UNIT-e

# *Handbook*

## *UNIT-e Database Manager - Tools*

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## 4.42 Enhancements

The following enhancements are provided in this version of the handbook:

- List of Bigmemo properties report (see page 2-6):

  A number of features aren't supported for properties of type Bigmemo:

  - Detailed auditing, i.e. using Audit Business rules, doesn't work for Big memo properties and prevents saving records.
  - Data in Big memo properties can't be transferred from Oracle to the SQL Server Snapshot using the CallSync stored procedure.
  - In Oracle databases, UNIT-e applications can't save more than 4000 characters in properties of type Bigmemo.

  A new report is therefore provided, cgn.dm.0027, that identifies all the Big memo properties in the database.

**More information:** *For details on enhancements from previous releases, refer to 'Appendix A: Previous Enhancements' on page 11-2.*

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# Chapter 1: Introduction

**Overview..... 1-2**

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# Overview

This guide introduces you to the tools available within the UNIT-e Database Manager applications, dealing with functionality that enables you to manage your UNIT-e database. The following areas are covered:

- Defining Business Rules (see page 2-1)

  Business rules specify the way in which certain elements of your data are dealt with. For example, you may define a System Reference business rule to automatically generate student references, or you may define mandatory rules that specify which properties must be completed for a class. Business rules are usually applied to every application, Manager or Proforma, but can be restricted to specific users or groups of users.

- Maintaining Lookups (see page 3-1)

  Lookups are items that are available for selection from a pick-list on a Manager or Proforma form. For example, within the Person Title lookup are the titles that you might apply to a student or member of staff - Mr, Miss, Mrs etc.

- Using Class Editor (see page 4-1)

  'Data dictionary' is the term that defines the classes and properties used by the UNIT-e system to store information. The UNIT-e Class Editor application is used to view and edit the classes and properties in this data dictionary.

- Changing Passwords (see page 6-1)

  Passwords that give access to your UNIT-e database and applications can either be changed by a system manager or can be changed by individual users, depending on the level of access available to them.

- Producing Entity Diagrams (see page 7-1)

  Each class in the UNIT-e database has a unique ID, and classes can be related to each other using links. The Entity Diagram functionality enables you to show the links between different classes in a visual format. You can create and configure Entity Diagrams to meet your exact requirements and they can be saved and printed if required. The Entity Diagram functionality is available in various (but not all) applications, via the **Tools | Entity Diagram** option on the menu bar.

- Using Class Browser (see page 8-1)

  A class contains a set of properties that are used to categorise related information. For example, the Student class defines the properties that enable you to enter student information. The Class Browser enables you to view all the classes and properties in your database in a tree-view structure. As a result, you can:

  - View the classes and extended classes in the database.
  - View details of the class definition (name and reference).
  - View the properties contained in the class.
  - Identify classes that link to one another.

- Using Query Executor (see page 9-1)

  Query Executor enables you to construct and run queries to extract information from your UNIT-e database. This information can be viewed on screen and saved to a file. You can also save the queries that you create so that they can be used again. Query Executor scripts are also provided in software upgrade releases to update your database.

- Database Management Reports (see page 10-1)

  This II application enables you to access database management Reporting Services reports.

# Finding the information you need

A table of contents and index are provided in each handbook to help you find the information you need. Where more detailed information is available in another handbook, a hyperlink is provided to take you directly to that handbook.

**Note:** *Your UNIT-e documentation must all be stored in the same folder for these hyperlinks to work.*

All UNIT-e documentation can be downloaded from the Customer Support portal and can be accessed via the UNIT-e documentation home page here. The latest version of this handbook is available to download directly here.

**Note:** *You must be logged in to ServiceNow to download the more technical documentation.*

If you're not sure where to look for information you can perform a search in the Customer Support portal, or again by storing all your UNIT-e documentation PDFs in one folder, you can carry out a search that checks through them all as follows:

1. Open Adobe Acrobat.

   **Note:** *You must be using version 6 or higher of Adobe Acrobat Reader to use this facility. This software is available to download, free of charge, from the Adobe website – www.adobe.com.*

2. Click on the Search button to open the search form.
3. Enter your search criteria in the **What word or phrase would you like to search for?** field.
4. Select the **All PDF Documents in** radio button and search for the appropriate directory.

   **Note:** *Select the directory where your platform release is stored. There is a **Browse for Location** option at the bottom of the list of directories – use this to select a sub-directory.*

5. Select the appropriate check boxes.
6. The system then carries out a search and displays all platform documents and handbooks with text that matches your selection criteria. You can expand a platform document or handbook entry to view the matches within that document.
7. Click on an option to view the entry in the handbook.

# Chapter 2: Defining Business Rules

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# Overview

Business rules specify the way in which certain elements of your data are dealt with. For example, you may define a System Reference business rule to automatically generate student references, or you may define mandatory rules that specify which properties must be completed for a class. Business rules are usually applied to every application, Manager or Proforma, but can be restricted to specific users or groups of users.



**Note:** *Business rules are not applied if you import data directly using a tool such as UNIT-e Report Generator.*

The following areas are covered in this chapter:


- Business Rule Types (see page 2-3)
- The Business Rules Interface (see page 2-9)
- Adding Business Rules (see page 2-11)
- Editing Business Rules (see page 2-24)
- Deleting Business Rules (see page 2-25)

# Business Rule Types

The following business rules exist within UNIT-e:

123 System Reference Rules (see below)

↔ Size Rules (see page 2-4)

Aa Format Rules (see page 2-4)

Lookup Rules – reserved for future use.

Mandatory Rules (see page 2-4)

Read only Rules (see page 2-5)

Default Rules (see page 2-5)

AB Label Rules – reserved for future use.

List Rules (see page 2-5)

Identity Rules (see page 2-6)

Audit Rules (see page 2-6)

Validate Rules (see page 2-6)

## System Reference Rules

System Reference rules determine where automatically generated references are applied (for example, you may wish to generate student references automatically). They can be set up for any property in the database and can be user specific. This allows you to use different templates to generate references for different users, providing an easy way for a user to identify their own information.

System References make use of re-usable Sequences, which define the particular template used to generate a value. For example, a sequence can be used to define the way in which references are incremented.



**Note:** *Oracle installations use Oracle sequences for the generation of the incremental numbers used in System Generated References. SQL Server installations use proprietary UNIT-e sequence generation.*

System Generated References are inherited to extended classes when defined on a base class, unless there is a System Generated Reference defined for the extended class. For example, defining a **Student Reference** rule on the Student class would also be applied to the StudentILR class, unless you define another Student Reference rule for the StudentILR class.

System Generated References that are set up for a class are applied when a record is created. In addition, if an existing record is updated so that it becomes extended in a new way (e.g. staff to student), System Generated References set up for the extended class are applied. For example, if you select an existing member of staff in the **Student** form and flag them as a Student, the **Student Reference** (and any other System Generated References) is populated.

**Notes:**

- *There are methods of data entry in UNIT-e, such as Report Generator Import and Web Update, which do not apply business rules. To ensure uniqueness in these scenarios you should apply unique constraint indexes via UNIT-e Database Manager (Class Editor).*
- *If you create a record that generates a System Reference, and then rollback, the sequence number is still incremented by 1.*

**More information:** *See 'Adding System References' (page 2-11).*

**Tips:**

- *Although UNIT-e provides a comprehensive set of defaults, it is possible to use system generated references to apply addition defaulting. This is done by specifying a Template that doesn't change as the Value is increased, so the same value is defaulted into every new record:*
  1. *Add a new System References in the usual way via UNIT-e Database Manager (Business Rules), selecting the required Class and Property. Leave the User field as "(none)".*
  2. *Add and select a new sequence in the usual way, specify the Template as the value to be defaulted inserting a "\" character before each letter - for example, to default the value "example" you would specify a Template as "\e\x\a\m\p\l\e".*
- *Use '0' (zero) to insert the current date into a date field. The current date is inserted as you tab out of the field. To set up a Business Rule to insert a '0' as a default for new records, enter '\0' in the* ***Template*** *field of the* ***Edit Sequence*** *form and '1' in the* ***Value*** *field.*

## Format Rules

Format rules are only applicable to the UNIT-e Extended Applications functionality. They are used to control the format of choice number, month of entry, year of entry and point of entry.

**Note:** *Format rules are added to your system via scripts and should not be altered.*

## Size Rules

Size rules determine how long a particular field can be. They can be setup for any property in the database and can be User specific. On entry of a value for a property with a size rule, the length of the value is checked and an error returned if it is an illegal size.

**More information:** *See 'Adding Size Rules' (page 2-15).*

## Mandatory Rules

Mandatory rules specify certain properties as mandatory for a class. They can be setup for any property in the database and can be user specific. When a record is update or created, mandatory rules are applied to ensure that the appropriate fields have been completed. If there are any fields that have not been completed an error is displayed.

**More information:** *See 'Adding Mandatory Rules' (page 2-16).*

## Read Only Rules

Read Only rules specify certain properties as read only for a class. They can be setup for any property in the database and can be User specific. Read only properties cannot have values inserted or updated.

**Note:** *Masks can also be used to make properties read-only, via UNIT-e Database Manager (Users) [UDMUS.exe]. For further information, refer to the "UNIT-e Database Manager (Users)" Handbook (UDMUS.pdf).*

**More information:** *See 'Adding Read only Rules', (page 2-17).*

## Default Rules

There are two types of defaulting available in UNIT-e.

- Insert Defaulting (see below)
- Update Defaulting (see below)

### Insert Defaulting

When a new record is created or a link between two records is created, system defaulting is applied to the record(s) involved.

**More information:**

- *The "Defaulting datasheet".*
- *The "Managing UNIT-e" Handbook (MU.pdf).*
- *'Adding Default Rules', (page 2-17).*

### Update Defaulting

**Tip:** *You can also specify updated defaulting via a "default" Validate rule, see 'Defaulting Validation' (page 2-7).*

When a record is updated after it has been created, update defaulting is applied. This is specified via Default business rules, which specify a source and a destination property and class. When the source class property is updated, via a Manager or Proforma application, the value is defaulted into the destination class property for all linked records. For example, where a rule is specified from Module Reference to Enrolment Reference and after enrolling 10 Students the Module Reference is changed. The updated value is defaulted into all 10 Enrolment records when you commit the change on the Module.

The source and destination property must adhere to the following:

- They must not be from the same class.
- The destination is from child class of the Source property.

**Warning:** *Due to the volume of data that may be copied for default rules, they may affect the performance of UNIT-e. Therefore care should be taken when setting up new Default rules.*

**More information:** *See 'Adding Default Rules' (page 2-17).*

## List Rules

List business rules are managed by ESS Ltd and cannot be updated by institutions. They include Link fields that are not editable in grids so that the parent link is not broken by mistake.

## Identity Rules

Identify business rules are managed by ESS Ltd and cannot be updated by institutions. They are used to automate the flag of extended classes. For example, if you have a StudentILR class in an Information Interface form, the ISR flag is automatically populated when you click on the **New** button to create a new student.

## Audit Rules

UNIT-e audits data as follows:

- Record level – applied for all changes
- Property level – applied for properties with user defined Audit business rules

Audit business rules are used to add property level auditing. Although UNIT-e automatically audits each change at record level, adding an Audit rule enables you to track the history of values for a particular property.

**Note:** *Detailed auditing, i.e. using Audit Business rules, doesn't work for Big memo properties and prevents saving records. A report is provided, cgn.dm.0027, that identifies all of the Big memo properties in the database.*

**More information:** *See 'Adding Audit Rules' (page 2-18).*

Once set up, property level audit data can be viewed via the **Audit** form.

**More information:** *The "Working with UNIT-e" Handbook (WWU.pdf).*

## Validate Rules

**Warning:** *Care should be taken when adding context lookups as this may affect performance.*

Validate rules enable you to specify the following:

- User Defined Validation (see below)
- Application validation rules (see page 2-7)

**More information:** *See 'Adding Validate Rules' (page 2-20).*

### User Defined Validation

Validation rules can now be setup via UNIT-e Database Manager (Business Rules).

- **Comparison** rules enable you to ensure the relationships between fields are maintained (see below).
- **Defaulting** rules enable you to set up predefined defaulting to save time with data entry and improve data integrity (see below).

#### *Comparison Validation*

Comparison validation rules compare two properties of a particular record. If they don't adhere to one the specified rule an error message is displayed which the user must correct before the data can be committed. The following relationships can be specified between two properties of the same record:

- Greater than
- Less than
- Equals
- Greater than or Equal

- Less than or Equal

### *Defaulting Validation*

Defaulting validation rules enable you to default a value into a property of a record, when another property equals a specified value.

## Application Validation

In addition to the user defined validation there are a number of application validation rules that can be applied to particular applications:

- Course Period Rule (see below)
- SQA Subject Rule (see page 2-8)
- Group Award Rule (see page 2-8)



**Note:** *Care should be taken when setting up FES/SQA Proforma applications, that the fields referenced in the selected rules below are included in the proforma. The validation is still applied regardless of whether these fields are included.*

### *Course Period Rule*



**Note:** *For this validation to be applied, a "courseperiod" validate rule must be added and enabled as described in the Add Application Validate rule section on page 2-22.*

The course period rules shown in Table 2-1 are applied to all modules with a Module Type (code) matches the **courseperiod** Validate Rule **Value** property.

| Rule | Application |
|---|---|
| If Module FES/SQA Mode of Attendance (code) is in the range 10 to 15 (inclusive):<br>When you create a new record the Module FES/SQA Start date is copied to the Enrolment FES/SQA.SUM Required Date<br>When you update an existing record the Enrolment FES/SQA Start date is copied to the Enrolment FES/SQA.SUM Required Date if the Enrolment FES/SQA.SUM Required Date is blank.<br>If Enrolment FES/SQA Mode of Attendance (code) is in the range 01 to 09 (inclusive):<br>the SUM Required Date (fes2sumsrequireddate) must be completed, otherwise the **error** "Please specify SUM Required Date" is displayed. | UNIT-e FSQA Manager (Enrolments)<br>UNIT-e FSQA Proforma (Enrolments) |
| If FES1 Advanced flag (fes1advanced) has been selected, a value should be selected for the Subject (subject lookup) property A **warning** is displayed "FES1 Flag has been checked but no subject has been selected" | UNIT-e FSQA Manager (Modules)<br>UNIT-e FSQA Proforma (Modules) |
| If the Subject (subject lookup) property has a value selected, the FES1 Advanced flag (fes1advanced) must be selected. A **error** is displayed "FES1 Advanced flag must be set when subject is specified" | UNIT-e FSQA Manager (Modules)<br>UNIT-e FSQA Proforma (Modules) |
| When you create a new Module FES/SQA you should select the Module FES2 required flag. If you do not a **warning** is displayed "FES2 Required flag should be checked for Course Period module type" | UNIT-e FSQA Manager (Modules)<br>UNIT-e FSQA Proforma (Modules) |
| If you deselect the FES2 Required flag a **warning** is displayed stating 'FES2 flag should be checked. Clearing this flag will cause UNIT-e to calculate zero SUMs for the programme enrolments.' | UNIT-e FSQA Manager (Modules)<br>UNIT-e FSQA Proforma (Modules) |
| If the Module SUMs required date is not between the Module Start and End an **error** is displayed stating, "SUMs required date must be between Module Start and End date". | UNIT-e FSQA Manager (Modules)<br>UNIT-e FSQA Proforma (Modules) |

Table 2-1 **Course Period Rules**

### SQA Subject Rule

**Note:** *For this validation to be applied, a "sqasubject" validate rule must be added and enabled as described in the Add Application Validate rule section on page 2-22.*

The SQA subject rules shown in Table 2-2 are applied to all modules with a Module Type (code) matching the **sqasubject** Validate Rule **Value** property.

| Rule | Application |
|---|---|
| If the Enrolment SQA Submitted Date is populated:<br>the SQA Enrolment flag (sqaenrolment) should be checked, otherwise the **warning** "SQA Enrolment Flag should be set as SQA Date is specified". | UNIT-e FSQA Manager (Enrolments)<br>UNIT-e FSQA Proforma (Enrolments) |
| If the Enrolment SQA Submitted Date is null:<br>when performing a cascade withdrawal the SQA Enrolment flag is unselected. | UNIT-e FSQA Manager (Enrolments)<br>UNIT-e FSQA Proforma (Enrolments) |
| If the SQA Course flag has been unselected:<br>A **warning** is displayed stated that "SQA Course Flag should be checked for SQA Subject module type" | UNIT-e FSQA Manager (Modules)<br>UNIT-e FSQA Proforma (Modules) |
| If the SQA Course flag has been selected for modules of a type other than those specified in the SQA Subject rule:<br>A **warning** is displayed stating, "SQA Course Flag should be unchecked for non SQA module types." | UNIT-e FSQA Manager (Modules)<br>UNIT-e FSQA Proforma (Modules) |
| If the SQA Course flag has been selected for modules of a type other than those specified in the Group Award rule and those in the SQA Subject rule:<br>A **warning** is displayed stating, "SQA Course Flag should be unchecked for non Group Award/ non SQA module types." | UNIT-e FSQA Manager (Modules)<br>UNIT-e FSQA Proforma (Modules) |

Table 2-2 SQA Subject Rules

### Group Award Rule

**Note:** *For this validation to be applied, an "sqagroupaward" validate rule must be added and enabled as described in the Add Application Validate rule section on page 2-22.*

The SQA group award rules shown in Table 2-3 are applied to all modules with a Module Type (code) matching the **sqagroupaward** Validate Rule **Value** property.

| Rule | Application |
|---|---|
| If the SQA Course flag has been unselected:<br>A **warning** is displayed stated that "SQA Course Flag should be checked for SQA Group Award module type" | UNIT-e FSQA Manager (Modules)<br>UNIT-e FSQA Proforma (Modules) |
| If the SQA Course flag has been selected for modules of a type other than those specified in the Group Award rule and those in the SQA Subject rule:<br>A **warning** is displayed stating, "SQA Course Flag should be unchecked for non Group Award/ non SQA module types." | UNIT-e FSQA Manager (Modules)<br>UNIT-e FSQA Proforma (Modules) |
| If the SQA Course flag has been selected for modules of a type other than those specified in the Group Award rule:<br>A **warning** is displayed stating, "SQA Course Flag should be unchecked for non SQA Group Award module types." | UNIT-e FSQA Manager (Modules)<br>UNIT-e FSQA Proforma (Modules) |

Table 2-3 SQA Group Award Rules

# The Business Rules Interface

Use the **Business Rules** form (Figure 2-1) to add new business rules and edit existing business rules. The form consists of the following elements:

- Menu Bar (see below)
- Toolbar (see page 2-10)
- Left Pane (see page 2-10)
- Properties Pane (see page 2-10)

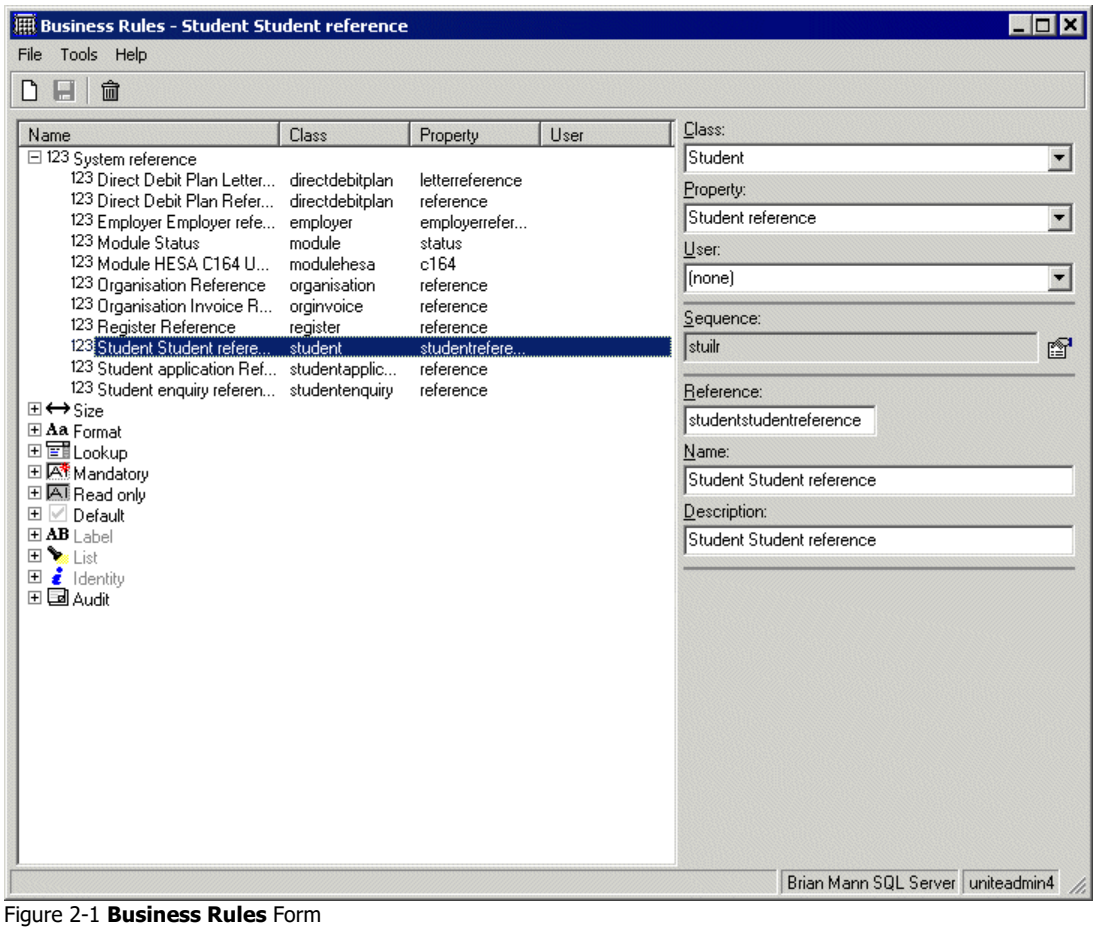


Figure 2-1 **Business Rules** Form

## Menu Bar

The menu bar has the following options available:

**File:** Contains options for creating new business rules, along with saving, deleting and closing the **Business Rules** form.

**Tools:** Allows you to select the **Sequences** option.

**Help:** Displays information about UNIT-e Database Manager (Business Rules).

## Toolbar

The **Business Rules** form has several buttons, which enable you to perform the following actions:

 **New:** Click on this button to create a new business rule.

 **Save:** Click on this button to save any business rules.

 **Delete:** Click on this button to delete any business rules.

## Left Pane

The left pane of the **Business Rules** form displays a listing of all the current business rules. The frame contains four columns, as shown in Table 2-4.

| Column Name | Notes |
|---|---|
| **Name** | The **Name** column identifies the business rules.<br>Components that contain child components have an ⊞ **Expand** or ⊟ **Contract** button displayed next to them. Click on the ⊞ **Expand** button to display all child components or click on the ⊟ **Contract** button to close up the display, leaving only the parent component. |
| **Class** | Displays the class selected via the Class pick-list. |
| **Property** | Displays the property selected via the Property pick-list. |
| **User** | Displays the username selected via the User pick-list. |

Table 2-4 **Business Rules** Form - Left Pane Columns

## Properties Pane

The **Properties** pane is situated on the right hand side of the form. This displays the details necessary to create a particular business rule, with the fields varying depending on the type of business rule.

 **More information:** *Individual fields are explained for each of the business rule types. See 'Adding Business Rules' (page 2-11) for more information.*

# Adding Business Rules

This section covers the following areas:

- Adding System References (see below)
- Adding Sequence Rules (see page 2-12)
- Adding Size Rules (see page 2-15)
- Adding Mandatory Rules (see page 2-16)
- Adding Read only Rules (see page 2-17)
- Adding Default Rules (see page 2-17)
- Adding Audit Rules (see page 2-18)
- Adding Validate Rules (see page 2-20)

**More information:** *For an explanation of each type of business rule, see 'Business Rule Types' (page 2-3).*

**Note:** *List and Identity business rules are managed by ESS Ltd and cannot be updated by institutions.*

## Adding System References

**Note:** *System Generated References are inherited by extended classes when defined on a base class. Unless there is a System Generated Reference defined for the extended class. For example, defining a Student Reference rule on the Student class would also be applied to the StudentILR class, unless you define another Student Reference rule for the Student ILR class.*

1. Open UNIT-e Database Manager (Business Rules) [UDMBR.exe]. The **Business Rules** form is displayed (Figure 2-1).

**Note:** *When the **Business Rules** form is opened, it automatically defaults to the system reference business rule.*

2. To add new system reference business rules, make sure that System reference is highlighted and either click on the **New** button or select **File | New** from the menu bar.
3. Complete the **Properties** frame as required (Figure 2-2).

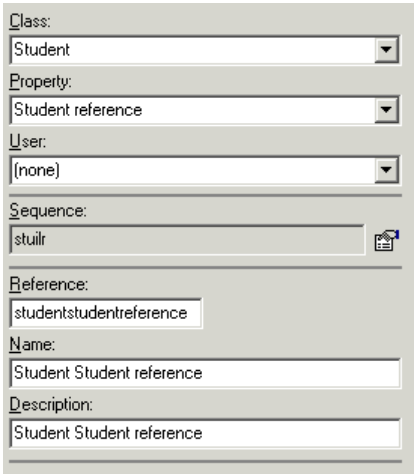



Figure 2-2 **Business Rules** Form - Properties Pane - System Reference

**Class:** Select a class from the pick-list.

**Property:** Select a property from the pick-list.

**User:** Select a user from the pick-list.

**Tip:** *Once you have selected a user, press the **Tab** button twice to automatically generate a **Reference** and **Name** (via the **Properties** frame).*

**Sequence:** The sequence value enables you to identify the format of the current system reference.

**More information:** *See 'Adding Sequence Rules' (below).*

**Reference:** Enter a reference name.

**Name:** Enter a name for the sequence.

**Description:** Enter a description for the business rule.

4. Click on the **Save** button to save the system reference business rules.

## Adding Sequence Rules

Sequence rules are used to define the way in which system references are incremented (e.g. whether the reference should always be a unique number). To add a new sequence:

1. Open UNIT-e Database Manager (Business Rules) [UDMBR.exe]. The **Business Rules** form is displayed (see page 2-9).
2. Select the appropriate System reference and click on the **Select Sequence** button adjacent to the **Sequence** field in the **Class** frame. This opens the **Sequences** form (Figure 2-3).

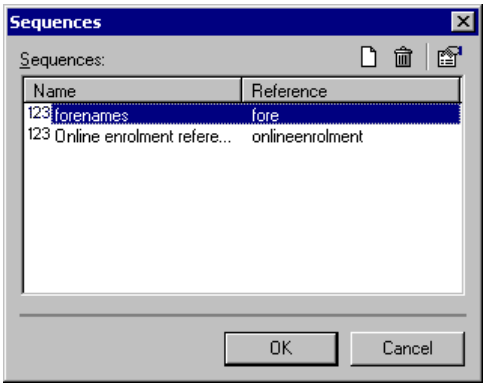



Figure 2-3 **Sequences** Form

3. Click on the **New** button to create a new sequence.
4. Step 1 of the **Create Sequence** form is displayed (Figure 2-4). Complete the fields and click on the **Next** button to continue.

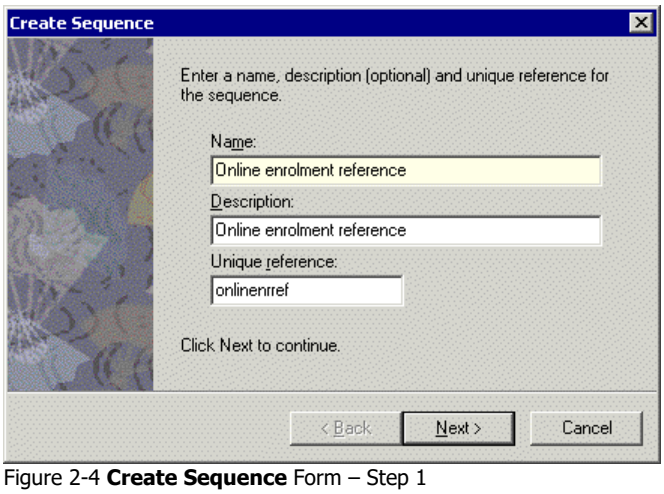



Figure 2-4 **Create Sequence** Form – Step 1

**Name:** Enter a name for the new sequence.

**Description:** Enter a description of the new sequence.

**Unique reference:** Enter a unique reference name.

5. Step 2 of the **Create Sequence** form is displayed (Figure 2-5). Complete the fields.

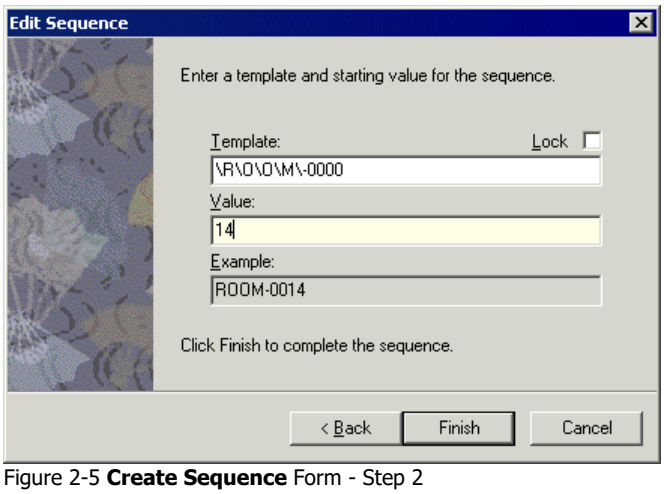



Figure 2-5 **Create Sequence** Form - Step 2

**Template:** Enter a format for the reference.

**Note:** *Precede any letter to appear in the output with a backslash "\" to avoid picking up any automated formatting.*

**Value:** Enter a starting number for the value. The reference inserts digits wherever you have included zeros in the template which are not preceded by a "\". If you insert a "\" before a digit, the digit is not incremented.

**Example:** Once a **Value** has been added an **Example** reference is generated.

6. Click on the **Finish** button to complete the **Create Sequence** form. The **Create Sequence** form closes and the **Sequences** form is updated to display the new sequence you have added.

## Deleting Sequence Rules

**Note:** *For Oracle installations, each time you edit or view a Sequence it is incremented by 1.*

To delete a sequence:

1. Open UNIT-e Database Manager (Business Rules) [UDMBR.exe]. The **Business Rules** form is displayed (see page 2-9).
2. Select the appropriate System reference and click on the **Select Sequence** button adjacent to the **Sequence** field in the **Class** frame. This opens the **Sequences** form (Figure 2-3).
3. Highlight the **Name** of the sequence you wish to delete.
4. Click on the **Delete** button.
5. The **Delete Sequence** confirmation box is displayed (Figure 2-6).

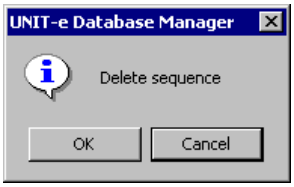



Figure 2-6 **Delete Sequence** Dialogue

6. Click on the **OK** button to confirm the deletion.

## Editing Sequence Properties

**Note:** *For Oracle installations, each time you edit or view a Sequence it is incremented by 1.*

To edit sequence properties:

1. Open UNIT-e Database Manager (Business Rules) [UDMBR.exe]. The **Business Rules** form is displayed (see page 2-9).
2. Select the appropriate System reference and click on the **Select Sequence** button adjacent to the **Sequence** field in the **Class** frame. This opens the **Sequences** form (Figure 2-3).
3. Click on the **Sequence Properties** button.

   **Tip:** *When you access the **Sequences** form, the sequence that is applicable to the selected system reference is highlighted but may not be visible if the list of sequences is large. In this situation there is no need to scroll to the highlighted sequence, simply click on the **Sequence Properties** button to go directly to the **Edit Sequence** form.*

4. Step 1 of the **Edit Sequence** form is displayed (Figure 2-7). Complete the fields and click on the **Next** button to continue.

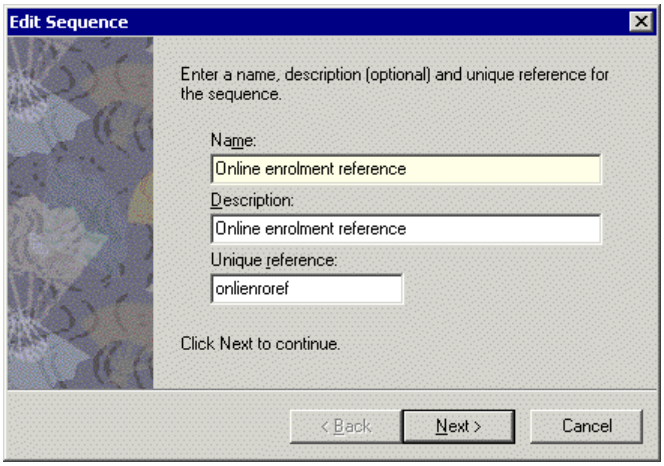



Figure 2-7 **Edit Sequence** Form - Step 1

**Name:** Edit the name of the existing sequence.

**Note:** *Precede any letter to appear in the output with a backslash.*

**Description:** Enter a new description for the sequence.

**Unique reference:** Edit the Unique reference.

5. Step 2 of the **Edit Sequence** form is displayed (Figure 2-8). Edit the required fields.

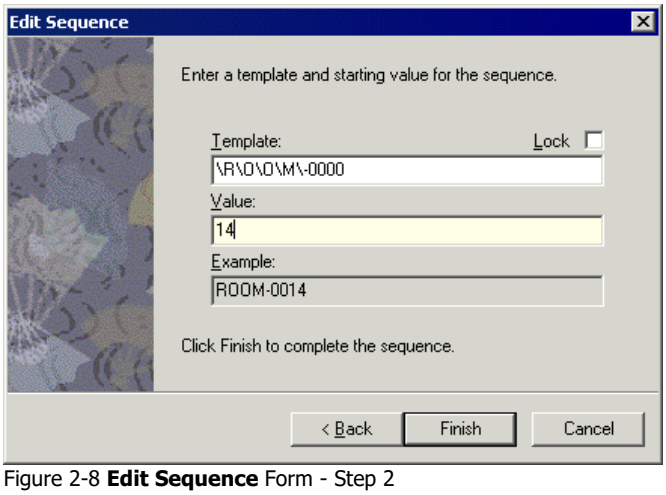



Figure 2-8 **Edit Sequence** Form - Step 2

**Template:** Enter a format for the reference.

**Note:** *Precede any letter to appear in the output with a backslash.*

**Value:** Enter a starting number for the value. The reference inserts digits wherever you have included zeros in the template which are not preceded by a "\". If you insert a "\" before a digit, the digit is not incremented.

**Example:** Once a **Value** has been added an **Example** reference is generated.

6. Click on the **Finish** button to complete the **Edit Sequence** form.
7. The **Edit Sequence** form closes, with any changes being updated.

## Adding Size Rules

To add a Size business rule:

1. Open UNIT-e Database Manager (Business Rules) [UDMBR.exe]. The **Business Rules** form is displayed (see page 2-9).
2. Select the Size business rule from the left pane and either click on the **New** button or select **File | New** from the menu bar.
3. Complete the **Properties** frame as required (Figure 2-9).

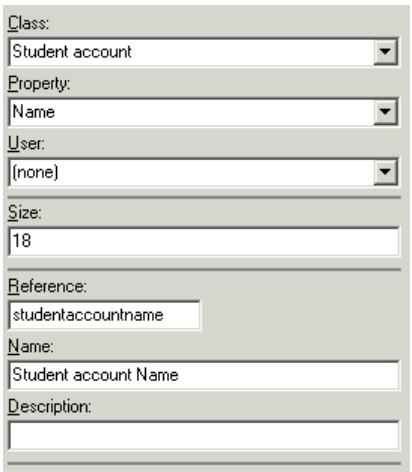



Figure 2-9 **Business Rules** Form - Properties Pane - Size

**Class:** Select a class from the pick-list.

**Property:** Select a property from the pick-list.

**User:** Select a user from the pick-list. The Size rule is only applied to the selected user. Select (none) to apply the rule to all users.

**Size:** Enter the maximum size for the selected class, property and user.

**Reference:** Enter a unique reference name. Tabbing into this field automatically populates it with the class and property Reference.

**Name:** Enter a name for the business rule. Tabbing into this field automatically populates it with the class and property Name.

**Description:** Enter a description for the business rule.

4. Click on the **Save** button to save your details.

## Adding Mandatory Rules

To add a Mandatory business rule:

1. Open UNIT-e Database Manager (Business Rules) [UDMBR.exe]. The **Business Rules** form is displayed (see page 2-9).
2. Select the Mandatory business rule from the left pane and either click on the **New** button or select **File | New** from the menu bar.
3. Complete the **Properties** frame as required (Figure 2-10).

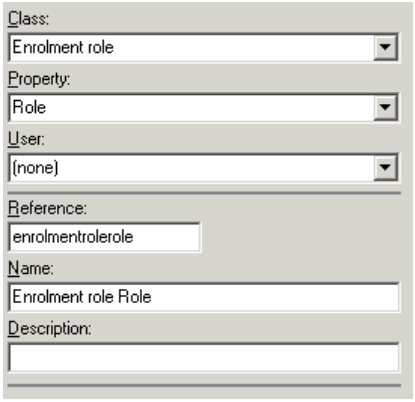



Figure 2-10 **Business Rules** Form - Properties Pane - Mandatory

**Class:** Select a class from the pick-list.

**Property:** Select a property from the pick-list.

**User:** Select a user from the pick-list.

**Tip:** *Once you have selected a user, press the **Tab** button twice to automatically generate a **Reference** and **Name** (via the **Properties** frame).*

**Reference:** Enter a unique reference name.

**Name:** Enter a name for the business rule.

**Description:** Enter a description for the business rule.

5. Click on the **Save** button to save the details.

## Adding Read only Rules

To add a Read only business rule:

1. Open UNIT-e Database Manager (Business Rules) [UDMBR.exe]. The **Business Rules** form is displayed (see page 2-9).
2. Select the Read only business rule via the left pane and either click on the **New** button or select **File | New** from the menu bar.
3. Complete the **Properties** frame as required (Figure 2-11).

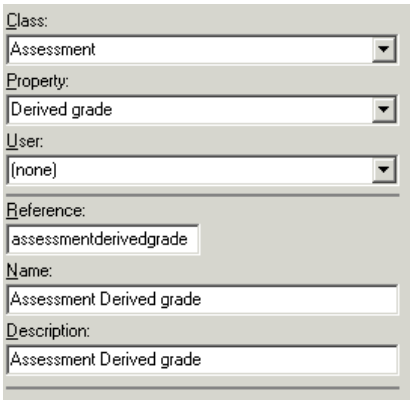



Figure 2-11 **Business Rules** Form - Properties Pane – Read Only

**Class:** Select a class from the pick-list.

**Property:** Select a property from the pick-list.

**User:** Select a user from the pick-list.

**Tip:** *Once you have selected a user, press the **Tab** button twice to automatically generate a **Reference** and **Name** (via the **Properties** frame).*

**Reference:** Enter a unique reference name.

**Name:** Enter a name for the business rule.

**Description:** Enter a description for the business rule.

5. Click on the **Save** button to save the details.

## Adding Default Rules

**Warning:** *Due to the volume of data that may be copied for default rules, they may affect the performance of UNIT-e. Therefore care should be taken when setting up new Default rules*

To add a Default business rule:

1. Open UNIT-e Database Manager (Business Rules) [UDMBR.exe]. The **Business Rules** form is displayed (see page 2-9).
2. Select the Default business rule via the left pane and either click on the **New** button or select **File | New** from the menu bar.
3. Complete the **Properties** frame as required (Figure 2-12).

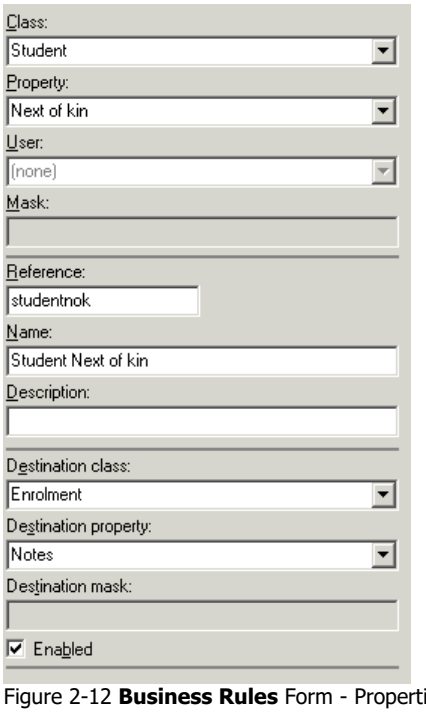



Figure 2-12 **Business Rules** Form - Properties Pane – Default

**Class:** Select a class from which to default a value.

**Property:** Select a property from which to default a value.

**User:** Reserved for future use.

**Mask:** Reserved for future use.

**Reference:** Enter a unique reference name. Tabbing to this field generates a reference for you.

**Name:** Enter a name for the business rule. Tabbing to this field generates a reference for you.

**Description:** Enter a description for the business rule.

**Destination Class:** Select a class to default a value into.

**Destination Property:** Select a property to default a value into. This list is automatically updated with properties of the appropriate type to default the selected value into.

**Destination Mask:** Reserved for future use.

**Enabled:** Select this check box to enable the current rule.

**Note:** *Though the user may set up rules involving any two classes in the database, default rules are only applied if there is a logical link between them. This is to ensure data integrity is preserved.*

5. Click on the **Save** button to save the details.

## Adding Audit Rules

To add an Audit business rule:

1. Open UNIT-e Database Manager (Business Rules) [UDMBR.exe]. The **Business Rules** form is displayed (see page 2-9).
2. Select the Audit business rule via the left pane and either click on the **New** button or select **File | New** from the menu bar.
3. Complete the **Properties** frame as required (Figure 2-13).

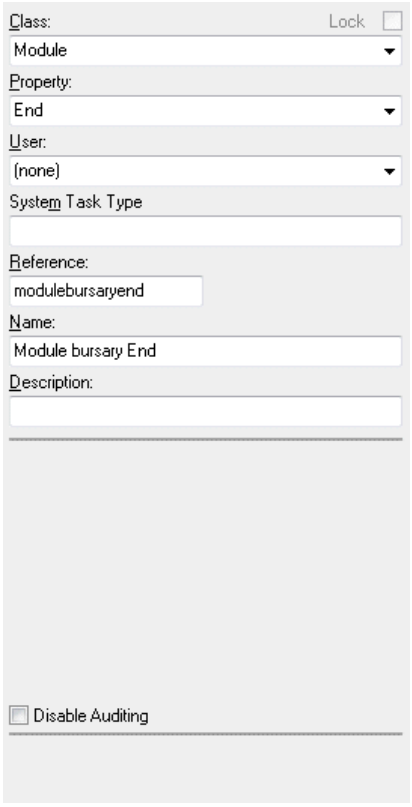



Figure 2-13 **Business Rules** Form - Properties Pane – Audit

**Class:** Select the class that includes the property you want to audit.

**Property:** Select a property to audit.

**Notes:**

- *Business Rules cannot be set up to audit changes made to lookups in UNIT-e Database Manager (Lookups) [UDMLK.exe] but they can be set up to audit lookup changes within standard UNIT-e applications.*
- *Audit Business rules don't work for Big memo properties and prevent saving records. A report is provided, cgn.dm.0027, that identifies all of the Big memo properties in the database.*
- *Auditing currently only works if set up against the base class. For example, if you want to audit changes to disability information you must set up the audit rule against personal details.*
- *Audit rules only display the properties within their base class.*

**User:** Specify a user for this audit. The specified property level auditing is only applied for the selected user. Leave this as (none) to apply the auditing to all users.

**Tip:** *Once you have selected a user, press the **Tab** button twice to automatically generate a **Reference** and **Name** (via the **Properties** frame).*

**System Task Type:** These are generated by the auditrulesystemtask_am script. They create audit rules for the UNIT-e Attendance Workflow Lite process.

**Note:** *There are two audit entries for Enrolment Current status. In one the **System Task Type** is blank as this creates an audit of status changes. The second has a **System Task Type** of 'attenrol', which creates system tasks from the audit.*

**Reference:** Enter a unique reference name. Tabbing to this field generates a reference for you.

**Name:** Enter a name for the business rule. Tabbing to this field generates a reference for you.

**Description:** Enter a description for the business rule.

**Disable Auditing:** Select this check box to prevent auditing on the property. It's only available when you're creating a new business rule that doesn't have a property defined. It's disabled when you're modifying an existing rule.

**Note:** *This may mean that no trigger will be created, or, if the property is used for Workflow replacement then the trigger will only be added to the caps_systemtask table and not to audit details.*

5. Click on the **Save** button to save the audit business rule.

## Adding Validate Rules

There are two types of validate rule that you may add:

- Adding Generic Validate Rules (see below)
- Adding Application Validate Rules (see page 2-22)

### Adding Generic Validate Rules

To add a Validate business rule:

1. Open UNIT-e Database Manager (Business Rules) [UDMBR.exe]. The **Business Rules** form is displayed (see page 2-9).
2. Select the Validate business rule via the left pane and either click on the **New** button or select **File | New** from the menu bar.
3. The system displays the **Validate Rule type** dialogue (Figure 2-14). Select the **Generic** check box.

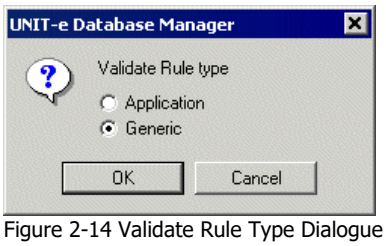



Figure 2-14 Validate Rule Type Dialogue

4. Complete the **Properties** frame as required (Figure 2-15).

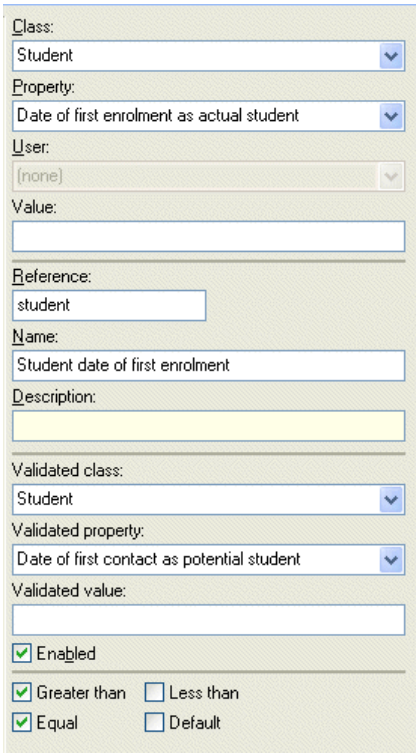



Figure 2-15 **Business Rules** Form - Properties Pane – Generic Validate

**Class:** Select a class to validate.

**Property:** Select a property to validate.

**Note:** *Business Rules cannot be set up for Id or Flag properties.*

**User:** This is reserved for future use.

**Value:** If specifying a default type validation, enter the value that the property must equal for the defaulting to occur. This can be left blank for all other types of validation.

**Tip:** *Once you have selected a value, press the **Tab** button twice to automatically generate a **Reference** and **Name** (via the **Properties** frame).*

**Reference:** Enter a unique reference. Tabbing to this field generates a reference for you.

**Name:** Enter a name for the business rule. Tabbing to this field generates a name for you.

**Description:** Enter a description for the business rule.

**Validated Class:** This defaults to the selected class in the Class pick-list. This should not be altered.

**Validated Property:** Select a second property for the validation. For Default validations this should be the property to be updated. For other validations this is the second property to check.

**Validated Value:** If specifying a default type validation, enter the value to be defaulted into the **Validated Property**. This can be left blank for all other types of validation.

**Enabled:** Select this check box to turn the current rule on for all users.

**Greater than:** Select this check box to apply a Greater than validation rule. The selected **Property** is greater than the selected **Validated Property**.

**Note:** *This can be combined with the Equal rule to create a Greater than or Equal to validation.*

**Less than:** Select this check box to apply a Less than validation rule. The selected **Property** is less than the selected **Validated Property**.

**Note:** *This can be combined with the Equal rule to create a Less than or Equal to validation.*

**Equal:** Select this check box to apply an Equal than validation rule. The selected **Property** must equal the selected **Validated Property**.

**Default:** Select this check box to apply a Default validation rule. If the selected **Property** equals the specified **Value,** then the **Validated Property** is set to the specified **Validated Value**.

5. Click on the **Save** button to save the details.

## Adding Application Validate Rules

**Note:** *Care should be taken when setting up FES/SQA Proforma applications, that the fields referenced in the selected rules below are included in the proforma. The validation is still applied regardless of whether these fields are included.*

Adding an application validate rule turns on the related validation, and specifies which Module/Enrolment types the validation applied to. You may find that these rules were imported as part of your installation process, if this is the case you only need to specify a Module/Enrolment type in the **Value** property and select the **Enabled** check box to turn them on.

To add an application validate business rule:

1. Open UNIT-e Database Manager (Business Rules) [UDMBR.exe]. The **Business Rules** form is displayed (see page 2-9).
2. Select the Validate business rule via the left pane and either click on the **New** button or select **File | New** from the menu bar.
3. The system displays the **Validate Rule type** dialogue (Figure 2-14). Select the **Application** check box.
4. Complete the **Properties** frame as required (Figure 2-16).

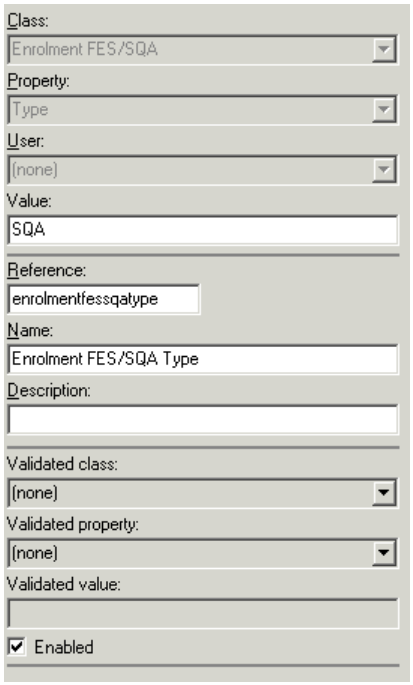



Figure 2-16 **Business Rules** Form - Properties Pane – Application Validate

**Value:** Specify the Enrolment Type Lookup code for the records to which the rule applies. For example specify "cp" for the Course Period rule.

**Notes:**

- *The Enrolment Type is shared with Module Type. When checking your lookup values in UNIT-e Database Manager (Lookups) you should search for the Module Type lookup.*
- *This is case sensitive.*

If you are specifying a value for the SQA Subject or SQA Group Award rules you can use comma separated lists to identify more than one Module Type (e.g. "GA, RGA" for Group Award and Reference Group Award type modules).

**Note:** *The Enrolment Type is shared with Module Type. When checking your lookup values you should search for "Module Type" in UNIT-e Database Manager (Lookups)*

**Reference:** Specify the type of application rule to apply via the following:

- Course Period Rule = "courseperiod" (see page 2-7)
- SQA Subject Rule = "sqasubject" (see page 2-8)
- SQA Group Award Rule = "sqagroupaward" (see page 2-8)

**Enabled:** Select this checkbox to turn on the current Validate rule.

6. Click on the **Save** button to save the details.

# Editing Business Rules

To edit a business rule:

1. Highlight a business rule via the **Business Rules** form (see page 2-9).
2. Edit the information you want to change via the **Properties** pane.
3. Click on the **Save** button.

# Deleting Business Rules

To delete a business rule:

1. Highlight a business rule on the **Business Rules** form (see page 2-9).
2. To delete a business rule either click on the **Delete** button or select **File | Delete** from the menu bar.
3. The **Delete** confirmation dialogue is displayed (Figure 2-17).

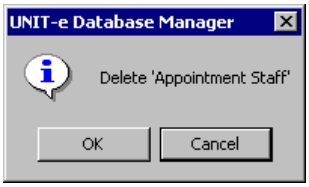



Figure 2-17 Confirm Deletion Dialogue

   - Click **OK** to delete the business rule.
   - If you wish to cancel click on the **Cancel** button.
4. The business rule is deleted.

# Chapter 3: Maintaining Lookups

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# Overview

Lookups are items that are available for selection from a pick-list on a Manager or Proforma form. For example, within the Person Title lookup are the titles that you might apply to a student or member of staff - Mr, Miss, Mrs etc. A set of lookups is contained in a lookup list.

Whilst the lookup list for a specific pick-list is pre-defined (supplied by UNIT-e) you can add or edit its values as required. By restricting the values available for selection, you can ensure consistency of data entry across your institution. For example, the Module type Lookup List contains items that are used to identify the course type. You can add or delete values within an existing Lookup List to match your institution's requirements.



**Note:** *As set codes are required for reporting purposes, both by the UNIT-e software and funding bodies to which returns must be made, Lookup properties are provided to enable you to map your institution-specific Lookups to the standards sets of codes (see page 3-5).*

When your UNIT-e system is first installed, in a minimum system implementation, the following Lookup Lists are provided as examples:

- Person gender
- Person title
- Alert

You may receive additional Lookup Lists relating to your market-sector via scripts issued within a standard Configuration.

In addition, when you receive a new sector-specific UNIT-e application, new Lookup Lists are typically included enabling you to perform your statutory returns. However, in subsequent releases of the same application, these Lookup Lists are not updated.



**More information:** *See 'Importing Lookup Values' (page 3-17).*

This chapter covers the following areas:


- Lookup Modes (see page 3-3)
- Lookup Codes (see page 3-5)
- The Lookups Interface (see page 3-6)
- The Migrate Tool (see page 3-10)
- Adding Lookup Values (see page 3-11)
- Copying Lookup Values (see page 3-12)
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- Updating Lookup Values from Scripts (see page 3-21)

# Lookup Modes

Lookup pick-lists can be displayed in the following modes:

- Minimised (see below)
- Maximised (see page 3-3)
- Context Filtered (see page 3-3)

## Minimised

Minimised Lookup pick-lists are used to display only the most commonly used values. For example, the minimised Lookup List for the Person title pick-list contains the following Lookup values:

- Miss
- Mr
- Mrs
- Ms

## Maximised

Maximised Lookup pick-lists are used to display more uncommon values. For example, the maximised Lookup List for the Person title pick-list contains the following Lookup values:

- Miss
- Mr
- Mrs
- Ms
- Prof
- Dr
- Br
- Rev
- Sir

On a Manager or Proforma form you can:

 Minimise the pick-list by clicking on the **Minimise** button.

 Expand the pick-list to display all the Lookups by clicking on the **Maximise** button.

## Context Filtered

 **Warning:** *Care should be taken when adding context lookups as this may affect performance.*

Context filtering of Lookup Lists is provided to improve data integrity and aid data entry by restricting the user from selecting invalid Lookup Values for a particular type of record.

The currently selected Type lookup value specifies a record's context. All other lookup lists for that record can then be filtered to only contain values appropriate for the selected context.

For example, a Module record can be used to store information about a variety of activities; selecting a particular Type specifies this purpose, e.g. "Class", "Course" or "Tutor Group". The values provided for the Module lookup lists (e.g. Mode, Level, etc.) are then filtered to contain only values appropriate for the selected type of Module.

 **Note:** *The context can also be used to alter Field Labels to provide advice appropriate to the selected Context. Refer to the "UNIT-e Database Manager (Settings)" handbook (UDMSE.pdf).*

Context Filters are setup via the following:

1. Setting up Type Contexts (see below)
2. Setting up Value Contexts (see page 3-4)

## Setting up Type Contexts

To set up the available contexts for a particular record:

1. Open UNIT-e Database Manager (Lookups) [UDMLK.exe] and select the Type lookup list for the class you are working with. For example "Module Type".
2. Specify a **Context** for each lookup value of the selected Type (see page 3-8). When you select a context Type in a Manager or Proforma application, only Lookup-list values with a matching (or empty) type are available for that record.

**Notes:**

- *If you do not specify a context for a Type Lookup, no filtering is applied when that Type is selected.*
- *An example of Module Type lookup values is shown in Table 3-1, together with the context values.*

| Lookup | Name | Context | Notes |
|---|---|---|---|
| Module Type | Course | CS | When selected this specifies a "CS" context for the Module class. |
| Module Type | Class | CL | When selected this specifies a "CL" context for the Module class. |
| Module Type | Other | | When selected this shows all pick-list values. |

Table 3-1 Example Type Lookups for Module

## Setting up Value Contexts

To apply the type contexts to Lookup-list values in order to filter the lists:

1. Open UNIT-e Database Manager (Lookups) and select the Lookup-lists that you wish to filter.
2. Specify a Context for each lookup value that is to be filtered (see page 3-8). The Context should match the value entered for the Type for which this Lookup value is required.

**Notes:**

- *If you do not specify a context for a Value Lookup, it appears for all context Types.*
- *An example set of context filtered lookups for Module is shown in Table 3-2.*

| Lookup | Name | Context | Notes |
|---|---|---|---|
| Module Level | Other Level | | This value is available for all Types. |
| Module Level | Optional Level | | This value is available for all Types. |
| Module Level | A Level | CS | These values only appear in the list when the "Course" Type or a Type with no context ("Other") is selected. |
| Module Level | AS Level | CS | |
| Module Level | G.C.S.E | CS | |
| Module Level | Higher Set | CL | These values only appear in the list when the "Class" Type or a Type with no context ("Other") is selected. |
| Module Level | Middle Set | CL | |
| Module Level | Lower Set | CL | |

Table 3-2 Example Context Filtered Lookups for Module

# Lookup Codes

As the **Code** value of each Lookup is user-definable and therefore institution-specific, UNIT-e core reports are not able to reference these values directly. In order for the software to extract records with specific values for a Lookup field, for example extracting Enrolment records with an Enrolment Status of Current, these codes must be mapped to standard sets of codes. The ability to do this is particularly important for generating returns.

The Lookup class includes the following properties to enable this mapping:

- UNIT-e:
  - Stores a standard set of supplied codes that the UNIT-e software is then able to use in core reports, etc. when necessary.
- National1:
  - Stores the standard National code values for the Lookups. These are the sets of codes determined by the funding councils and are used in various reports, including the sample return reports. Changes instigated by the funding councils may result in changes to these codes.
- National2 to National4:
  - Additional National properties are provided to be used if an entirely new set of codes are introduced by a funding council (unless the new codes are CDD codes – see below). Each time an entire set of codes is changed, the new codes are added to the next available National property (e.g. if National2 is already populated, National3 is used). The relevant core reports are then amended to extract the values from these fields for the applicable return fields.
  - This system enables you to submit the previous year's returns using the old codes, whilst also storing data for the current year's Enrolments that may require the new codes. This avoids the need for long lists of both sets of codes during the transition period.
- CCD1 to CDD4:
  - The CDD (Common Data Definition) properties are used to record the Common Data Definition (CDD) codes for the Lookups. As a result of the Managing Information Across Partnerships (MIAP) initiative, new sets of CDD codes are gradually being introduced for various fields. These properties are used in the same way as the National properties

Each National, UNIT-e and CDD code must be mapped to one or more of your Institution's Lookup values, using the fields provided on the **Lookup** form (see page 3-6).



**Note:** *By default these fields are disabled, to prevent them being used for alternative purposes before they are required by the mapping process. As and when they are required, a new Setting is updated to enable the fields for the relevant Lookup values.*

# The Lookups Interface

Lookups are added, defined and viewed using the **Lookups** form (Figure 3-1).

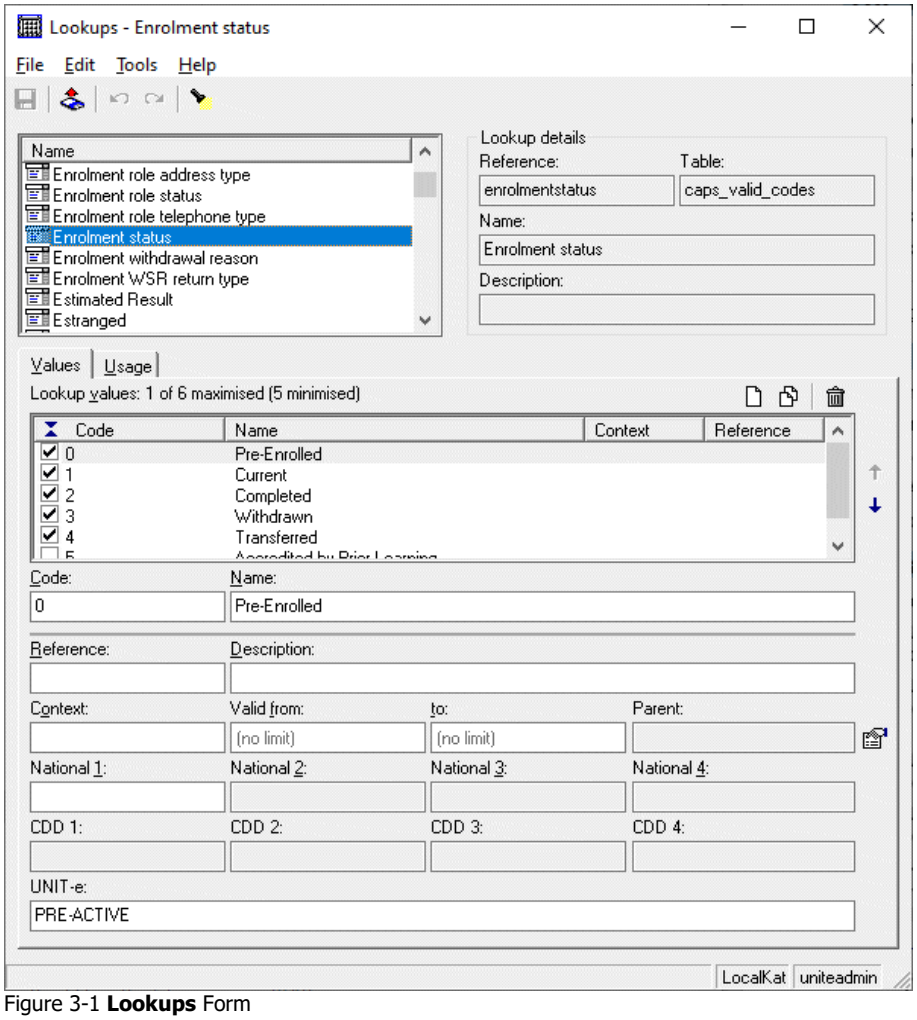



Figure 3-1 **Lookups** Form

The **Lookups** form consists of the following elements:

- Menu Bar (see below)
- Toolbar Buttons (see page 3-7)
- Lookups List (see page 3-7)
- Lookup Details Frame (see page 3-7)
- Values Tab (see page 3-7)
- Usage Tab (see page 3-9)

## Menu Bar

The menu bar has the following options available:

**File:** Contains options for importing Lookup Values, along with saving and exiting the application.

**Edit:** Allows you to undo or redo any changes.

**Tools:** Allows you to access the **Migrate** tool (see page 3-10).

**Help:** Contains information about UNIT-e Database Manager (Lookups).

## Toolbar Buttons

The following toolbar buttons are available on the **Lookups** form toolbar:

**Save Lookup Values:** Click on this button to save any changes you have made.

**Import Lookup Values:** Click on this button to import a set of Lookups. The **Lookup Import** form is displayed (see Import Lookup Values on page 3-17).

**Undo Changes:** Click on this button to undo any changes.

**Redo Changes:** Click on this button to redo any changes.

**Search:** Click on this button to perform a search of lookup lists. A search form is provided to enable you to search. Once the search has been performed the Lookups list is filtered with those matching Lookup Lists, and the **Lookup** form title states that it is "(filtered)".

**Tip:** *If you know a Value from the lookup-list on a Manager or Proforma form, but not its name, you can use this search to return all the Lookup Lists that have the value via the Lookup Valid Value Name search parameter.*

## Lookups List

The **Lookups** list situated in the top left quarter of the **Lookups** form displays a list of all the Lookup Lists currently set up on the UNIT-e system. You can sort the list in ascending/descending order by clicking on the **Name** column heading.

- Each Lookup List is displayed on a single line.
- The Lookup List currently selected is displayed in the title bar of the **Lookups** form.

When new items are created they appear below the currently selected lookup value in this list.

## Lookup Details Frame

The **Lookup Details** frame situated in the top right quarter of the **Lookups** form displays the details of the Lookup List currently selected in the **Lookups** list.

The following read-only fields are displayed:

**Reference:** The reference for the Lookup List.

**Table:** The table in the database, which the Lookup List is stored in.

**Name:** The name given to the Lookup List.

**Description:** A description of the Lookup List (if supplied).

## Values Tab

The **Values** tab is used to display and define the Lookup Values contained within each Lookup List.

**Lookup Values List:** A list of all the Lookup Values contained in the selected Lookup List is displayed.

- Each Lookup Value is displayed on a single row.
- The name and reference for each Lookup Value is displayed via the **Name** and **Reference** columns.
- Each Lookup Value can be set to appear in the minimised or maximised list for the Lookup List – a minimised list may typically contain the most commonly used values, whilst the maximised list will contain all the values.

This is defined via the **In Minimised** check box in the **Code** column:

☑ If the **In Minimised** check box is selected the Lookup Value will appear in the minimised list as well as the maximised list for the Lookup List.

☐ If the **In Minimised** check box is not selected, the Lookup Value will only appear in the maximised list for the Lookup List.

You can choose to display either the minimised or maximised list for the Lookup List by clicking on the **Code** column heading:

**Code:** This indicates the list is currently displayed in maximised mode. Click the **Code** column heading once to display the list in minimised mode.

**Move Value Up/Down**: You can change the order in which a Lookup Value is displayed in the pick-list on the Manager or Proforma form by highlighting a Lookup Value and clicking on the Move Value Up or **Down** buttons situated on the right of the **Values** tab.

**New Value:** Click on this button to create a new Lookup Value for the selected Lookup List.

**Copy Value:** Click on this button to copy an existing Lookup Value. Change the details for the copy as required.

**Delete Value:** Click on this button to delete a Lookup Value from the selected Lookup List.

**Code:** This field displays the code used to identify a Lookup Value. This can be used, for example, when it is necessary to identify a Lookup Value item when writing a report via UNIT-e Report Generator. A maximum of 10 characters can be entered.

**Note:** *You must include the code in the **Name** field if you want it to appear in the Lookup Value pick-list on a Manager or Proforma form.*

**Name:** This field displays the item name that will appear in the related Lookup Value pick-list.

**Notes:**

- *You can view approximately 20 characters in a standard Lookup Value pick-list.*
- *Do not duplicate Lookup Value Names, as users will not be able to determine which value has been selected.*

**Reference:** This field should normally be left blank as it is reserved by UNIT-e for additional information (e.g. currency and VAT).

**Description:** This field allows a more detailed description to be defined for a Lookup Value.

**Context:** Specify the context for which this Lookup Value can be used. This must match the context of the **Type** Lookup Value for the class that it is being specified. For example if you want to add a Level Lookup Value that only appears when Module Type "Course" is selected, you must enter the Context from the Module Type "Course" lookup value. Leave the Context blank to make this lookup value for all records.

**More information:** *See 'Context Filtered' (page 3-3).*

**Note:** *This value is case sensitive and must exactly match the Type context value.*

**Tip:** *To be able to view the **Type** lookup values and enter the context for new Lookup values, it helps to have two copies of UNIT-e Database Manager (Lookups) open:*

- *One with the **Type** lookup selected*
- *One with the lookup list requiring new values selected.*

**Valid From/To:** A Valid **From** and **To** date can be entered for each Lookup Value. This is purely for reference and reporting purposes; it does not define the length of time values will appear in the list.

**Parent:** This field displays any link defined between this Lookup Value and another Lookup Value in the UNIT-e system. This link is created via the **Select Parent** button (see below).

**Select Parent:** Click on this button to open the **Lookup Values** form. This form enables you to define a link between the selected Lookup Value and another Lookup Value in the UNIT-e system - this is purely for checking two values against each other in UNIT-e Report Generator.

**National 1:** Records the National code values for this Lookup. This field is populated by the installation scripts, with the same value that is imported into the **Code** field. The **Code** value can then be amended by your Institution if required, as the sample reports will reference the **National 1** code (see page 3-5).

**National 2** to **4** and **CDD 1** to **4:** The remaining National fields and the CDD fields are used if and when a new set of codes are required for the Lookup list for a return, for example if a funding body implements a new coding standard for a particular field. Each time an entire set of codes is changed, the new codes are added to the next available National field (or CDD field for CDD codes). The relevant core reports are then amended to extract the values from these fields for the applicable return fields (see page 3-5).

**UNIT-e:** Stores a standard set of supplied codes that the UNIT-e software is then able to use in core reports, etc. when necessary.

**Note:** *By default these fields are disabled, to prevent them being used for alternative purposes before they are required by the mapping process. As and when they are required, a new Setting is updated to enable the fields for the relevant Lookup values.*

**More information:** *See 'Chapter 3: Maintaining* Lookups*' (page 3-1).*

## Usage Tab

The **Usage** tab displays a list of all the Classes and Properties that the Lookup List is currently used by. This allows you to determine which Classes and Properties are being used for a Lookup List.

- Each Class that the Lookup List is used by is displayed on a single line. The Class is displayed in the **Class** column.
- The Property that uses the Lookup List is displayed in the **Property** column.

**More information:** *See 'Defining Lookup Value Parent Links' (page 3-14).*

# The Migrate Tool

This tool enables you to copy values from the **Code** or **Reference** property of a Lookup lists to the **National** property. Any number of Lookup lists can be migrated at one time.

To migrate values:

1. Select **Tools | Migrate** from the menu bar.
2. Use the **Migrate** form to select Lookup Lists for which you wish to migrate values.
3. Specify whether you are migrating **Codes** or **Reference** properties to the **National** property via the **Migrate** dialogue.

## Migrate Form

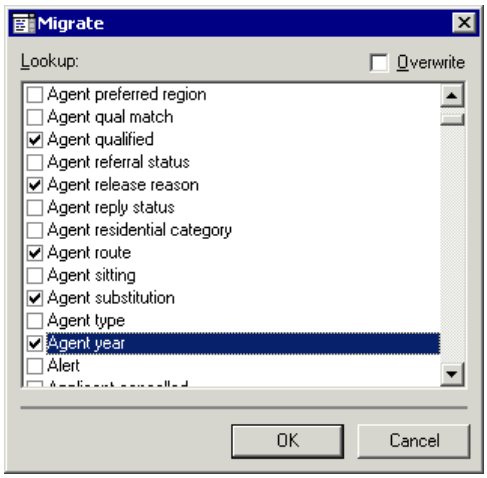



Figure 3-2 **Migrate** Form

**Lookup List:** Select the check boxes to specify which Lookup Lists to migrate.

**Overwrite:** Select this check box to overwrite existing National values.

**OK:** Click on this button to perform the Migration. A dialogue opens to provide the option of migration from either **Code** or **Reference**.

# Adding Lookup Values

To add a Lookup Value to a Lookup List:

1. Open UNIT-e Database Manager (Lookups) [UDMLK.exe]. This opens at the **Lookups** form (Figure 3-1).
2. Select the Lookup List you wish to add the Lookup Value to in the **Lookups** list.

**Tip:** *Use the "type-down" facility to select a Lookup List. For example, enter "Module t" to locate the Module type Lookup List.*

4. Ensure the **Values** tab is selected and displayed.
5. Select the position in the list where you require the new value.
6. Click on the **New Value** button.
7. A grey bar is placed in the **Lookup Values** list to indicate a new Lookup Value is being added, and the cursor moves to the **Code** field.
8. Complete the fields for the Lookup Value as required.
9. Position the new Lookup Value as required in the **Lookup Values** list.
10. Click on the **Save** button to save the new Lookup Value.

**Notes:**

- *Lookup Values can also be imported via the **Import** function.*
- *If you have created a Lookup Value for an application that is currently open, the application must be closed and re-opened before the new Lookup Value appears*.

# Copying Lookup Values

To copy an existing Lookup Value:

1. Open UNIT-e Database Manager (Lookups) [UDMLK.exe]. This opens at the **Lookups** form (Figure 3-1).
2. Select the Lookup List you wish to copy the Lookup Value for in the **Lookups** list.
3. Select the Lookup Value you wish to copy in the **Lookup Values** list.
4. Click on the **Copy Value** button.
5. A duplicate of the Lookup Value is created, and the cursor moves to the **Code** field.
6. Edit the Lookup Value details as required.
7. Click on the **Save** button to save the new Lookup Value.

# Editing Lookup Values

To edit an existing Lookup Value:

1. Open UNIT-e Database Manager (Lookups) [UDMLK.exe]. This opens at the **Lookups** form (Figure 3-1).
2. Select the Lookup List you wish to edit the Lookup Value for in the **Lookups** list.
3. Select the Lookup Value you wish to copy in the **Lookup Values** list.
4. Edit the Lookup Value details as required.
5. Click on the **Save** button to save your changes.

# Defining Lookup Value Parent Links

You can create a link between two Lookup Values and then use this link in UNIT-e Report Generator. To define a Lookup Value Parent link:

1. Open UNIT-e Database Manager (Lookups) [UDMLK.exe]. This opens at the **Lookups** form (Figure 3-1).
2. Select the Lookup Set that contains the Lookup Value you wish to define a Parent link for in the **Lookups** list.
3. Select the Lookup Value you wish to define a Parent link for in the **Lookup Values** list.
4. Click on the **Select Parent** button.
5. The **Lookup Values** form is displayed (Figure 3-3).

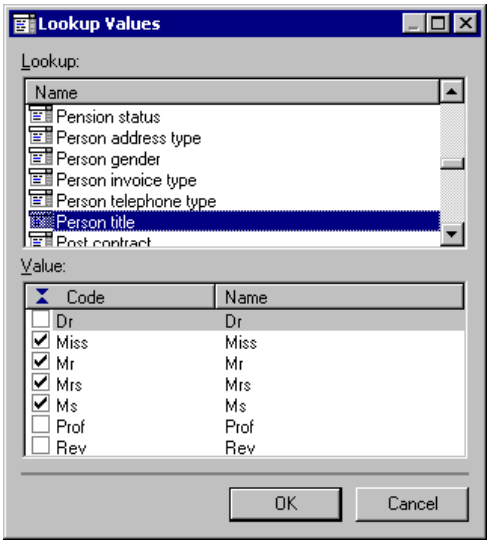



Figure 3-3 **Lookup Values** Form

**Lookup:** Select the property that will be updated by the report from the pick-list. The list can be sorted in ascending or descending order by clicking on the **Name** column heading.

**Value:** A list of available values for the Lookup Set selected in the **Lookup** field is displayed. Select the value you wish to populate the property with when the child Lookup Value is selected in a Manager or Proforma form.

The list can be viewed in maximised or minimised mode by clicking on the **Code** column heading.

**Note:** *You can clear a **Parent** link for a Lookup Value by selecting the "(none)" entry in the **Lookup** field. A dialogue is displayed, prompting you to clear the Parent link.*

6. Complete the **Lookup Values** form as required.
7. Click on the **OK** button to continue.
8. The **Lookup Values** form closes and the **Parent** field on the **Lookups** form displays the Parent link you have defined.

# Viewing Lookup Value Usage

It is possible to view the Classes and Properties currently using a Lookup List. To view the Class/Property usage for a Lookup List:

1. Open the **Lookups** form.
2. Select the Lookup List you wish to view the usage for in the **Lookups** list.
3. Select the **Usage** tab.
4. A list of all the Classes and Properties that the Lookup List is currently used by is displayed.

**More information:** *See 'Usage Tab' (page 3-9).*

# Deleting Lookup Values

To delete a Lookup Value from a Lookup List:

1. Open UNIT-e Database Manager (Lookups) [UDMLK.exe]. This opens at the **Lookups** form (Figure 3-1).
2. Select the Lookup List you wish to delete the Lookup Value from in the **Lookups** list.
3. Select the Lookup Value you wish to delete in the **Lookup Values** list on the **Values** tab.
4. Click on the **Delete** button.
5. The Lookup Value is deleted and the **Lookup Values** list is updated to reflect the deletion.
6. Click on the **Save** button to save your changes.

# Importing Lookup Values

It is possible to import new Lookup Values into the UNIT-e system. This is achieved via the import of a .txt file containing the new Lookup Values. The new Lookup Values can either be merged into an existing set of Lookup Values or can overwrite the existing values.

For example, you may wish to import a different set of Lookup Values for Lookup List "A". You can import a new set of Lookup Values and completely replace the existing set of Lookup Values within Lookup List "A".

The following rules apply for all import files:

- The file must be a comma separated, double-quote delimited .txt file.
- The file may or may not contain a header row describing the columns in a file.
- If no header row is supplied in the file:
  - The file must only contain two columns – a column of values for the Lookup Value "code" and the Lookup Value "name" (in this order).
  - All Lookup Values will be imported into the Lookup List currently selected in the **Lookups** list on the **Lookups** form.
- If header rows are supplied in the file:
  - The file must contain at least "code" and "name" columns, but can contain any valid combination of columns.

Columns can be in any order and may include any of the headings detailed in Table 3-3.

  - If no "type" or "lookup" column is supplied, all Lookup Values will be imported into the Lookup List currently selected in the **Lookups** list on the **Lookups** form.
  - If either a "type" or "lookup" column is supplied, each value will be imported into the Lookup List specified in this column. For example, if you specify a "type" column in the file and insert the value "Union" for each value in this column, all the import file values will be imported into the "Union" Lookup List.

    **Note:** *The column headers "type" and "lookup" are synonyms and only one or the other should be used in an import file.*

  - A column with the heading "start", "From" or "valid from" can be included to import values into the **Valid From** field on the **Values** tab.
  - A column with the heading "end", "to" or "valid to" can be included to import values into the **Valid To** field on the **Values** tab.
  - A column with the heading "reference" can be included to import values into the **Reference** field on the **Values** tab.
  - A column with the heading "description" can be included to import values into the **Description** field on the **Values** tab.
  - A column with the heading "default" can be included to specify that a Lookup Value should be initially set to appear only in the minimised list. The value "-1" should be inserted as the column value.
  - A column with the heading "national" can be included to import values into the **National** field on the **Values** tab.
  - Merging of imported Lookup Values into an existing set of Lookup Values is normally performed on the **Code** column; changes in other columns in the import file are applied to the existing record.

    **Note:** *A column with the heading "id" can be used as the merge column in exceptional circumstances, though this is not recommended.*

Table 3-3 shows the layout for an example Lookup Value import file.

| **“type”,** | **“code”,** | **“name”,** | **“description”,** | **“default”,** |
|---|---|---|---|---|
| "Union", | "A", | "value A", | “Example Lookup Value”, | "-1" |
| "Union", | "B", | "value B", | “Example Lookup Value”, | "-1" |
| "Union", | "C", | "value C", | “Example Lookup Value”, | "-1" |
| "Block", | "A", | "value A", | “Example Lookup Value”, | "-1" |

Table 3-3 Example Lookup Value Import File

- This example would result in three Lookup Values being inserted into the “Union” Lookup List.
- One Lookup Value would be inserted into the “Block” Lookup List.
- All values would be initially set to appear only in the minimised list for each Lookup List.

**Tip:** *Note that the last column in the import file does not end in a comma – this is a common mistake to make with import files and will result in an import error.*

Table 3-4 provides more detail about the various columns that may be included in an import file.

| **Heading** | **Date** | **Description** | **Mandatory/ Conditional** |
|---|---|---|---|
| **type / lookup** | Alphanumeric **reference** of the Lookup Set. | Specify the Lookup List into which the Lookup Values are imported.<br>If this heading is not included, the Lookup Values are imported into the Lookup List currently selected in the **Lookups** list on the **Lookups** form. | Conditional |
| **code** | Alphanumeric **code** for the Lookup Value.<br>Maximum of 10 characters. | The code used to identify the Lookup Value (e.g. used to identify a Lookup Value item when writing a report via UNIT-e Report Generator [URG.exe]).<br>Also include this value under the Name heading if you want the code to appear in the Lookup Value description. | Mandatory |
| **name** | Alphanumeric **name** for the Lookup Value.<br>Maximum of 20 characters. | The name or description for the Lookup Value that will appear in the related Lookup Value pick-list. | Mandatory |
| **start / from / valid from** | Date format reference | The **Valid from** date defined for the Lookup Value.<br>Displayed in the valid from field on the **Values** tab. | Conditional |
| **end / to / valid to** | Date format reference. | The **Valid to** date defined for the Lookup Value.<br>Displayed in the **valid to** field on the **Values** tab. | Conditional |
| **reference** | Alphanumeric **reference** for the Lookup Value. | The reference used for the Lookup Value in the UNIT-e system. | Conditional |
| **Description** | Alphanumeric **description** for the Lookup Value. | Description of the Lookup Value. | Conditional |

| Heading | Date | Description | Mandatory/ Conditional |
|---|---|---|---|
| **default** | Numeric indicator for the minimised list of a Lookup List. | Used to specify an imported Lookup Value as defaulting into minimised mode in a Lookup List. | Conditional |

Table 3-4 Lookup Import File Columns

## Running Imports

To import new Lookup Values into the UNIT-e system:

1. Produce a .txt file containing the Lookup Values you wish to import.
2. Open the **Lookups** form.
3. Click on the **Import Lookup Values** button on the toolbar.
4. The **Lookup Import** form is displayed (see Figure 3-4).

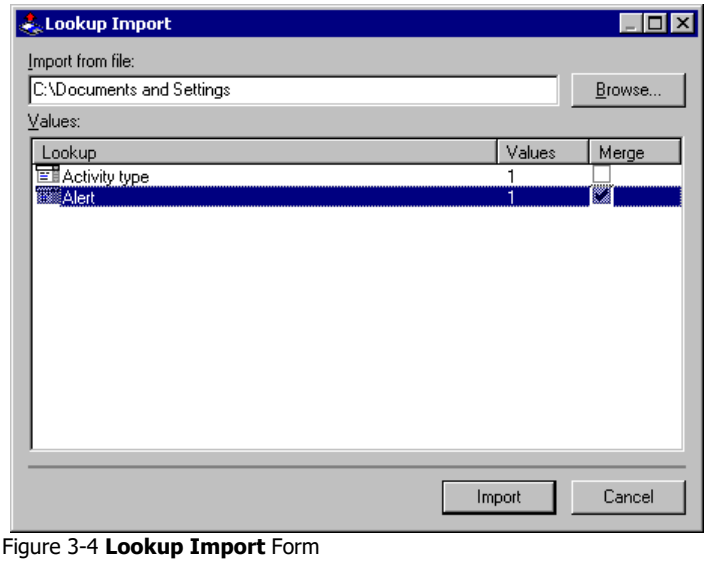



Figure 3-4 **Lookup Import** Form

**Import from file:** This field displays the path for the import file. This field is populated automatically via the **Browse** button.

**Browse:** Click on this button to browse for and locate the file you wish to import.

**Values:** Once you have selected a file via the **Browse** button, a list of the Lookups that will be imported via the file is displayed:

- Each Lookup List is displayed on a separate line.
- The **Lookup** column displays the Lookup List that the Lookup Values will be imported into.
- The **Values** column displays the number of Lookup Values that will be imported.
- The **Merge** column provides you with the option to either merge the imported Lookup Values into the existing Lookup List or to completely replace the existing Lookup Values with the imported Lookup values. Select or de-select the check box as required:

  ☑ **Selected:** Merges the imported Lookup Values into the existing Lookup List.

  ☐ **De-selected:** Replaces the existing Lookup Values with the imported Lookup Values.

5. Select a file to import via the **Browse** button.
6. The Lookup Values to be imported are displayed in the **Values** frame. Check the values are correct and set the merge options as required.

7. Click on the **Import** button to begin the import process. If the import is successful the **Import Success** dialogue is displayed (Figure 3-5).

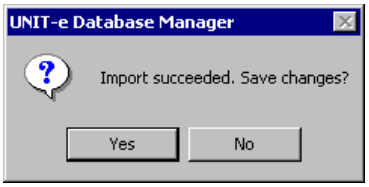



Figure 3-5 **Import Success** Dialogue

   i. Click on the **Yes** button to complete the import and save the changes. The **Lookup Import** form will close and you will return to the **Lookups** form.

   ii. Click on the **No** button to cancel the import process. The Lookup Values will not be imported and you will return to the **Lookup Import** form.

# Updating Lookup Values from Scripts

You can add to and update your lookup values by importing upgrade scripts using one of the following methods:

- Use the Automated Upgrade Wizard to import all amended scripts automatically
- Use UNIT-e Database Manager (System Transfer) [UDMST.exe] to import scripts individually

As you're able to create your own lookup values, running upgrade scripts by either method may result in your own codes being overwritten. To overcome this problem you can use the setting 'Application\DMST\Lookup\values\overwrite' to define the way in which your system deals with lookup values within scripts that match lookup values already in your database. The value that you apply to this setting will affect the outcome of script imports. The options are shown in Table 3-5.

| Setting value | Outcome |
|---|---|
| -1 | When you run the script, all of the values held against the lookup are overwritten by those in the script. |
| 0 | When you run the script, custom values (i.e. those created by your institution) are left unchanged but standard values are overwritten and any new values in the script are added. |
| 1 | When you run the script, all existing values remain unchanged but new values are imported from the script. |

Table 3-5 Lookup values overwrite options

**More information:** *Refer to the "UNIT-e Database Manager (Settings)" Handbook (UDMSE.pdf) for further information about settings.*

# Chapter 4: Using Class Editor

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# Overview

'Data dictionary' is the term that defines the classes and properties available in the UNIT-e system. The UNIT-e Class Editor application is used to view and edit the classes and properties in this data dictionary. Using UNIT-e Class Editor you are able to:

- View Classes and Properties
- Import Tables and Columns
- Edit Imported Classes and Properties

This chapter covers the following areas:


- The Class Editor Interface (see page 4-3)
- Viewing Classes and Properties (see page 4-7)
- Importing Tables and Columns (see page 4-8)
- Editing Imported Classes (see page 4-11)

# The Class Editor Interface

Use the **Class Editor** form (Figure 4-1) to view and edit classes and properties.

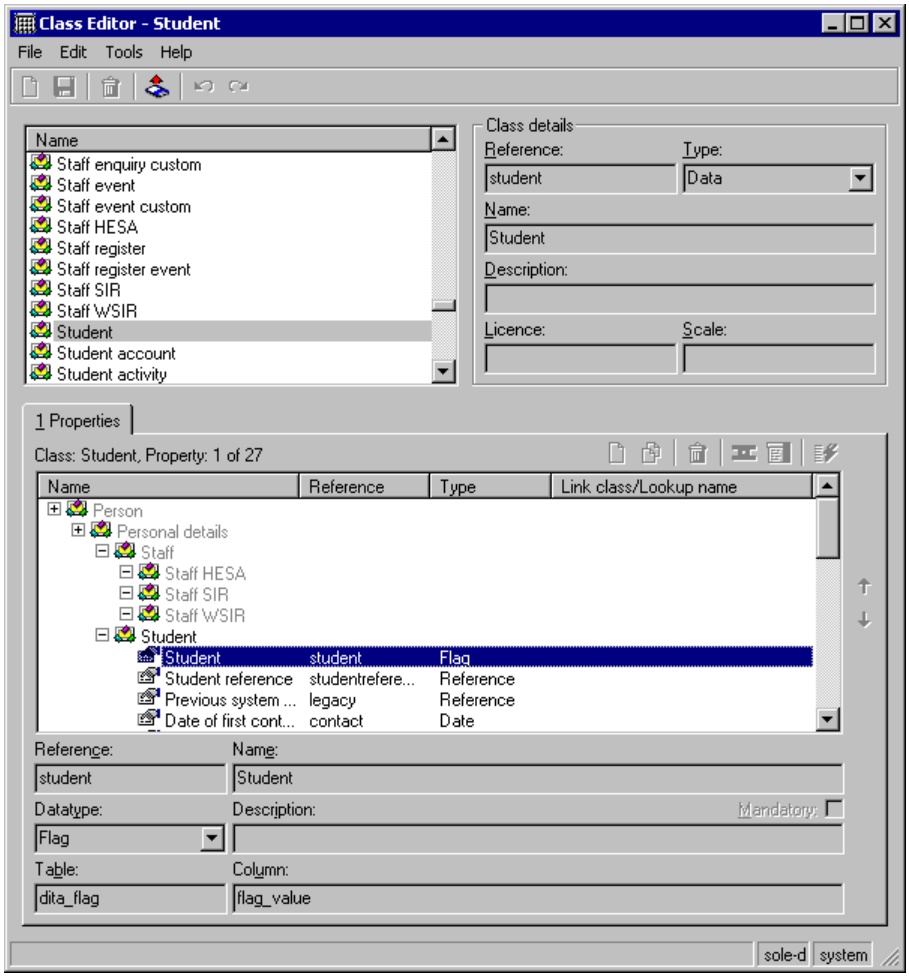



Figure 4-1 **Class Editor** Form

The **Class Editor** form consists of the following elements:

- Menu Bar (see below).
- Toolbar Buttons (see page 4-4)
- Class list (see page 4-4)
- Class Details Frame (see page 4-4)
- Properties Tab (see page 4-5)

## Menu Bar

The menu bar has the following options:

**File:** Contains options for creating new classes, along with saving, deleting and closing the **Class Editor** form.

**Edit:** Undo or redo any changes.

**Tools:** Allows you to Import a class.

**Help:** Displays information about UNIT-e Database Manager (Class Editor).

## Toolbar Buttons

The following toolbar buttons are available on the **Class Editor** form toolbar:

**New Class Definition:** Click on this button to create a new class definition.

**Save:** Click on this button to save your changes. This button is only enabled when you have imported a table.

**Delete Class Definition:** Click on this button to delete a class definition.

**Import Class Definition:** Click on this button to import a set of Lookups. The **Import External Class** form is displayed.

**Undo:** Click on this button to undo any changes.

**Redo:** Click on this button to redo any changes.

## Class List

The **Class** list situated in the top left quarter of the **Class Editor** form displays a list of all the classes in your data dictionary. You can sort the list in ascending/descending order by clicking on the **Name** column heading.

- Each class is displayed on a single line.
- The class currently selected is displayed in the title bar of the **Class Editor** form.

**More information:** *The "Working with UNIT-e" Handbook (WWU.pdf).*

## Class Details Frame

The **Class Details** frame situated in the top right quarter of the **Class Editor** form displays the details of the Class currently selected in the **Class** list. The following read-only fields are displayed:

**Reference:** The reference for the class.

**Type:** The type of table in the database. The following classes are available:

- System – Classes used to store information for the UNIT-e system.
- Data – Classes used to store the data recorded in the UNIT-e system.
- Archive – Classes used to archive data
- External – Classes created for external tables.

**Name:** The name given to the class.

**Description:** A description of the class.

**Licence:** Licence key required to access class.

**Scale:** Sizing factor for the class database table used when it is first installed.

## Properties Tab

The **Properties** tab displays information relating to the class selected in the **Class** list. It consists of the following:

- Toolbar Buttons (see below).
- Property List (see below).
- Property Values (see page 4-6).

### Toolbar Buttons

The **Properties** tab provides the following toolbar buttons:

**New Property:** Click on this button to add a new property to the currently selected class. This button is only available if an imported class is selected in the main **Class** list.

**Copy Property:** Click on this button to copy the current property. This button is only available if an imported class is selected in the main **Class** list.

**Delete Property:** Click on this button to delete the current property. This button is only available if an imported class is selected in the main **Class** list.

**Property Links:** Click on this button to link the current property to another class. This button is only available if an imported class is selected in the main **Class** list.

**Property Lookups:** Click on this button to assign the current property to an existing Lookup List. This button is only available if an imported class is selected in the main **Class** list.

**Indexes**: Click on this button to view, edit and create indexes via the **Indexes** form (see page 4-14). This button is only available if a supplied class is selected in the main **Class** list.

**Note:** *An appropriate licence is required to access the **Indexes** form.*

### Property List

Displays the currently selected class and property above the list.

Classes are displayed as follows:

- Selected Class: The class selected in the **Class** list is highlighted in the **Properties** list.
- Parent Classes: The parents of the currently selected class are displayed above it in the list. They appear as grey text and can be browsed, but not edited.
- Sibling Classes: Classes with the same parent are displayed at the same level in the tree-view. They appear as grey text and can be browsed, but not edited.
- Child Classes: Extensions of the currently selected class are displayed below it in the list.

Properties are displayed as follows:

- Selected Class Properties: The properties related to the selected class are listed below it in the tree view.
- Properties are automatically displayed for the class currently selected in the **Class** list. Properties for the other related classes in the list can be viewed as follows:
  - Click on the **Expand** ⊞ button to view the properties for a class.
  - Click on the **Contract** ⊟ button to hide the properties for a class.
- The following information is provided for each property:
  - **Name:** The reference of the currently selected property. This can be altered for imported classes.
  - **Reference:** The reference of the currently selected property. This can be altered for imported classes.

- **Type:** The data type of the currently selected property. This can be altered for imported classes.
- **Link class/Lookup name:** The class that this property links to, or the Lookup list name that this property uses. This can be altered for imported classes.

## Property Values

**Reference:** The reference of the currently selected property. This can be altered for imported classes.

**Name:** The reference of the currently selected property. This can be altered for imported classes.

**Data type:** The data type of the currently selected property.

**Description:** The description of the currently selected property. This can be altered for imported classes.

**Table:** The database table in which this property is stored.

**Column:** The database column in which this property is stored.



**More information:** *The "Working with UNIT-e" Handbook (WWU.pdf).*

# Viewing Classes and Properties

You can view all the classes in your database via the **Class/Property List.**

1. Open UNIT-e Class Editor [UDMCE.exe]. This opens the **Class Editor** form (Figure 4-1).
2. Select the required class from the **Class** pick-list.



**Tip:** *Use the type-down facility to jump to a certain class in the list. For example, press the **E** key to jump to the Enrolment class.*

3. To display properties for extended classes, click on the **Expand** button to expand the **class** tree-view.



**More information:** *Classes and properties can be viewed in more detail via the **Class Browser** form (see Figure 8-2).*

# Importing Tables and Columns

If you wish to access non-UNIT-e database tables via UNIT-e applications, they must be defined in your data dictionary. UNIT-e Class Editor provides a tool to import a definition of non-UNIT-e tables that exist in your database, into the UNIT-e data dictionary.

**Note:** *In order to import external licences you must have the 'Class Importer – Dictionary Importer' licence (DMCI).*

To import a table definition:

1. Ensure that the table to be imported exists in your database.
2. Open UNIT-e Class Editor [UDMCE.exe]. This opens the **Class Editor** form (Figure 4-1).
3. Click on the **Import** button to open the **Import External Class** form.
4. **Stage 1:** Select a table or view to import as shown in Figure 4-2.

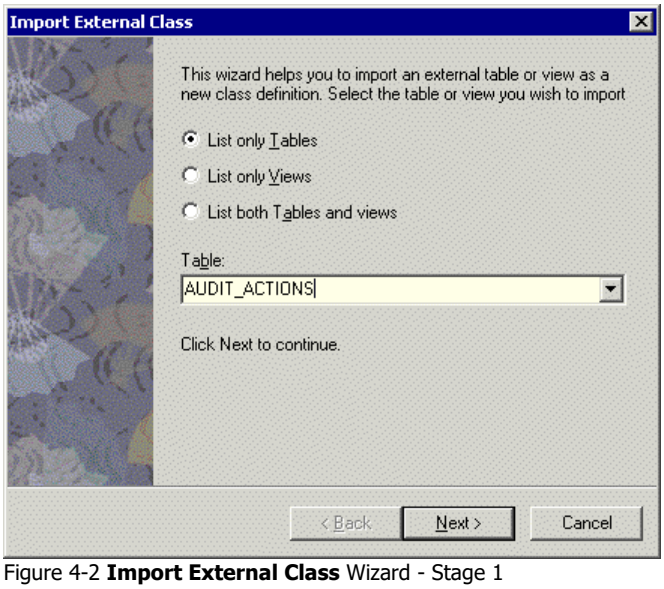



Figure 4-2 **Import External Class** Wizard - Stage 1

   i. Select one of the list options.
   ii. **Table:** Select a table from the pick-list.
   iii. Click on the **Next** button.

5. **Stage 2:** Specify how the imported table or view is identified in UNIT-e, as shown in Figure 4-3.

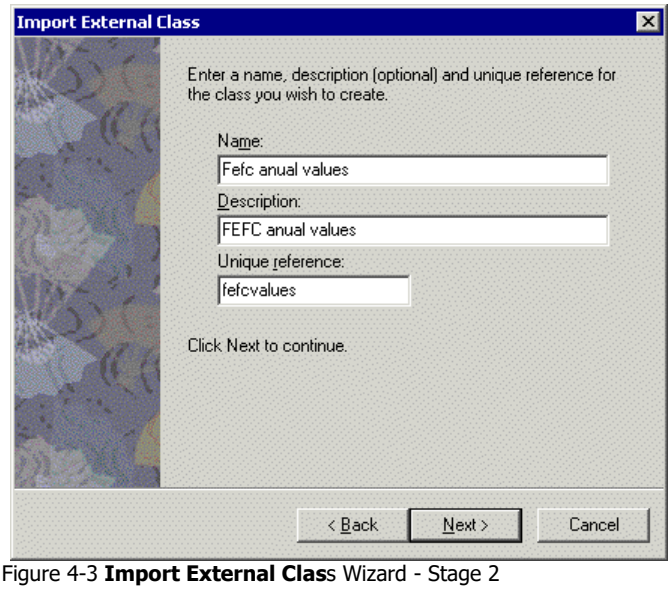



Figure 4-3 **Import External Clas**s Wizard - Stage 2

i. **Name:** Specify a name for your table.

ii. **Description:** Specify a description for your table.

iii. **Unique reference:** Specify a unique reference for your table.

iv. Click on the **Next** button.

6. **Stage 3:** Specify how the imported columns will be identified in UNIT-e, as shown in Figure 4-4.

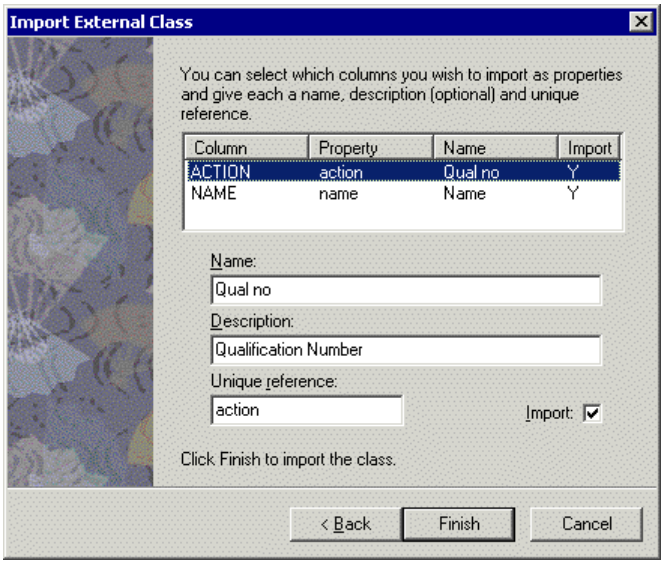



Figure 4-4 **Import External Class** Wizard - Stage 3

i. Highlight a column in the list.

ii. **Name:** Specify a name for the selected column.

iii. **Description:** Specify a description for the selected column.

iv. **Unique reference:** Specify a unique reference for the selected column. This need only be unique within the class you are importing.

v. **Import:** Select this check box to specify that this column is to be imported.

vi. Repeat this for each column in the list.

vii. Click on the **Finish** button.

7. Your selected table and columns are imported.

8. Click on the **Save** button to save the changes.

**Note:** *You must now set up user permissions for the newly imported class(es). You need to set at least 'select' rights for the relevant users/groups. Refer to the "UNIT-e Database Manager (Users)" Handbook (UDMUS.pdf) for further details.*

## Oracle Only

Run the following in QX.

```
CREATE OR REPLACE PUBLIC SYNONYM customer tablename FOR customer tablename

Grant Select,update,insert,delete on customer tablename to UNITERIGHTSMASTER
```

# Editing Imported Classes

A table may be edited in various ways:

- Importing Columns not Originally Selected (see below)
- Deleting Classes (see page 4-12)
- Deleting Properties (see page 4-12)
- Editing Classes (see page 4-12)
- Editing Properties (see page 4-12)
- Linking Properties to Classes (see page 4-12)
- Linking Properties to Lookups (see page 4-13)
- Creating Indexes (see page 4-14).

**Note:** *You cannot edit supplied classes.*

## Importing Columns not Originally Selected

If you did not select all the columns when importing a table, Class Editor enables you to import the remaining columns.

1. Open UNIT-e Class Editor [UDMCE.exe]. This opens the **Class Editor** form (Figure 4-1).
2. Select the imported class from the **Class** pick-list.
3. Click on the **New Property** button on the **Property** tab.
4. The **Import External Class** form (Figure 4-5) opens, displaying the columns not imported for the currently selected class.

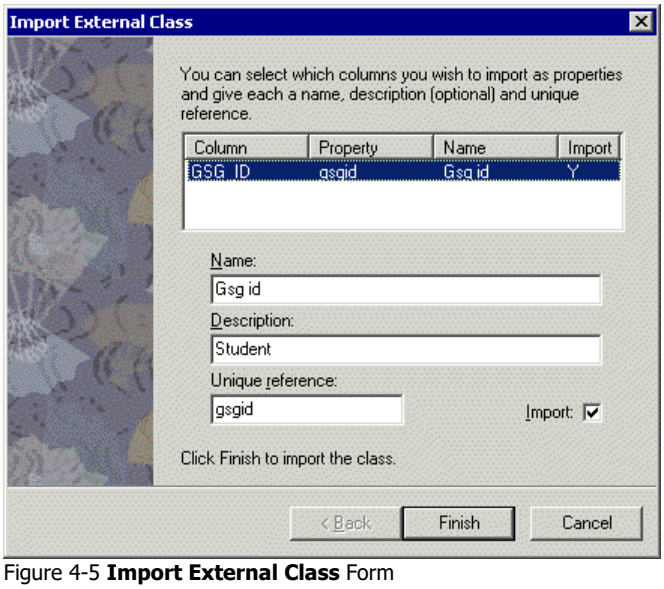



Figure 4-5 **Import External Class** Form

Highlight a **Column** in the list.

**Name:** Specify a name for the selected column.

**Description:** Specify a description for the selected column.

**Unique reference:** Specify a unique reference for the selected column.

**Import:** Select this check box to specify that this column is to be imported.

5. Repeat this for each column in the list.

6. Click on the **Finish** button. The selected columns appear as new properties for the selected class.

## Deleting Classes

To delete an imported class:

1. Open UNIT-e Class Editor [UDMCE.exe]. This opens the **Class Editor** form (Figure 4-1).
2. Select the imported class from the **Class** list.
3. Click on the **Delete** button to delete the selected class and all its properties.
4. Confirm the deletion.

## Deleting Properties

Once an external class has been imported, Properties that are not required can be deleted.

1. Open UNIT-e Class Editor [UDMCE.exe]. This opens the **Class Editor** form (Figure 4-1).
2. Select the imported class from the **Class** pick-list.
3. Select the property to be deleted.
4. Click on the **Delete property** button on the **Property** tab.
5. Confirm the deletion by clicking on the **OK** button when prompted.

## Editing Classes

To edit an imported class:

1. Open UNIT-e Class Editor [UDMCE.exe]. This opens the **Class Editor** form (Figure 4-1).
2. Select the imported class from the **Class** list.
3. Edit the class via the **Class Details** frame (see page 4-4).
4. Save the changes.

## Editing Properties

To edit an imported property:

1. Open UNIT-e Class Editor [UDMCE.exe]. This opens the **Class Editor** form (Figure 4-1).
2. Select the imported class from the **Class** list.
3. Select the property to be altered via the **Properties** list.
4. Edit the property via the **Properties** tab (see page 4-5).
5. Save the changes.

## Linking Properties to Classes

Once an external class has been imported, properties can be linked to other classes in your UNIT-e system. These links represent the relationship of imported classes to the other classes in the system. It enables them to be linked to other classes in UNIT-e Report Generator reports. To link an imported external class:

1. Open UNIT-e Class Editor [UDMCE.exe]. This opens the **Class Editor** form (Figure 4-1).
2. Select the imported class from the **Class** list.
3. Select the **property** to be linked.
4. Click on the **Property Links** button on the **Property** tab to open the **Property Links** form (Figure 4-6).

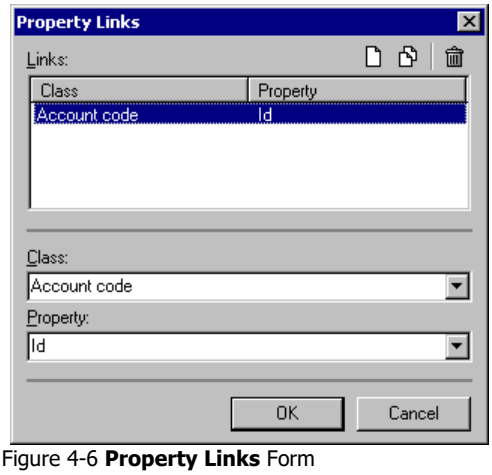



Figure 4-6 **Property Links** Form

5. Click on the **New** button to create a new link.
6. Select a class from the **Class** pick-list. The **Property** pick-list is populated with the properties for the selected class.
7. Select a property from the **Property** list.
8. Click on the **OK** button.
9. The link appears for the selected property in the list.

## Linking Properties to Lookups

Once an external class has been imported, properties can be associated with the Lookup Lists in your UNIT-e system. These links represent the relationship of imported classes to the other classes in the system. It enables them to be linked to other classes in UNIT-e Report Generator reports. To link a property:

1. Open UNIT-e Class Editor [UDMCE.exe]. This opens the **Class Editor** form (Figure 4-1).
2. Select the imported class from the **Class** pick-list.
3. Select the property to be linked.
4. Click on the **Property Lookups** button on the **Property** tab to open the Property Lookups form (Figure 4-7).

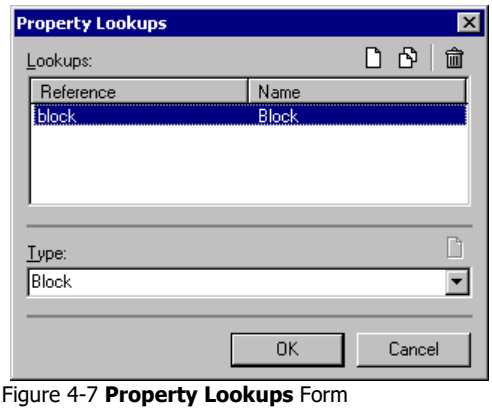



Figure 4-7 **Property Lookups** Form

5. Click on the **New** button to create a new link.
6. Select a Lookup List from the **Type** pick-list.
7. Click on the **OK** button.
8. The Lookup name appears for the selected property in the list.

## Creating Indexes

Indexes can be added in order to speed up searches and queries. Indexes can be based on a single column (i.e. property) or multiple columns. They can also be defined as consisting of unique values only, in order to avoid duplicate records being returned.

Create an index as follows:

1. Open UNIT-e Class Editor [UDMCE.exe]. This opens the **Class Editor** form (Figure 4-1).
2. Select the required class from the **Class** pick-list.
3. Click on the **Index** button on the **Property** tab to open the **index** form (Figure 4-8):

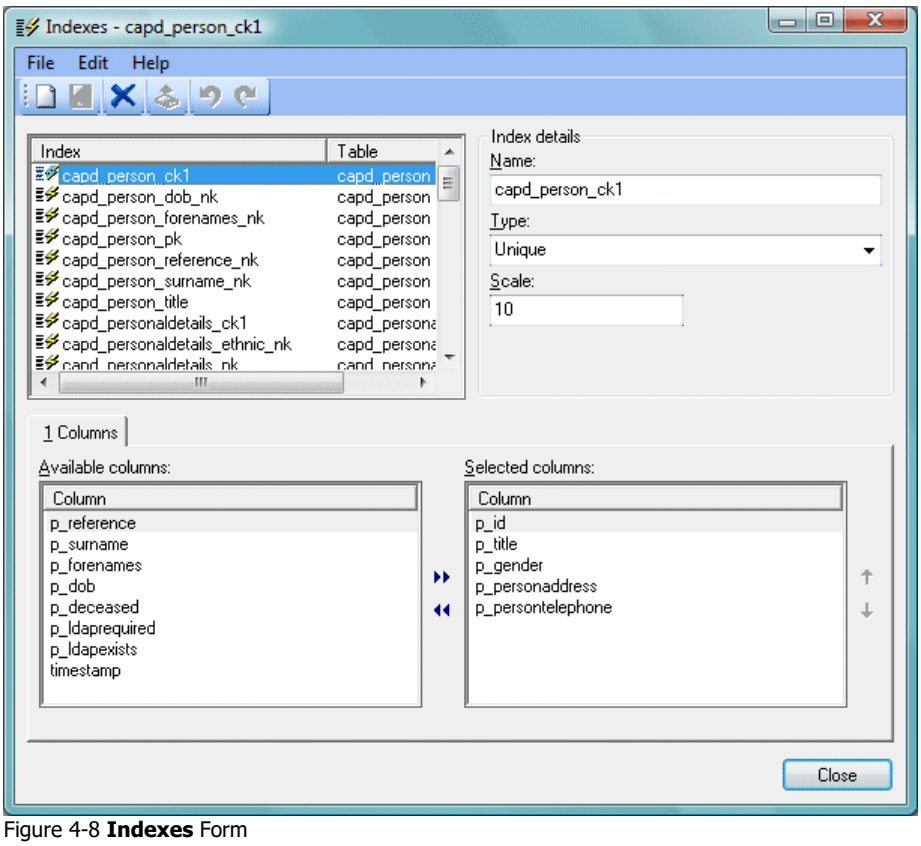
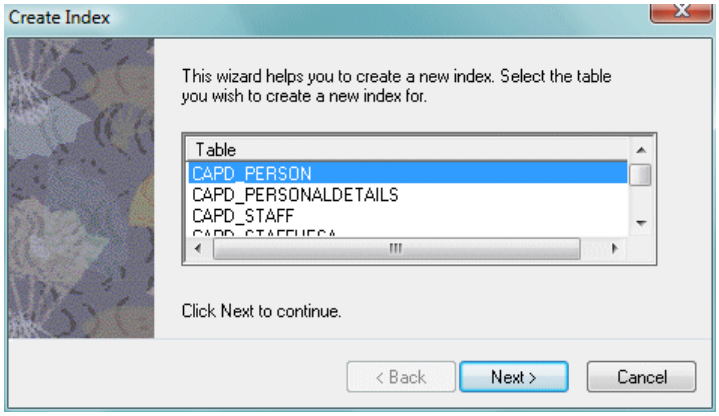
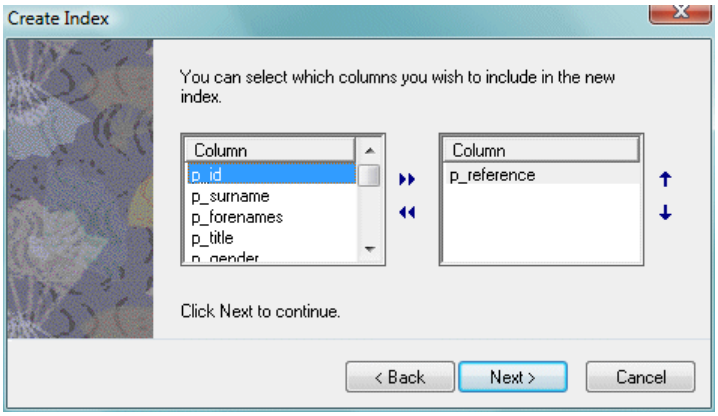



Figure 4-8 **Indexes** Form

4. Click on the **New** button to start the Create Index wizard:

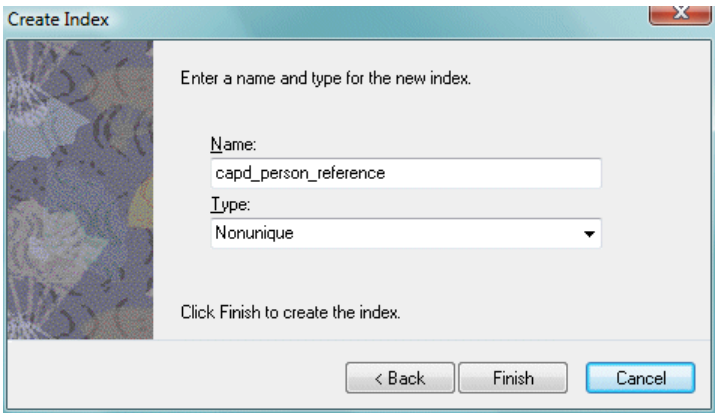



   i. Select the table (i.e. class) for which you wish to create a new index and click on the **Next** button.




ii. Select the columns (i.e. properties) you wish to include in the index and click on the **New** button.

**Note:** *Each index must include a unique list of columns, i.e. no two indexes can index the same single column or combination of columns.*




iii. Enter a **Name** for the index and select the **Type**, i.e. whether or not the index is to be restricted to unique values.

iv. Click on the **Finish** button to create the index.

5. On the **Index** form (Figure 4-8) ensure the new index is selected and enter '10' in the **Scale** field.
6. Save your changes.

# Chapter 5: Merging Records

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# Overview

UNIT-e provides two tools that enable you to merge data;

- UNIT-e Database Manager (Merge Data) [UDMMD.exe]
- UNIT-e Database Manager (Student Merging) [Student Merging.exe]

The tool that you use depends on the type of merging that you wish to carry out and the level of freedom that you wish to allow your system users.

The Merge Data tool offers you great flexibility, enabling you to merge duplicate records, transfer duplicate data to a single record or delete unwanted records, but it doesn't deal with online accounts (those created via UNIT-e Online Services), hotlinks to additional information or frozen records (e.g. accounts that have been invoiced).

What you can achieve using the Student Merge tool is strictly controlled by settings but you can merge duplicate student records, including those created via UNIT-e Online Services.

This chapter covers the following areas:

- Using the Merge Data Tool (see page 5-3)
- Using Student Merging (see page 5-15)

# Using the Merge Data Tool

The Merge tool within UNIT-e Database Manager enables you to:

- Identify records that contain duplicate data
- Transfer duplicated data to a single record
- Delete unwanted records



**Warning:** *Only use the Merge tool if you have considerable experience in managing and using the UNIT-e system. The Merge tool is a powerful facility that uses complicated processes to identify and merge duplicate records in the database. Whilst having a database containing duplicate data can cause problems, using the Merge tool incorrectly may cause irrevocable damage.*

This section covers the following areas:


- An Overview of the Merge Data Process (see page 5-4)
- Data Merge Issues to Consider (see page 5-4)
- An Overview of the Merge Data Form (see page 5-5)
- Selecting a Data Type (see page 5-7)
- Selecting Records (see page 5-7)
- Analysing Dependencies (see page 5-12)
- Viewing Data (see page 5-13)
- Merging Data (see page 5-14)
- Deleting Data (see page 5-14)

## An Overview of the Merge Data Process

Figure 5-1 gives an overview of the merge data process.

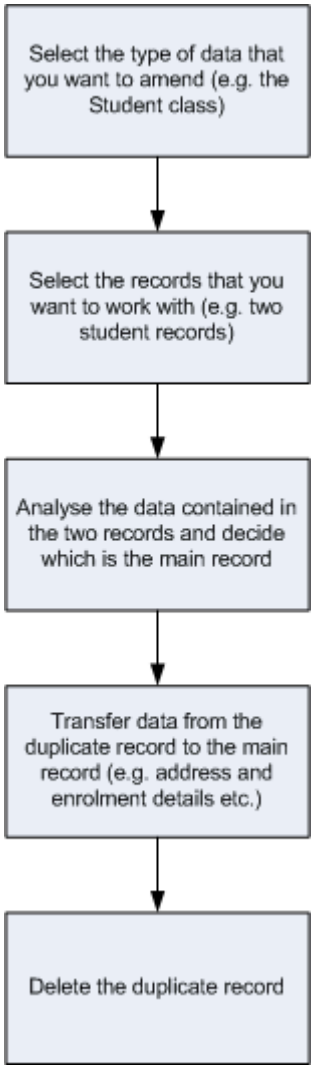



Figure 5-1 Merge data process

## Data Merge Issues to Consider

The following limitations apply when using the Merge Data tool:

- If you have access to the merge tool, but do not have user rights to specific classes, you cannot delete or transfer classes.
- Whilst UNIT-e Database Manager can analyse dependencies and maintain basic data integrity, it has no knowledge of the business rules associated with that data. You must therefore be careful not to use this tool to create data that, although it does not break data integrity, may still cause applications and reports to behave in unexpected ways. For example, problems may occur if you transfer a Student application from one student to another during de-duplication, without also transferring the associated Module application records.
- You cannot merge/delete data that has been frozen. For example, if a student has an invoice that has already been transferred to a finance system and is therefore frozen, you cannot transfer the invoice to a different student. The transfer is not permitted because, even if the data were duplicated, the transfer would involve changing a value in the frozen invoice record.

- The data model imposes further limitations, particularly with regard to properties in market-specific extended classes:
  - You can transfer a record containing extended properties from one student to another, e.g. you can transfer an Enrolment record containing ISR properties to a different student.
  - You cannot delete the record containing extended properties, because the object contains "foreign properties", e.g. you cannot delete an Enrolment record containing ISR properties.
  - The merge tool cannot determine from the Enrolment level which extended properties are attached to the record (e.g. ISR, HESA, Exams etc.). Therefore, you are not allowed to delete the record.
  - To delete a class containing extended properties, you need to:
    - Select the extended class (e.g. Enrolment ISR), in the main pick-list on the **Merge** form.
    - Delete the record on the dependency diagram.
    - Return to the process of merging the top-level records and deleting the redundant records.
  - You *cannot delete* a record that has *multiple* extensions (e.g. Enrolment ISR, Exams and so on). You may have to edit the properties for the extended properties using one of the UNIT-e data entry applications.

## An Overview of the Merge Data Form

The Merge process is carried out using the **Merge** form (Figure 5-2).

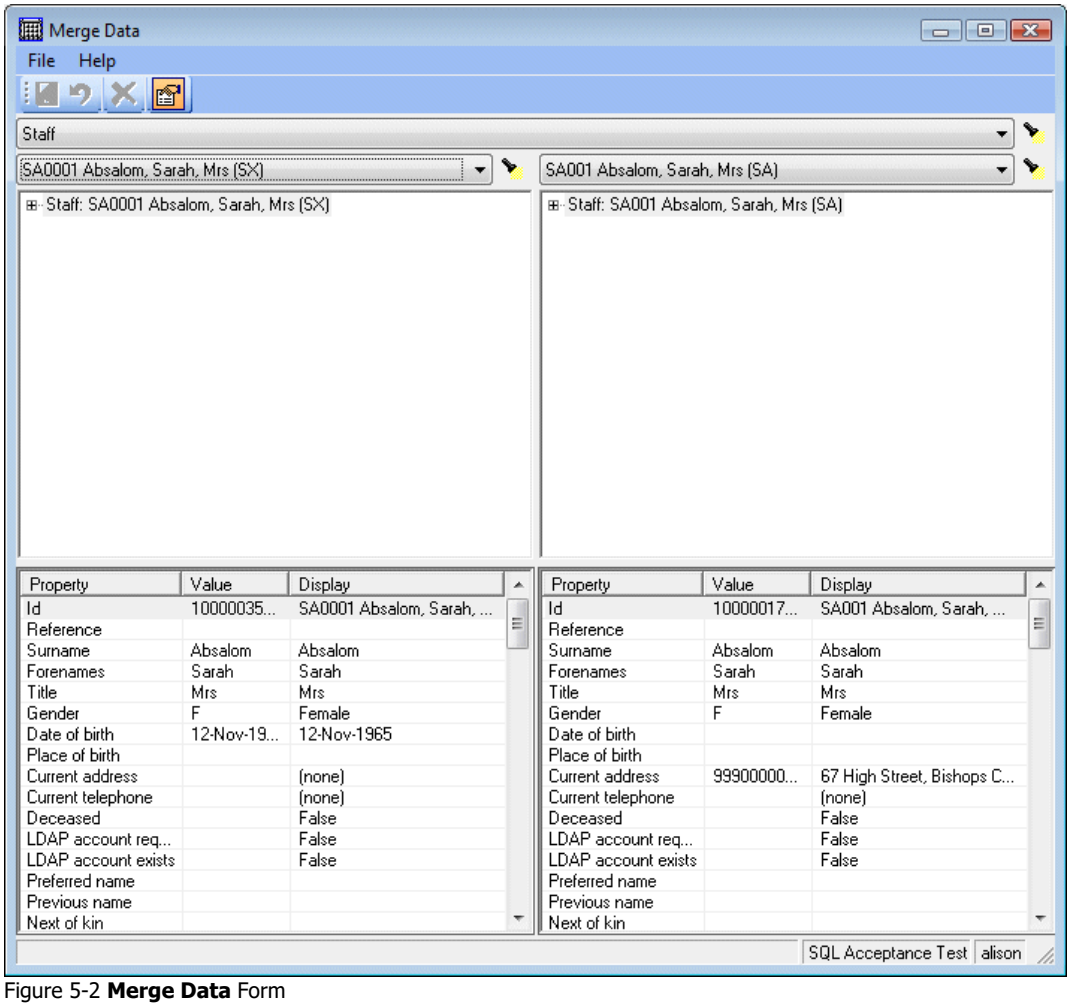



Figure 5-2 **Merge Data** Form

The **Merge** form consists of the following elements:

## Class Pick-list




The main Class pick-list is the starting point for the merge procedure. Select a class from the pick-list to work from. For example, to merge student information, select the Student class or the market-specific equivalent (Student ISR, Student HESA etc.). This pick-list displays the class selected the last time the **Merge** form was open.

**Note:** *When selecting a class, select the extended class rather than the base class from the pick-list (e.g. select Person telephone rather than Telephone, Enrolment fee rather than Fee etc.). This is because the Merge Data tool uses reports to access records and some of the base classes do not have associated pick-list reports. This also applies to archive objects (e.g. FES 00 FES1, ISR 00 Student and so on).*

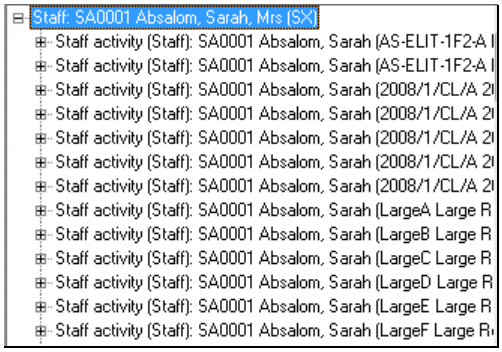
You can use the **Search** button beside the class pick-list to populate both Record pick-lists (see below) with records matching your search criteria.

## Record Pick-lists




Use the **Search** buttons to select the records that you wish to compare for duplicate data. When you select a record the record dependencies are displayed (see below).

## Record Dependency Frames




The **Record Dependency** frames display all of the records that are directly linked to the record selected in the pick-list. Click on a record to view the details in the **Data** frame (see below). You can expand or contract any of the lists in this frame.

## Data Frames

| Property | Value | Display |
|---|---|---|
| Id | 10000035... | SA0001 Absalom, Sarah, ... |
| Reference | | |
| Surname | Absalom | Absalom |
| Forenames | Sarah | Sarah |
| Title | Mrs | Mrs |
| Gender | F | Female |
| Date of birth | 12-Nov-19... | 12-Nov-1965 |
| Place of birth | | |
| Current address | | (none) |
| Current telephone | | (none) |
| Deceased | | False |
| LDAP account req... | | False |
| LDAP account exists | | False |
| Preferred name | | |
| Previous name | | |
| Next of kin | | |

**Data** frames can be accessed to display a more detailed view of the data stored in a record. Data frames are initially hidden but can be displayed by clicking on the **Properties** button.

The following information is displayed in a **Data** frame:

- Property name
- The actual value of the property stored in the database
- The value displayed to the user on a Manager/Proforma form

You cannot edit the data using this view.

**Note:** *The displayed value for flag, Lookup Value, Id and link properties is different to the actual value stored in the database: Flags are displayed as "True" or "False".*

- *Lookup Values are displayed using their Description.*
- *Id and link properties are displayed using the corresponding pick-list report, if identified.*
- *Date fields that contain a time value set to "00:00:00:" (representing midnight) are displayed without an additional time component.*

## Selecting a Data Type

To identify the class to use as a starting point:

1. Open UNIT-e Database Manager (Merge Data) [UDMMD.exe] to display the **Merge Data** form (Figure 5-2).

   **Note:** *If the Merge item is greyed out, you have not been set-up with the correct user rights.*

2. Select the appropriate class from the Class pick-list.

## Selecting Records

Use one of the following methods to select the two records you wish to analyse:

- Click on the **Search** button beside the Class pick-list to populate both Record pick-lists with records that match your search criteria.
- Click on the **Search** button beside the left-hand Record pick-list to populate that list with records that match your search criteria.
- Click on the **Search** button beside the right-hand Record pick-list to populate that list with records that match your search criteria.

The **Filter** form is displayed when you click on any of the **Search** buttons. By selecting properties and defining search criteria you can use the **Filter** form to restrict the records returned to the **Select** form.

- Using the Filter Form (see page 5-8)
- Using the Search Form (see page 5-12)

## Using the Filter Form

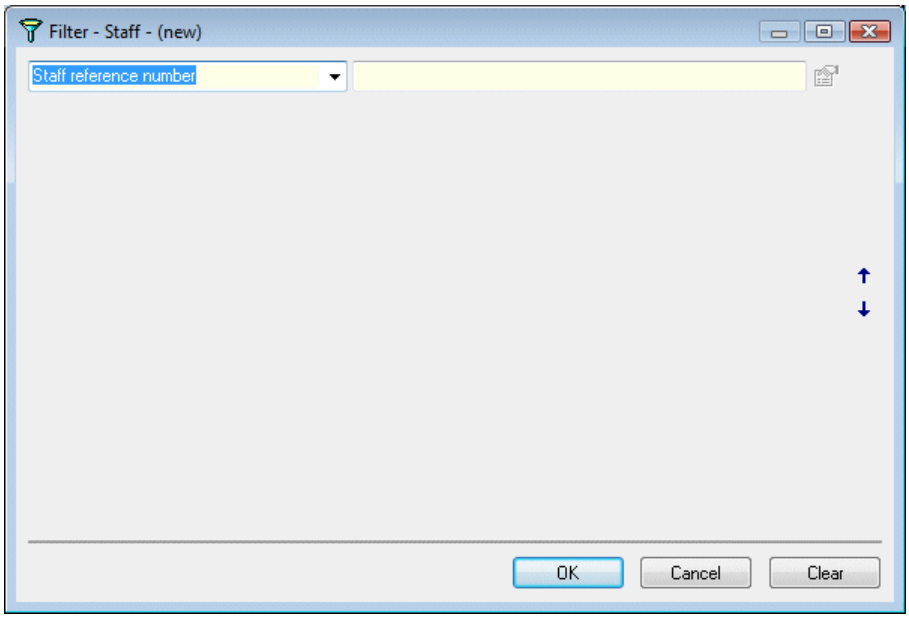



Figure 5-3 **Filter** Form

By selecting properties and defining search criteria you can use the **Filter** form to restrict the records returned to the **Select** form. Only records matching your selection criteria are returned.

You can apply multiple filter parameters for any combination of properties for the selected class. For example, you can apply a filter to only return Student records which:

- Contain Gender set to Female.
- Are linked to a Sponsor record that contains a reference beginning with FEFC%.

**Property:** The fields on the left-hand side of the form list the properties currently available for the selected class. When you first open this form, the software automatically attempts to display the most "useful" starting property; typically this is the reference property.

**Note:** *The application cannot always be guaranteed to display the most "useful" property for every class in the UNIT-e database.*

**Value:** The fields on the right-hand side of the form allow you to enter a filter value for the property selected. You can use any of the special characters and combinations of characters available throughout the UNIT-e system (e.g. use "%" to define a sequence of characters).

This form can be used in various ways:

- Adding Parameters (see page 5-9)
- Ordering Parameters (see page 5-9)
- Deleting Parameters (see page 5-9)
- Adding Flag Parameters (see page 5-9)
- Adding Lookup Value Parameters (see page 5-9)
- Adding ID / Link Parameters (see page 5-10)
- Using Static Lists for ID / Link Properties (see page 5-10)
- Using Sub-filters for ID / Link Properties (see page 5-11)

### *Adding Parameters*

Each time you add a parameter value, a new property field and value field are added to the form (Figure 5-4). If you do not define a filter value, the parameter is ignored.

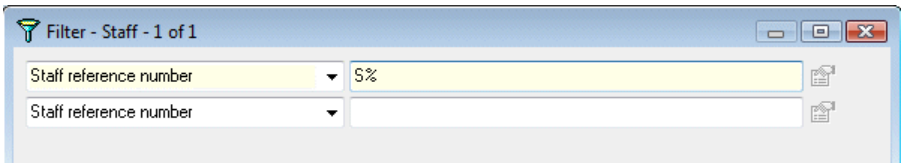



Figure 5-4 **Filter** Form - Adding Parameters

### *Ordering Parameters*

The order in which the filter parameters are displayed on the form controls how the filter process is performed. To efficiently filter data, add the parameter that restricts the most data at the bottom of the form. To change the order of a parameter, click in a field and perform one of the following:

- Click on the **Up/down** arrow buttons.
- Press **Alt + Shift + Cursor-Left** to move the parameter up.
- Press **Alt + Shift + Cursor-Right** to move the parameter down.

### *Deleting Parameters*

Click on the **Clear** button to clear all filter parameters displayed on the form.

### *Adding Flag Parameters*

To define filter criteria for a flag property (e.g. Student flag, Employer paying flag etc.):

1. Select the flag property in the left field.
2. Carry out one of the following:
   - Click on the button beside the corresponding value field. The "–1" (true) value is inserted into the value field automatically. This instructs UNIT-e to only return records that have the flag selected.
   - Use the "|" character. This instructs UNIT-e to only return records that do not have the flag selected.

### *Adding Lookup Value Parameters*

To define filter criteria for a Lookup Value property (e.g. Gender, Title, Module type etc.):

1. Select the Lookup Value property in the left field.
2. Click on the **Edit Parameter** button beside the corresponding **Value** field to open the **Values** form (Figure 5-5).
3. Select a set of Lookups. The **Values** form initially displays the Maximised list of Lookups. Click on the **Minimise/Maximise** button at the top left-hand side of the list to change the view. The form also displays any previously selected Lookup Values and settings for a property.
4. To only return records that contain a specific set of values, highlight a set of values in the list. When you click on the **OK** button, the selected values are inserted into the value field using the "|" separator (e.g. Mr|Mrs|Miss|Ms).

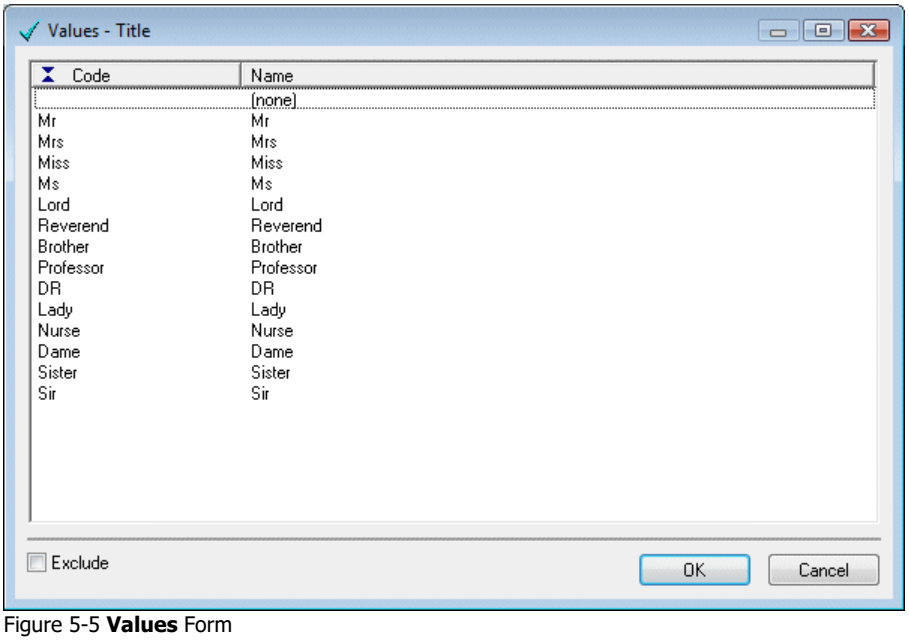



Figure 5-5 **Values** Form

5. To only return records that do not contain a specific set of values, highlight a set of values in the list and select the **Exclude** check box. When you click on the **OK** button, the selected values are inserted into the value field using "!" character to indicate that the values are excluded and the "|" separator (e.g. !|Rev|Prof|Dr).

### *Adding ID / Link Parameters*

When defining ID and link properties, you can either:

- Enter a static list of ID values. This enables you to supply a **fixed** set of IDs identifying a set of records.
- Define a sub-filter to identify ID values **dynamically**. This enables you to define a sub-filter that identifies a set of records using filter criteria.

The main difference between providing static IDs and identifying records dynamically, is how the records are used by the **Merge** form as you change the data contained in a record.

If you use a static list to identify records, the **Merge** form always uses the supplied IDs to display records.

If you use a sub-filter to identify a set of records, the **Merge** form continues to re-apply the filter when selecting which records to display.

This means, when using static lists, even if you change a record and it no longer meets the criteria, the record is still used by the **Merge** form. When using dynamic sub-filters, when you change the data in a record, the **Merge** form may not make it available if it no longer meets the filter criteria.

The left field on the **Filter** form displays the list of properties available for the object. The ID and link properties for the object occur in the list multiple times.

Each subsequent entry includes the name of another object and property name. This indicates that you can use a sub-filter to obtain a set of IDs dynamically.

### *Using Static Lists for ID / Link Properties*

To define a static set of values for an ID or link property (e.g. Student Id, Employer Id etc.):

1. Select the ID or link property in the left field. You must select the first occurrence of the property in the list. For example, select Current employer. Do not select Current employer (Employer Id), Current employer (Exam board Id) etc.
2. Click on the button beside the corresponding **Value** field.

3. The Search linked class form is displayed, either:

   i. Select the class on which you want to filter. For example, if you are filtering on the Student Id property, you are presented with a form displaying all of the objects, which use the Id to link to the original Student class (Person, Personal Details, Student ISR, Student HESA etc.).

   This provides considerable flexibility for setting-up filters. For example, you can set-up a filter to only return records for students who are also members of staff.

   ii. Select the class to which the property links. For example, if you are restricting Student records which are linked to a specific employer, identify whether the filter applies to an Organisation, Employer, School etc.

4. Click on the **OK** button.

5. The **Filter** form and **Select** form are displayed enabling you to select the records, to be included in the filter. These forms enable you to a further filter, to enter criteria against the object selected at the top-level. For example, if you are defining criteria for the Current employer link property on the Student record, you are prompted to enter further criteria for identifying which Employer records to use within the filter.

   **Note:** *The **Select** form contains additional **Null** and **Exclude** check boxes to control which records are used within the filter.*

6. After you have selected records to be used as part of the filter, the results are inserted into the value field on the **Filter** form. The selected values are inserted using the "|" separator.

   **Note:** *The manual editing of the syntax returned by defining a static list of values for an ID or link property is not recommended.*

### *Using Sub-filters for ID / Link Properties*

To identify values dynamically for an ID or link property (e.g. Student Id, Employer Id etc.):

1. Select the ID or link property in the left field. You must select the occurrence of the property that also contains the additional object in the list. For example, select Current employer (Employer Id), or Current employer (Exam board Id) etc. Do not select Current employer.

   **Note:** *For example, select Current employer (Employer Id) to filter on Employer records.*

2. Click on the **Search** button beside the corresponding **Value** field.

3. Enter filter criteria on the **Filter** form to define further criteria for the selected object. Click on the **OK** button.

4. The value field on the original **Filter** form is updated to display (filter). The value itself is greyed out because you can only edit the filter criteria by clicking on the Drill button.

5. Click on the **Search** button in the Search frame and complete the **Filter** form.

6. Highlight an entry, or multiple entries, in the **Search** frame and either:

   - Double-click on a single entry.
   - Click on the **Add** button.
   - Press the Insert key.

   Alternatively, click on the **Add All** button to transfer all of the entries to the **Selected** frame.

7. Only the records displayed in the **Selected** frame will be available for selection on the **Merge** form.

8. To remove records from the **Selected** frame, highlight an entry, or multiple entries, and either:

   - Double-click on a single entry.
   - Click on the **Remove** button.

- Press the **Delete** key.

9. Click on the **OK** button.

**Note:** *If you open the **Search** form again during the same session (before the **Merge** form is closed), the results of your last search are retained.*

## Using the Search Form

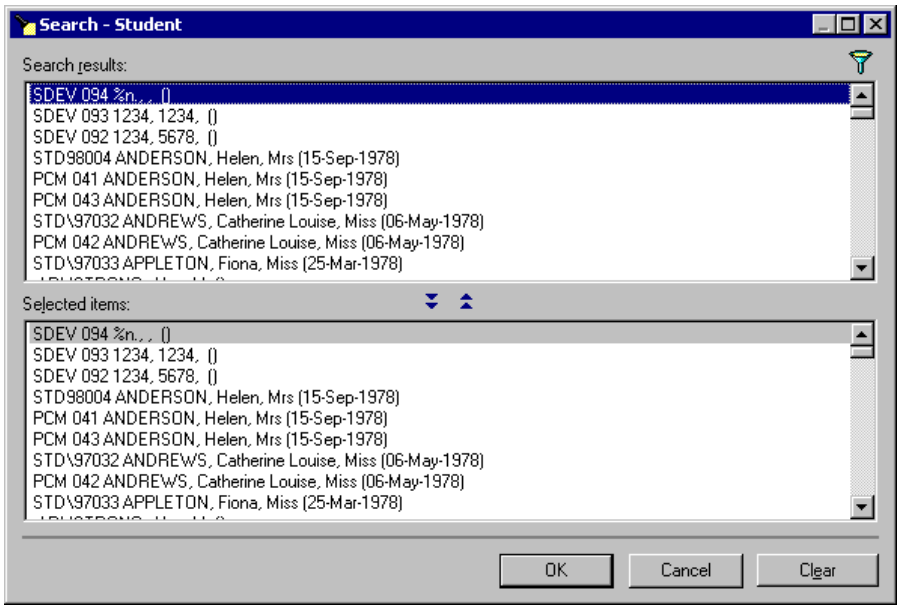


Figure 5-6 **Search** Form

**Search results frame:** Searches are conducted within this frame.

**Selected items frame:** Displays records currently selected. Records are added from the **Search** frame.

**Clear Button:** Click on this button to clear the **Selected items** frame.

The **Search** form allows you to select the records you want to compare for duplicate data. These records are returned to the **Merge** form (see above).

The process of selecting data based on filter criteria is both powerful and flexible. To identify a set of records, you may set-up multiple levels of selection and filters using the **Select** form and the **Filter** form. You must be aware that due to the extensive selection and filter processes available in the merge tool, it is recommended that only experienced users of the UNIT-e system (in particular UNIT-e Report Generator) use the merge tool.

**Note:** *This form contains additional check boxes if you are using the form to identify a set of records that will comprise the filter. These records are returned to the **Filter** form (see page 5-9).*

You can perform multiple searches using different filter criteria and add different sets of records to the **Select** frame to build up a complete set of records.

## Analysing Dependencies

The **Record Dependency** frame displays all of the records that are directly linked to the record selected in the pick-list.

**Note:** *When you first select a record, the process of analysing the data may take some time, as the tool has to register multiple classes and reports to obtain the dependencies.*

Initially, only the top-level dependencies are displayed. Click on the + symbol to expand a level and view its contents.

**Warning:** *Do not use the windows hotkey (keypad *) to recursively expand all levels of the diagram, as the software may take a considerable amount of time to analyse the dependencies of so much data.*

The application obtains the information using the name of the class and the standard pick-list report for the class. Each level displays the information returned by the pick-list report. For example, the Student pick-list report used to identify a Student record displays the Student reference, Surname, Forenames, Title and DOB.

If an error occurs whilst obtaining the description of a record using a pick-list report, the item is displayed in **red** text on the dependency diagram.

Items displayed as greyed out / in square brackets on the dependency diagram, indicate that the record already appears in another area on the diagram (typically the item occurs higher up). You cannot carry out an action on an item that is greyed out / in square brackets.

## Viewing Data

**Data** frames can be accessed to display a more detailed view of the actual data stored in a record. Data frames are initially hidden. The following information is displayed in a **Data** frame:

- Property name
- The actual value of the property stored in the database
- The value displayed to the user on a Manager/Proforma form.

You cannot edit the data using this view.

**Note:** *The displayed value for flag, Lookup Value, ID and link properties is different to the actual value stored in the database:*

- *Flags are displayed as True or False.*
- *Lookup Values are displayed using their Description.*
- *ID and link properties are displayed using the corresponding pick-list report, if identified.*
- *Date fields that contain a time value set to "00:00:00:" representing midnight are displayed without an additional time component.*

To view the **Data** frame:

1. Right-click on a **Record Dependency** Frame and select **Show Data** from the pop-up menu.
2. Drag the splitter bar at the bottom of the window up.
3. Double-click on the bottom of the record above the splitter bar.

To hide the **Data** frame:

1. Right-click on a **Record Dependency** Frame and select **Hide Data** from the pop-up menu.
2. Drag the splitter bar at the bottom of the window down.
3. Double-click on the bottom of the record above the splitter bar.
4. Click on the **Properties** button.

## Merging Data

To merge the data contained in 2 records:

1. Select a record in the Record pick-list on the right.
2. Select a different record in the Record pick-list on the left.
3. Browse the data contained in each record.
4. Highlight the level containing the data you want to merge on the diagram.
5. Right-click on the item and select **Transfer** from the pop-up menu.
6. The linking properties on the selected records are changed to point to the new record.

**Note:** *To merge all of the data from one record to another, right-click on the top-level item and select **Transfer All** from the pop-up menu.*

## Deleting Data

To delete a record from the database (e.g. after you have merged all the necessary related records):

1. Browse the data contained in each record.
2. Highlight the record containing the data you want to delete on the diagram.
3. Either:
   - Right-click on the item and select **Delete** from the pop-up menu.
   - Click on the **Delete** button
   - Select **File | Delete** from the menu bar.

   **Note:** *You cannot delete an item if:*
   - *The record has dependencies.*
   - *You have not yet expanded the level to analyse its dependencies.*
4. The item is updated to display "DELETED". Your deletion is not made until you have saved your changes.

# Using Student Merging

This process enables you to identify any duplicate Student or Staff records in your UNIT-e Database and then merge those duplicates with the original (the record that contains the most data or the correct data). This process is based on the existing Stranger Mapping functionality, available in UNIT-e Online Services. A log is produced outlining the outcome of the process.

**Note:** *Although it is not possible to undo a merge, any duplicate Student or Staff records that are merged are archived.*

The following are provided:

- The existing Stranger Search Settings used for Stranger Mapping are used to specify the properties that are compared when the search for duplicate records is performed. In addition, two new Settings for NI number and postcode are provided.
- New fields have been added to the **Settings** tab in the **Online Stranger Mapping** form, to enable you to specify the required values for these new Settings.
- A set of rules are provided that the matching records must follow before they can be merged. These rules can be switched on or off using Settings provided. By default, records are not merged if both Students:
  - Have an active Direct Debit record
  - Have associated exam records

    **Note:** *This only applies if the candidate numbers differ. If they are the same the records are merged.*
  - Are on a Register
  - Have a Timetable

This section covers the following areas:

- Settings for Student Merging (see below)
- Merging Students (see below)

## Settings for Student Merging

These keys (Table 5-1) are used by the UNIT-e Student Merging tool to determine which parameters are used (by default) when matching students.

| Setting | Description | Notes |
|---|---|---|
| Application\Student Merging\Duplicate Search\Report | Report used when searching for duplicates. | e.g. 'student' |
| Application\Student Merging\Duplicate Search\Search Form | Search form used when searching for duplicates. | e.g. 'gn_student' |
| Application\Student Merging\Rules\Direct Debit Record | Used to prevent a merge if both student records have an active Direct Debit record. | The default is switched on; '-1'<br>It's recommended that you don't change this setting. |
| Application\Student Merging\Rules\Enrolment | Used to prevent merge if both students have been enrolled on same module. | The default is switched on; '-1' |
| Application\Student Merging\Rules\Exam | Used to prevent a merge if both student records have associated exam records. | The default is switched on; '-1'<br>It's recommended that you don't change this setting. |

| Setting | Description | Notes |
|---|---|---|
| Application\Student Merging\Rules\Register | Used to prevent a merge if both student records are associated with a record. | The default is switched on; '-1'<br>It's recommended that you don't change this setting. |
| Application\Student Merging\Rules\SCN Number | Used to prevent a merge if the student records have different SCN numbers. | The default is switched on; '-1'<br>It's recommended that you don't change this setting. |
| Application\Student Merging\Rules\Timetable | Used to prevent a merge if both student records have a timetable. | The default is switched on; '-1'<br>It's recommended that you don't change this setting. |

Table 5-1 Settings for Student Merging

**More information:** *Additional settings are required for the Pending Merged Students and Pending Merged Organisations processes. Refer to the "UNIT-e Online Services" Handbook (UOSC.pdf).*

## Merging Students

**Note:** *UNIT-e Student Merging automatically places students marked as duplicates on the left side of the form. You can define a record as a duplicate by setting the* ***Duplicate*** *flag against the student record. This flag is not currently available via a manager application, but can be included in a proforma or UNIT-e Information Interface application. You can also search for potential duplicates by activating the search option in UNIT-e Student Merging. When you click on a duplicate student, the right side of the form is populated with potential matches based on the settings specified (see page 5-15).*

**More information:** *Once a duplicate student is mapped to a student record, the actual merging of the record takes place through the UNIT-e Online Stranger Transfer Service, which runs periodically. Refer to the "UNIT-e Online Services" Handbook (UOSC.pdf) for more information about the UNIT-e Online Stranger Transfer Service.*

To use the Student Merge facility:

1. Open UNIT-e Student Merging [Student Merging.exe] (Figure 5-7) (in the UNIT-e Database Manager folder in Workplace).
2. Click on the **Search** button to search for duplicate students. If students have already been flagged as duplicates (see above note), they are automatically displayed, otherwise you must use the **Student Search** form to enter your selection criteria.
3. Records flagged as duplicates are shown on the left of the form and existing student records are shown on the right. You can click on a duplicate and/or student to view further details.

   **Note:** *The information shown for the duplicate and student is based on the settings used in the Stranger Search process (see page 5-15). All settings criteria must be met.*
4. If no matches are found you can temporarily change the selection criteria by amending the settings on the **Settings** tab (see page 5-18).
5. Select one of the duplicates on the left and one of the students on the right.
6. Click on the **Generate/Merge Students** Generate/Merge Students button to flag the selected records as ready for merging.
7. The records that are ready for merging are picked up and merged by the UNIT-e Online Stranger Transfer Service.

   **More information:** *Refer to the "UNIT-e Online Services" Handbook (UOSC.pdf) for more information about the UNIT-e Online Stranger Transfer process.*

8. A **Failed** flag is set against any records that do not meet the rules, and the failure is recorded in an error log that is saved to the directory specified in the UNIT-e Online Stranger Transfer Service.exe.config file. The merge process only tries again once the reason for the failure has been resolved.

**Note:** *The UNIT-e Online Stranger Transfer Service.exe.config file is located in the C:\Program Files (x86)\Education Software Solutions Ltd\UNIT-e Online Strangers Transfer Service directory. You need to amend the 'LogDefaultPath' entry in the file, as shown below.*

```
<setting name="LogDefaultPath" serializeAs="String">
 <value>C:\</value>
```

9. Go to the **Pending Merged Students** file (see page 5-20) in the UNIT-e Database Manager folder, which shows the records flagged for merging. The **Failed** flag can be deselected if the reason for the failure (as reported in the error log) has been resolved. Once the flag is removed the Online Stranger Transfer Service will attempt to merge those records again in the next run.

   The authorisation process for Online Strangers can also be skipped here by changing the **Matched** flag. Alternatively you can change the **Authorisation code** and inform the student.

## Student Merging Form

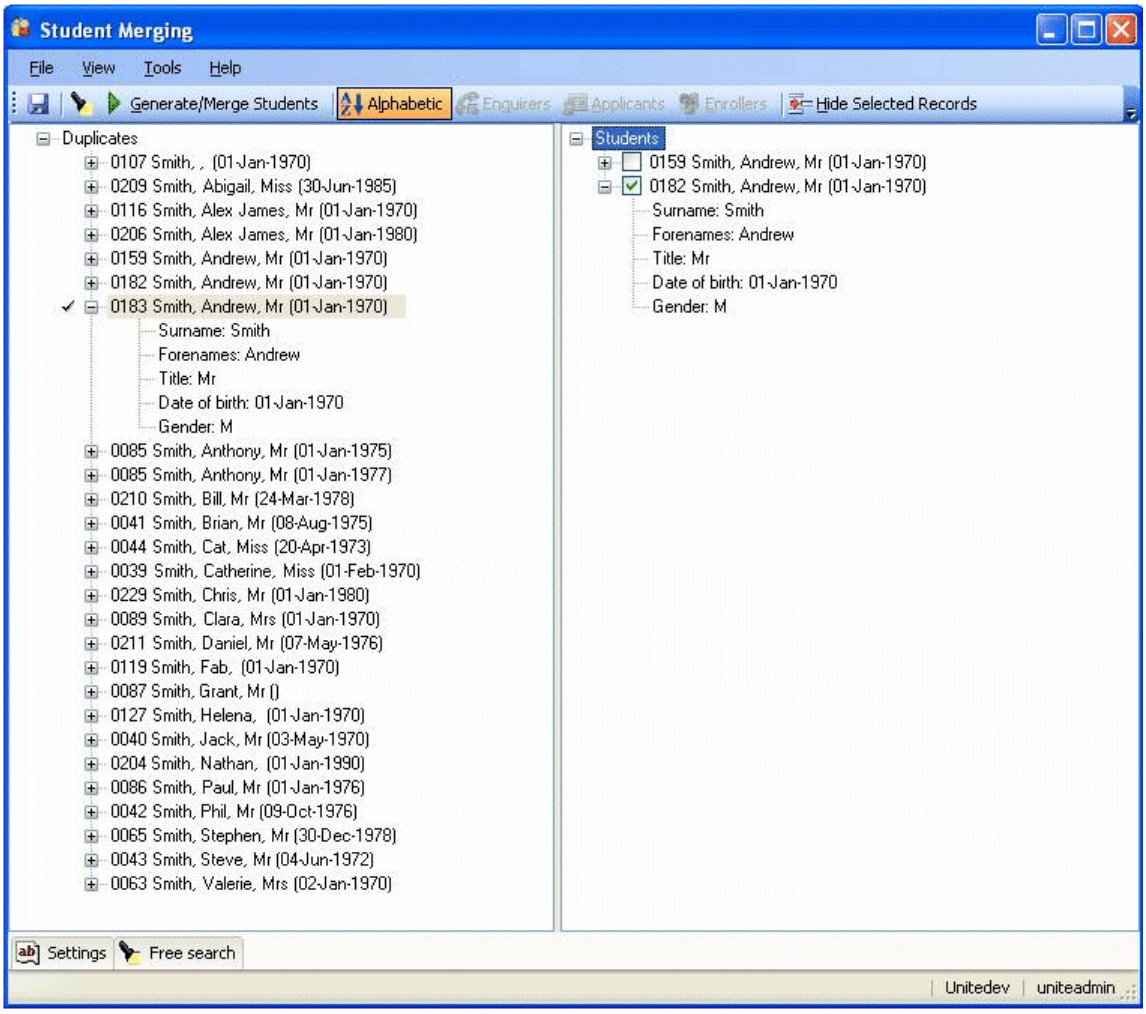



Figure 5-7 **Student Merging** Form

When you click on the **Search** button, this form shows duplicate or potentially duplicate records on the left and potential matching students on the right. You can view more detailed information about the student or the duplicate by right-clicking on the name and selecting Details from the pop-up menu. This displays the **Student Details** form (see page 5-19).

**Generate/Merge Students:** Click on this button to validate the merge process and flag the selected records as ready for merging.

**Alphabetic:** Click on this button to sort the data alphabetically.

**Enquirers:** This button is not used in the Student Merging process.

**Applicants:** This button is not used in the Student Merging process.

**Enrollers:** This button is not used in the Student Merging process.

**Hide/Show Selected Records:** Click on this button to hide or show the selected records. The text on this button changes according to the information currently displayed.

Hide/Show Matched Records: Click on this button to hide or show the matched records. The text on this button changes according to the information currently displayed.

**Settings:** Click here to open the **Settings** tab (Figure 5-8). Use this tab to temporarily override the matching settings defined by your institution in UNIT-e Database Manager (Settings) [UDMSE.exe].

**More information:** *See 'Settings for Student Merging' (page 5-15).*

**Free Search:** Click here to open the **Free Search** tab (see page 5-19). This enables you to ignore all pre-defined matching settings and carry out a search for a student that you know exists in the database. For example, a student called Elizabeth may have entered Liz as her forename online and the matching process would not find her database entry. By selecting **Ignore** as the **Forenames** option you can identify the match.

## Settings Tab

Use this tab to apply temporary matching criteria to the matching process.

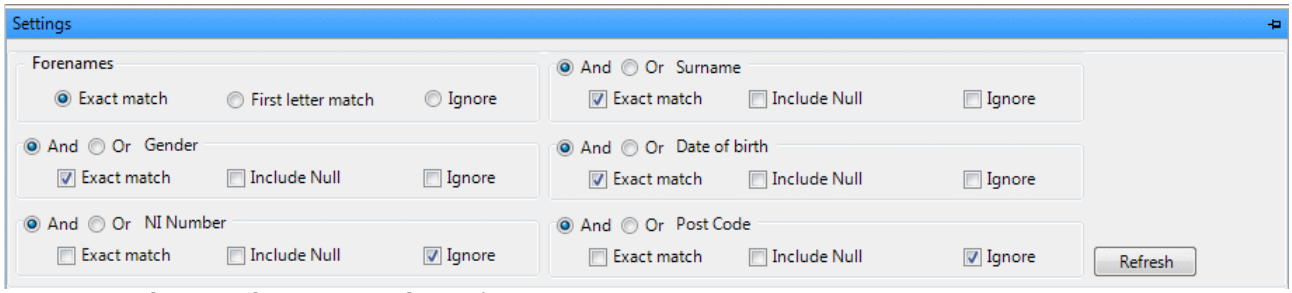



Figure 5-8 **Student Merging** Form - **Settings** Tab

**Notes:**

- *The default values shown on this tab reflect the settings values.*
- *The amendments that you make to the settings here only apply for the duration of the current session and are only applied to your user ID.*
- *The four frames on this form enable you to specify the combination of elements to be used in the matching process. Use the **And/Or** buttons to specify how the corresponding element should be included. For example, you can choose to match by **Forenames** and **Surname** by selecting the **And** radio button in the **Surname** frame, or you can match by **Forenames** or **Surname** by selecting the **Or** radio button in the **Surname** frame.*

**Forenames:** Select the appropriate radio button to indicate that matching forenames should be an **Exact match**, **First letter match** or **Ignore**.

**Surname:** Select the appropriate check box(es) to indicate that matching surnames should be an **Exact match**, **Include Null** or **Ignore**.

**Gender:** Select the appropriate check box(es) to indicate that matching genders should be an **Exact match**, **Include Null** or **Ignore**.

**Date of birth:** Select the appropriate check box(es) to indicate that matching dates of birth should be an **Exact match**, **Include Null** or **Ignore**.

**NI Number:** Select the appropriate check box(es) to indicate that matching national insurance numbers should be an **Exact match**, **Include Null** or **Ignore**.

**Post Code:** Select the appropriate check box(es) to indicate that matching post codes should be an **Exact match**, **Include Null** or **Ignore**.

**Refresh:** Click on this button to apply the temporary settings.

## Free Search Tab

This tab enables you to ignore all pre-defined matching settings and carry out a search for a specific student that you know exists in the database and you wish to merge with the duplicate record. For example, a student called Elizabeth may have previously given Liz as her forename and the matching process would not find her database entry. By selecting **Ignore** as the **Forenames** option on the **Settings** tab (Figure 5-8), and entering the appropriate name here, you can identify the match.

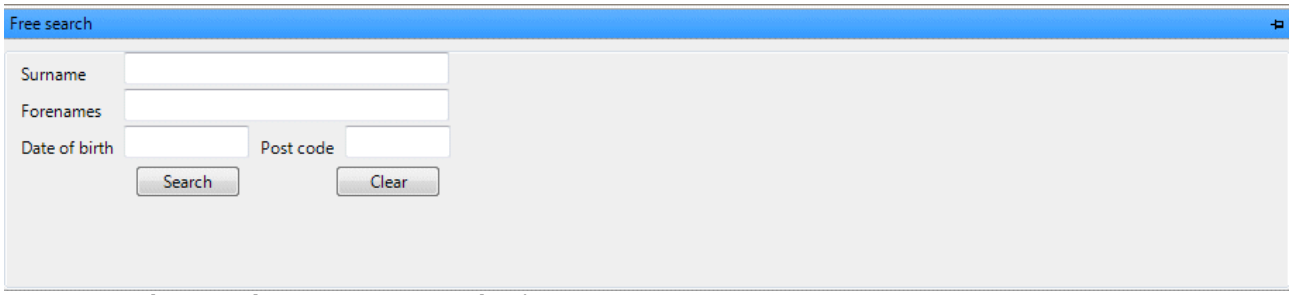



Figure 5-9 **Student Merging** Form – **Free Search** Tab

Enter the **Surname**, **Forenames**, **Date of birth** and/or **Post code** of the student you are searching for.

**Search:** Click on this button to carry out a search.

**Clear:** Click on this button to clear the form for another search.

## Student Details Form

This form is accessed by right-clicking on a duplicate or student name and selecting **Details** from the pop-up menu. It shows additional student information.

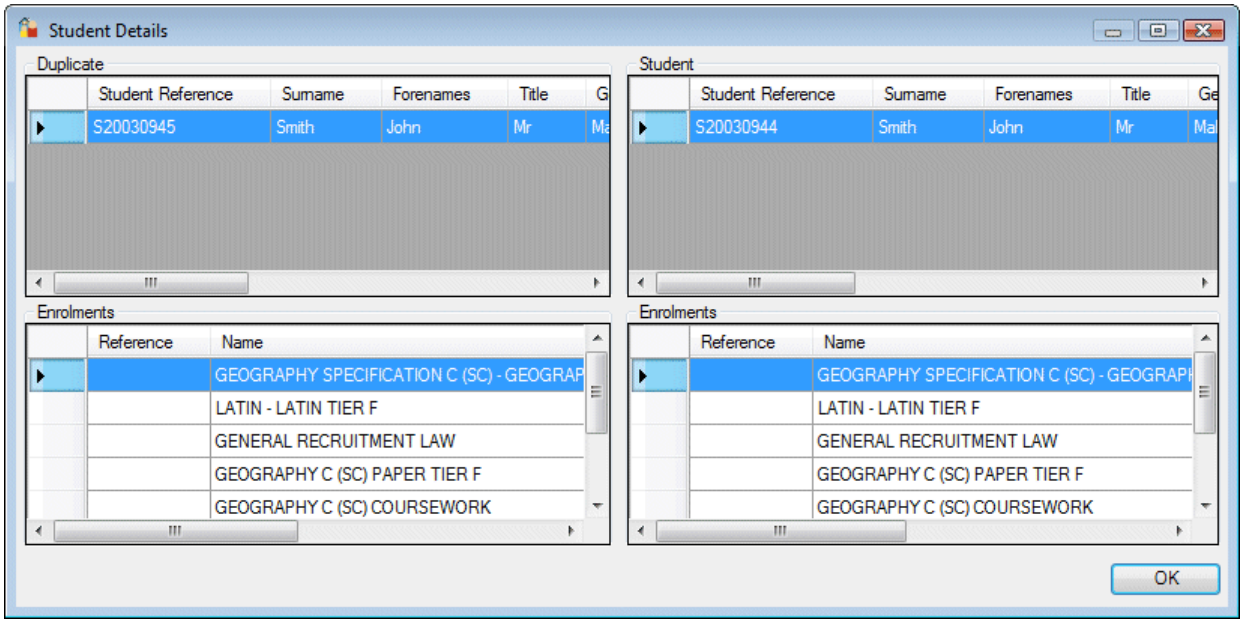



Figure 5-10 **Student Details** Form

## Pending Merged Students

**Note:** *Both Online Strangers and Generic Duplicate Students are available for review on this form prior to being merged by the UNIT-e Online Transfer Service. Any students shown here that have not failed the matching process are automatically processed by the next run of the Online Transfer Service, therefore you may not see successful merges at this pending stage as they may have already been picked up by the process.*

*Refer to the "UNIT-e Online Services" handbook (UOSC.pdf) for additional information about merging student records created online.*

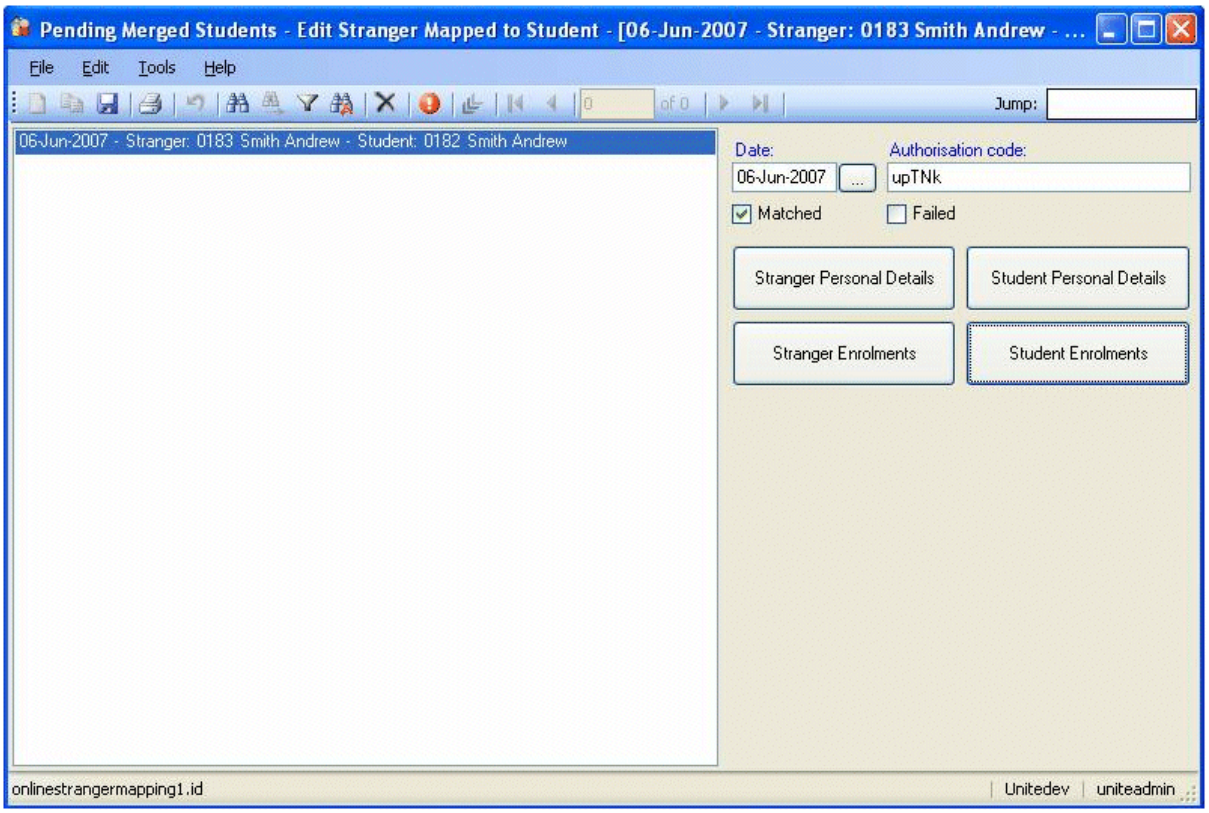



Figure 5-11 **Pending Merged Students** Form

**Date:** The date that the merge was requested.

**Authorisation code:** This field only applies to Online Strangers. You may change the authorisation code here and notify the student.

**Matched:** If this check box is selected the student will be merged in the next run of the Online Transfer Service.

**Failed:** If a student is flagged as failed by the Online Transfer Service, the reasons for the failure are given in the error log. Once the reason is resolved, deselect this check box and the student will be merged in the next run of the Online Transfer Service.

**Stranger Personal Details:** Click on this button to view more information about the selected record. The information shown can be customised by amending the UII Listview Report Pending Merged Student Details (gn.ii.mergedstudent).

**Student Personal Details:** Click on this button to view more information about the selected record. The information shown can be customised by amending the UII Listview Report Pending Merged Student Details (gn.ii.mergedstudent).

**Stranger Enrolments:** Click on this button to view more information about the selected record. The information shown can be customised by amending the UII Listview Report Pending Merged Student Enrolment Details (gn.ii.mergedenrol).

**Student Enrolments:** Click on this button to view more information about the selected record. The information shown can be customised by amending the UII Listview Report Pending Merged Student Enrolment Details (gn.ii.mergedenrol).

**More information:** *Refer to the "UNIT-e Report Generator" Handbook (URG.pdf) for more information on amending reports.*

## Pending Merged Organisations

This application is the equivalent of **Pending Merged Students** for organisations.

**Note:** *Refer to the "UNIT-e Online Services" handbook (UOSC.pdf) for further details.*

# Chapter 6: Changing Passwords

**Overview** ..... **6-2**
**Using UNIT-e Database Manager (Users)** ..... **6-3**
**Using UNIT-e Workplace** ..... **6-4**

# Overview

There are several ways of changing a user's password:

- Using UNIT-e Database Manager (Users) (see page 6-3)
- Using UNIT-e Workplace (see page 6-4)

# Using UNIT-e Database Manager (Users)

To change a password using UNIT-e Database Manager (Users):

1. Open UNIT-e Database Manager (Users) [UDMUS.exe]. This opens the **Users** form.
2. Select a user.
3. Re-key the **Password** in the **User details** frame and tab to the next field. The system displays the **Confirm Password** dialogue (Figure 6-1).




Figure 6-1 **Confirm Password** Dialogue

4. Confirm the new password by re-entering it and click on the **OK** button.
5. Click on the **Save** button to save the change.

**More information:** *The "UNIT-e Database Manager (Users)" Handbook (UDMUS.pdf).*

# Using UNIT-e Workplace

**More information:** *The process of changing a password via the **File | Change Password** option in UNIT-e Workplace is explained in detail in the "Working with UNIT-e" Handbook (WWU.pdf).*

# Chapter 7: Producing Entity Diagrams

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# Overview

Each class in the UNIT-e database has a unique ID, and classes can be related to each other using links. The Entity Diagram enables you to explore the link relationships between different classes in the database in a user-configured visual environment. Entity Diagrams can be created and configured to meet your exact requirements; Entity Diagrams can then be saved and printed if required.

For example, a Student class can have multiple related Enrolment classes. The Enrolment classes are linked to the Student class using the Student property. The Student property on the Enrolment class contains the unique ID for a particular Student record. These class relationships could be visually explored via an Entity Diagram.

Where available in a UNIT-e application, Entity Diagram functionality is usually accessed via the **Tools | Entity Diagram** menu item on the application toolbar.

This chapter covers the following areas:


- The Entity Diagram Form (see page 7-3)
- Entity Diagram Components (see page 7-4)
- Creating New Entity Diagrams (see page 7-5)
- Defining Entity Diagram Properties (see page 7-6)
- Saving Entity Diagrams (see page 7-7)
- Saving Copy Entity Diagrams (see page 7-8)
- Opening Existing Entity Diagrams (see page 7-9)
- Deleting Entity Diagrams (see page 7-11)
- Printing Entity Diagrams (see page 7-12)
- Modifying Entity Diagrams (see page 7-13)

# The Entity Diagram Form

Entity Diagrams are created and defined using the **Entity Diagram** form (Figure 7-1). Each instance of the form represents a separate Entity Diagram; multiple Entity Diagrams can be open at the same time.

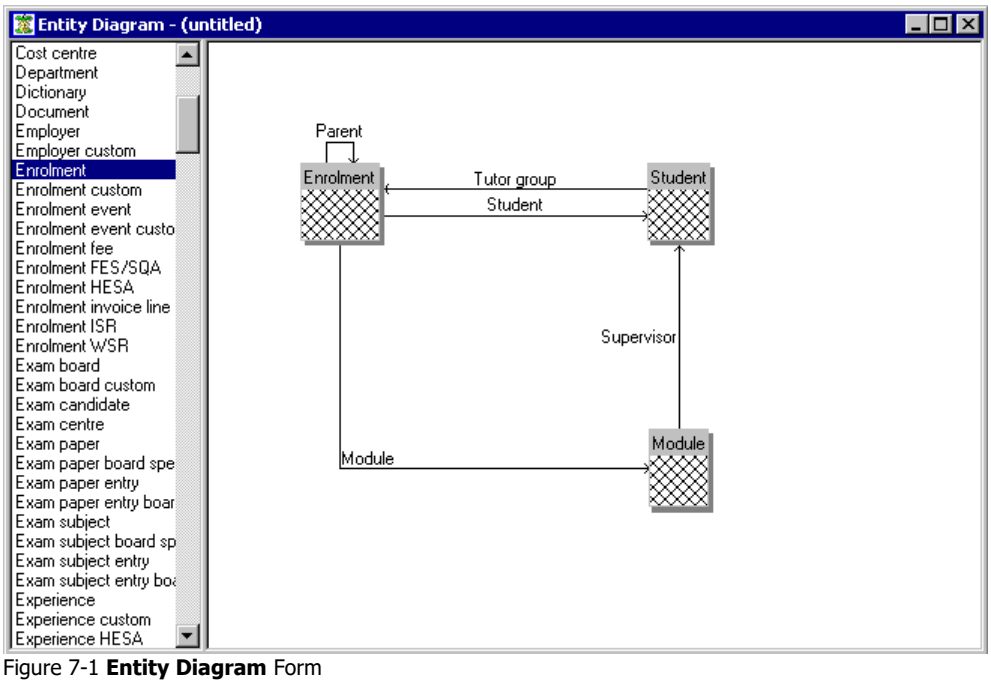



Figure 7-1 **Entity Diagram** Form

The **Entity Diagram** form consists of the following elements:

- Class List (see below)
- Diagram Pane (see below)

## Class List

The left-hand pane displays a list of all the classes stored in the UNIT-e database. Classes are displayed in alphabetical order. The pane can be expanded/contracted as required by dragging the pane border to the left or right.

Classes are selected from this list and added to the **Diagram** pane to create your Entity Diagram. The layout of the diagram and the relationships between the classes you select are configured via the **Diagram** pane.

## Diagram Pane

The right-hand pane displays the classes added to an Entity Diagram via the **Class List**. The **Diagram** pane graphically illustrates the relationships between the classes you have selected using objects and link lines (see below). The background is set as a grid to allow you to easily layout your diagram objects.

# Entity Diagram Components

An Entity Diagram can consist of the following components:

- Classes (see below)
- Links (see below)

## Classes

Classes added to the diagram are displayed as objects.




Figure 7-2 Entity Diagram Object

The name assigned to the object is displayed in a bar at the top of the box. Objects may be placed on top of each other and may be moved anywhere within the Entity Diagram.

When you select an object, the appearance of the objects in the diagram alters depending on the currently selected object, as shown in Table 7-1.

| Object Colour/Pattern | Definition |
|---|---|
| **White** | Object is selected. |
| **Black hatched** | Object is not selected. |
| **Blue hatched** | Object links **FROM** the selected object |
| **Red hatched** | Object links **TO** the selected object. |
| **Purple hatched** | Object links **TO** and **FROM** the selected object. |

Table 7-1 Entity Diagram Object Appearance

## Links

Any links between objects are represented using link lines (Figure 7-3).

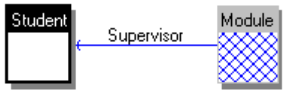



Figure 7-3 Linked Objects

An arrow indicates the direction in which the objects are linked (e.g. Module is linked to Student in Figure 7-3) and the name of the linking property is displayed above the link line (e.g. Module is linked to Student via the Supervisor property in Figure 7-3).

The colour of the link line indicates the manner in which the objects are linked, as shown in Table 7-2.

| Link Colour | Definition |
|---|---|
| Blue | Link is **TO** the selected class. |
| Red | Link is **FROM** the selected class. |
| Purple | Link is **TO** and **FROM** the selected class. |

Table 7-2 Entity Diagram Object Link Appearance

# Creating New Entity Diagrams

There are two ways in which you can create a new Entity Diagram:

- Within a UNIT-e application (see below)
- Using an Existing Entity Diagram (see below)

## Within a UNIT-e Application

To create a new Entity Diagram from within a UNIT-e application:

1. Open an application that contains Entity Diagram functionality (e.g. UNIT-e Report Generator).
2. Select **Tools | Entity Diagram** from the menu bar.
3. The **Entity Diagram** form is displayed (Figure 7-1).
4. Set-up the Entity Diagram as required.

## Using an Existing Entity Diagram

To create a new Entity Diagram from an existing **Entity Diagram**:

1. Select **File | New** from the menu bar or click on the **New**  button on the toolbar.
2. A new instance of the **Entity Diagram** form is displayed.
1. Set-up the Entity Diagram as required.

# Defining Entity Diagram Properties

The main properties for an Entity Diagram can be viewed and edited via the **Diagram** form (Figure 7-4), which can be accessed using one of the following methods:

- Right-click anywhere on the Entity Diagram and select **Name** from the pop-up menu.
- Select Edit | Diagram from the menu bar.

## Diagram Form

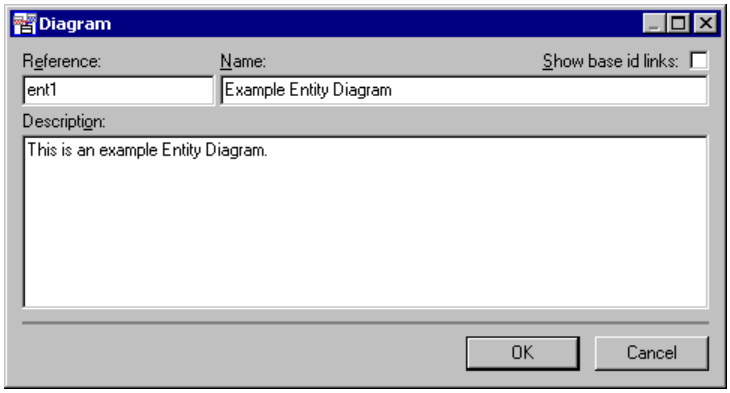



Figure 7-4 **Diagram** Form

**Reference:** The reference for the Entity Diagram is displayed in this field. This field will initially be blank until you enter a reference (recommended maximum of 20 characters).

**Tip:** *Tips Use lower case and no spaces for the Reference, as this will make it easier to identify the Entity Diagram throughout the rest of the UNIT-e system.*

**Name:** The name for the Entity Diagram is displayed in this field. The field will initially be blank until you enter a name. The name you enter here will be displayed on the Title bar of the Entity Diagram form.

**Description:** A description for the Entity Diagram can be added in this field.

**Show base id links:** This check box is used to define whether the base id links are displayed on your Entity Diagram. It is initially set to the de-selected state. Select or de-select the check box as required:

☑ **Selected:** Display all the base id links for your diagram objects.

☐ **De-selected:** Do not display any base id links for the diagram objects.

# Saving Entity Diagrams

To save your Entity Diagram for future use:

1. Select **File | Save** from the menu bar, click on the **Save** button or press **Ctrl + S**.

**Note:** *If you have not currently defined a name for the Entity Diagram, the **Diagram** form is displayed to prompt you to enter this information for the Entity Diagram. An Entity Diagram cannot be saved unless it has been given a name.*

# Saving Copy Entity Diagrams

To save a copy of the Entity Diagram:

1. Select **File | Save As** from the menu bar.
2. The **Diagram** form (Figure 7-4) is displayed. Enter the new details for the Entity Diagram.
3. Click on the **OK** button to save the Entity Diagram with the new details.

# Opening Existing Entity Diagrams

To open an existing Entity Diagram:

1. **Select File | Open** from the menu bar or click on the **Open** button to display the **Open Entity Diagram** form (Figure 7-5).

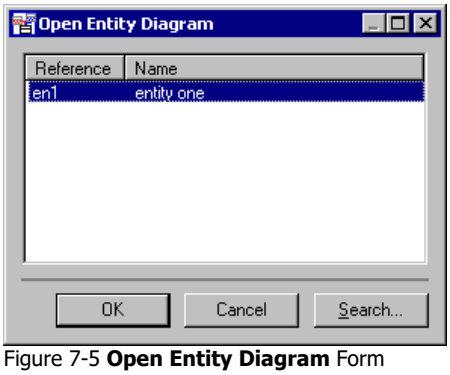



Figure 7-5 **Open Entity Diagram** Form

2. A list of available Entity Diagrams is displayed. To open an Entity Diagram, highlight an entry in the list and click on the **OK** button.
3. If you wish to perform a search for an Entity Diagram, click on the **Search** button. The **Search for Entity Diagram** form is displayed (Figure 7-6).

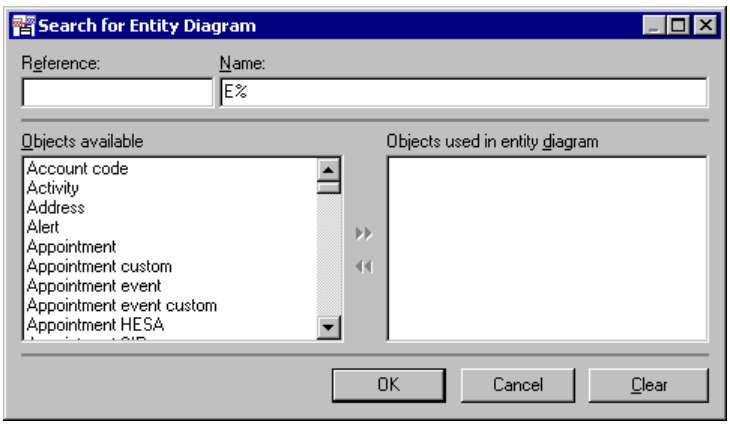



Figure 7-6 **Search for Entity Diagram** Form

4. Enter your search parameters:

   **Reference:** Search by Entity Diagram reference.

   **Name:** Search by Entity Diagram name.

   **Note:** *You can use the normal UNIT-e wildcards and symbols to define your search parameters. See Appendix E in the "Working with UNIT-e" Handbook (WWU.pdf) for more information on how to use wildcards and symbols when performing a search.*

   **Objects:** To search for all the Entity Diagrams that contain certain classes, transfer the classes you wish to search on from the **Objects available** frame to the **Objects used in the entity diagram** frame. Multiple classes can be transferred. For example, if you wish to find all the Entity Diagrams that contain an instance of the Person and Module classes, transfer the Person and Module classes to the **Objects used in entity diagram** frame.

   **Note:** *Click on the **Clear** button to clear all search parameters.*

5. Click on the **OK** button to perform the search.

6. If more than one Entity Diagram is found as a result of the search, the **Open Entity Diagram** form is displayed and the Entity Diagrams found are displayed in the list. Highlight an entry and click on the **OK** button to open that Entity Diagram.
7. If only one Entity Diagram is found as a result of the search, the Entity Diagram will automatically be opened.

# Deleting Entity Diagrams

To delete an Entity Diagram from the UNIT-e database:

1. Ensure you have the Entity Diagram open.
2. Select **File | Delete** from the menu bar.
3. The **Confirm Deletion** dialogue is displayed (Figure 7-7).

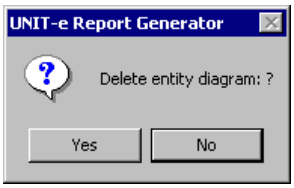



Figure 7-7 **Confirm Deletion** Dialogue

4. Click on the **OK** button to confirm the deletion.
5. The Entity Diagram is closed and is deleted from the UNIT-e database.

**Warning:** *Deleting an Entity Diagram is a permanent action and cannot be reversed.*

# Printing Entity Diagrams

To print your Entity Diagram:

1. Assign a name to your diagram prior to printing.

   **More information:** *See 'Defining Entity Diagram Properties' (page 7-6).*

2. The diagram name appears in the header of the printout.
3. Move the diagram classes around in the **Diagram** pane to produce a diagram in which any labels for links, etc. are clearly visible.

   **Tip:** *Use the background grid to assist with the layout of your diagram.*

4. Click on the **Print** button or select **File | Print** from the menu bar to print the Entity Diagram.

   **Tip:** *Before printing check your printer setup is correct. To check your printer setup, select **File | Print Setup** from the menu bar.*

# Modifying Entity Diagrams

Once you have created an Entity Diagram, use the following functionality to tailor the Entity Diagram to your specific needs:

- Adding Objects (see below)
- Viewing Classes to Link to (see below)
- Moving Objects (see page 7-14)
- Editing Object Details (see page 7-14)
- Opening the Class Browser (see page 7-15)
- Copying Objects (see page 7-15)

For example, to create an Entity Diagram that displays the relationship between the Student, Module and Person classes you might perform the following:

1. Create a new Entity Diagram.
2. Give the Entity Diagram a name and reference.
3. Add the Student, Module and Enrolment objects.
4. Move the objects around in the diagram until they are laid out clearly.
5. Adjust how the class relationship links are displayed, if required.
6. Save the Entity Diagram.
7. Print the Entity Diagram.

## Adding Objects

To add an object to an Entity Diagram:

1. Add an object to the Entity Diagram using one of the following methods:
   - Single-click on a class in the **Class List** frame, then press the **Enter** key.
   - Drag the required class from the **Class List** frame onto the **Diagram** frame.
   - Double-click on the class name in the **Class List** frame.
2. The object is placed in the centre of the **Diagram** pane. Move and edit the object as required.

## Viewing Classes to Link to

It is also possible to view a list of classes that the selected class can link to. You can then add any of these classes from the list to your diagram. For example, if you have the Receipt class in your Entity Diagram, you can access a list of classes you may wish to add that are relevant to the Receipt class such as the Organisation Receipt and Person Receipt classes. To view a list of classes to which the selected class may be linked:

1. Right-click on a class in the **Diagram** pane.
2. The pop-up menu (Figure 7-8) lists all the classes relevant to the selected class.

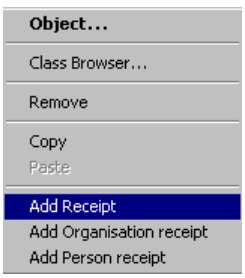



Figure 7-8 Receipt class - Example relevant Class list

3. To add a class from the list to your diagram, simply select an entry from the pop-up menu.
4. The object is added to the **Diagram** pane.

## Moving Objects

Objects added to the Diagram pane can be moved to produce a clearer diagram. For example, you may wish to lay a diagram out in a particular way for printing purposes.

To move an object, either:

- Select the object then press **Ctrl + Cursor left, right, up** or **down**.

or

- Single-click on the object and drag it to the required location within the **Diagram** pane.

## Editing Object Details

To view and edit the details for an object in the **Diagram** pane:

1. Double-click on an object or right-click on an object and select **Name** from the pop-up menu.
2. The **Object [name]** form is displayed (Figure 7-14).

### Object (name) Form

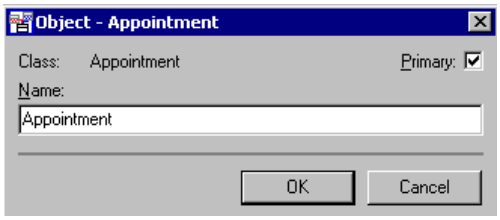



Figure 7-9 **Object (name)** Form

**Class:** The class that the object represents is displayed on the form.

**Name:** This field displays the name the object has been given in the Entity Diagram. You can edit the name as required by simply entering a new name. The name entered here is displayed in the Title bar of the Object [name] form and in the Title bar of the object itself. You may wish to rename objects via this field to further tailor an Entity Diagram to your requirements.

**Note:** *Renaming an object only applies to the Entity Diagram – it does not rename the class itself anywhere in the UNIT-e system.*

**Primary:** The **Primary** check box is used for further defining the display of links between objects. Selecting the **Primary** check box will display links from the selected object to any other object as normal, but if two linked objects have the **Primary** check box de-selected then links between the two will not be displayed.

- If two objects have the **Primary** check box selected then links will be displayed between them as normal on the diagram.
- If an object with the **Primary** check box selected is linked to another object without the **Primary** check box selected, links will be displayed between them as normal on the diagram.
- If two objects have the **Primary** check box de-selected, then no links will be displayed between them on the diagram.

For example, the following scenarios will be displayed if you have the Module and Student classes selected on your Entity Diagram (Figure 7-10, Figure 7-11 and Figure 7-12):

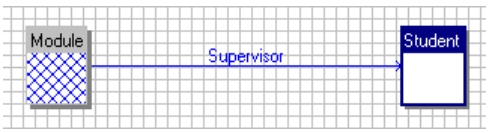



Figure 7-10 Both **Primary** Check Boxes Selected

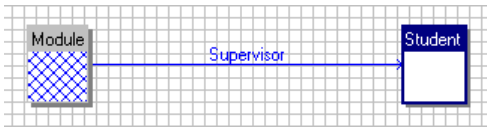



Figure 7-11 Module **Primary** Check Box Selected, Student **Primary** Check Box De-selected

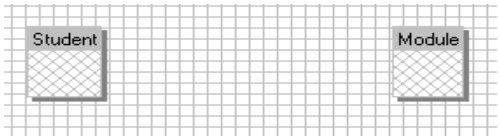



Figure 7-12 Both **Primary** Check Boxes De-selected

## Opening the Class Browser

As well as viewing the details for the particular object on your Entity Diagram, it is possible to access further details for classes added to your diagram. You can view a class directly using the Class Browser tool (if you have access to this functionality).

1. Select a class on your Entity Diagram in the **Diagram** pane.
2. Right-click and select **Class Browser** from the pop-up menu.
3. The Class Browser tool opens and the details for the selected class are shown.

**More information:** *See 'Chapter 8: Using Class* Browser' *(page 8-1).*

## Copying Objects

You can copy an object and paste it into any of the following:

- Another Entity Diagram
- The same Entity Diagram
- A Report Diagram in UNIT-e Report Generator

To copy an object:

1. Select the object you wish to make a copy of in the **Diagram** pane.
2. Right-click and select **Copy** from the pop-up menu or press **CTRL + C.**
4. The object is copied to the clipboard.
5. Perform one of the following to paste the object:
   - Right-click anywhere in the **Diagram** pane and select **Paste [name]** from the pop-up menu.
   - Right click on an existing Diagram Class Object and select **Paste [name]** from the pop-up menu.
   - Ensure you are in the **Diagram** pane and press **CTRL + V**.

# Chapter 8: Using Class Browser

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**The Class Browser Interface** ..... **8-3**
Class List ..... 8-3
Class Details Frame ..... 8-3
Property List Frame ..... 8-4
**Viewing All Classes** ..... **8-5**
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**Viewing Class Properties** ..... **8-7**
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**Opening the Lookups Form** ..... **8-11**

# Overview

A class contains a set of properties, which are used to categorise related information. For example, the Student class defines the properties that enable you to enter student information.

A class can have extended classes. An extended class inherits the properties of the base class. For example:

- The Person class contains properties that relate to all people.
- The Personal details class is an extended class of the Person class. It contains properties from the Person class and additional properties that relate to people that are present at an institution.
- The Student class is an extended class of the Personal details class. It contains properties from the Person class, properties from the Personal details class and additional properties that relate to a student.

The Class Browser is used to view all the classes and properties of your database in a tree-view structure. This enables you to:

- View the classes in the database.
- View extended classes in the database.
- View details of the class definition (name and reference).
- View the properties contained in the class.
- Identify classes that link to one another.

This chapter covers the following areas:


- The Class Browser Interface (see page 8-3)
- Viewing All Classes (see page 8-5)
- Viewing Class Details (see page 8-6)
- Viewing Class Properties (see page 8-7)
- Copying Property References (see page 8-9)
- Printing Class Details (see page 8-10)
- Opening the Lookups Form (see page 8-11)

# The Class Browser Interface

The Class Browser uses the **Class Browser** form (Figure 8-1).

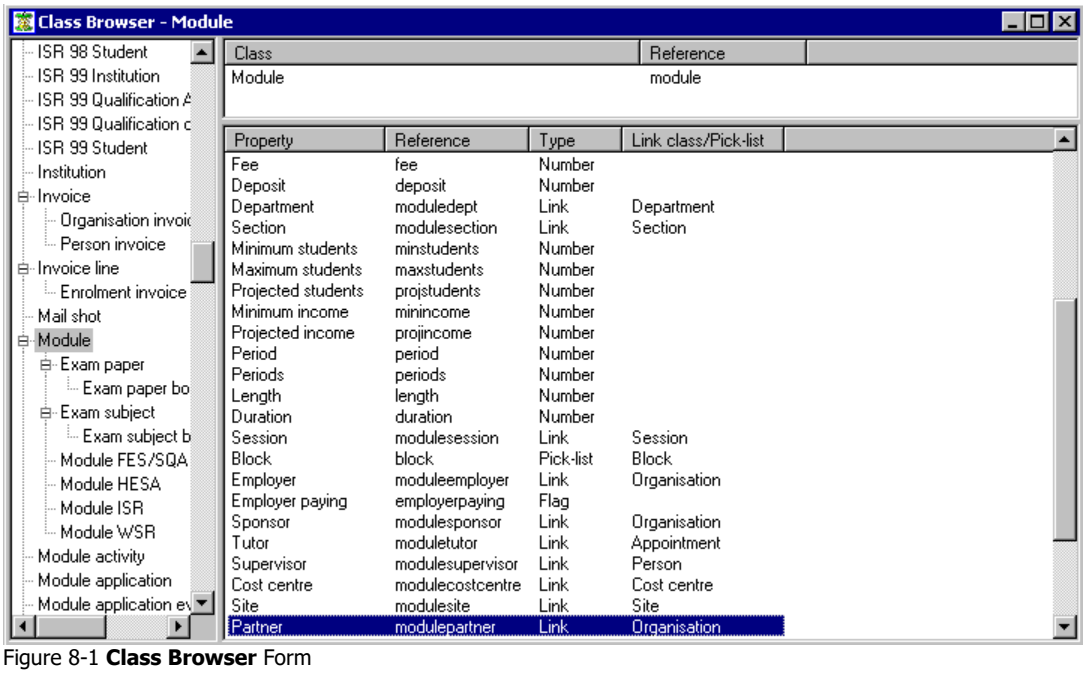



Figure 8-1 **Class Browser** Form

The **Class Browser** form consists of the following elements:

- Class List (see below)
- Class Details Frame (see below)
- Property List Frame (see page 8-4)

## Class List

The left-hand pane displays a list of all the classes stored in the UNIT-e database. Classes are displayed in alphabetical order. The **Class List** pane can be expanded/contracted as required by dragging the pane border to the left or right.

## Class Details Frame

The **Class Details** frame is situated on the top right-hand side of the **Class Browser** form. This frame displays details of the class definition currently selected in the **Class List**.

**More information:** *See 'Viewing Class Details' (page 8-6).*

## Property List Frame

The **Property List** frame is situated on the bottom right-hand side of the **Class Browser** form. This frame displays details of the property definitions for the class selected in the **Class List**.

Click on a column heading to sort the list in ascending/descending order by that column (e.g. click on the **Reference** column to sort the list by Reference).

The list can be further sorted by clicking on the **Sort** button as follows:

- If you have sorted by another column, clicking on this button will set the list back to the default order.
- If the list is already sorted as the default order, clicking on this button will reverse the order.

**More information:** *See 'Viewing Class Properties' (page 8-7).*

# Viewing All Classes

The **Class List** displays a list of all the classes stored in the UNIT-e database. Classes are displayed in alphabetical order.

The **Class List** displays the class definitions in the data dictionary according to the class structure rather than in alphabetical order.

If a class has a **plus** sign to the left of the class name, it has extended classes. To display the extended classes, click on the **plus** sign to expand the class tree-view.



**Tip:** *Use the type-down facility to jump to a certain class in the list. For example, press the **E** key to jump to the Enrolment class.*

# Viewing Class Details

The details for the currently selected class are displayed in the **Class Details** frame. The following information is displayed:

-  Class – The name of the class as selected in the Class List.
- Reference – The unique reference of the class (which is a maximum of 20 characters in lower case).

# Viewing Class Properties

The properties for the currently selected class are displayed in the **Property List** frame. The following columns of information are displayed for each property:

- **Property** – The name of the property. The name displayed in this column is used to select the property in UNIT-e applications.

**Note:** *You can re-label properties that are displayed on **Manager** forms and user-defined **Proforma** forms. Refer to the "UNIT-e Database Manager (Settings)" Handbook (UDMSE.pdf).*

- **Reference** – The unique property reference, which consists of a maximum of 20 characters in lower case.
- **Type** – The type of data stored in the property (as shown in Table 8-1).

| Data Type | Description |
|---|---|
| Id | Unique identifier for object. |
| Reference | Maximum of 20 characters. |
| Text | Maximum of 255 characters |
| Memo | Maximum of 2000 characters. |
| Flag | Single character field used to set a value to True (=-1) or False (null). |
| Number | Maximum of 38 decimal digits. |
| Date | Date/time field. |
| Link | Link value containing unique identifier of another object. |
| Pick-list | Maximum of 10 characters, value selected from Lookup set. |

Table 8-1 Property Data Type

- **Link class/Pick-List** – This is one of the following:
  - A class to which the property is linked (if the property is a link).
  - A Lookup List (if the property is a Lookup pick-list).

  This column can be used to identify any linked classes in the database. For example, if we select the Module class, we might see that the Partner property is linked to the Organisation class via the Id property (Figure 8-2).

  If the property is a Lookup pick-list, you can view Lookups information via the **Lookups** form, which can be accessed via this column.

**More information:** *See 'Opening the Lookups Form' (page 8-11).*

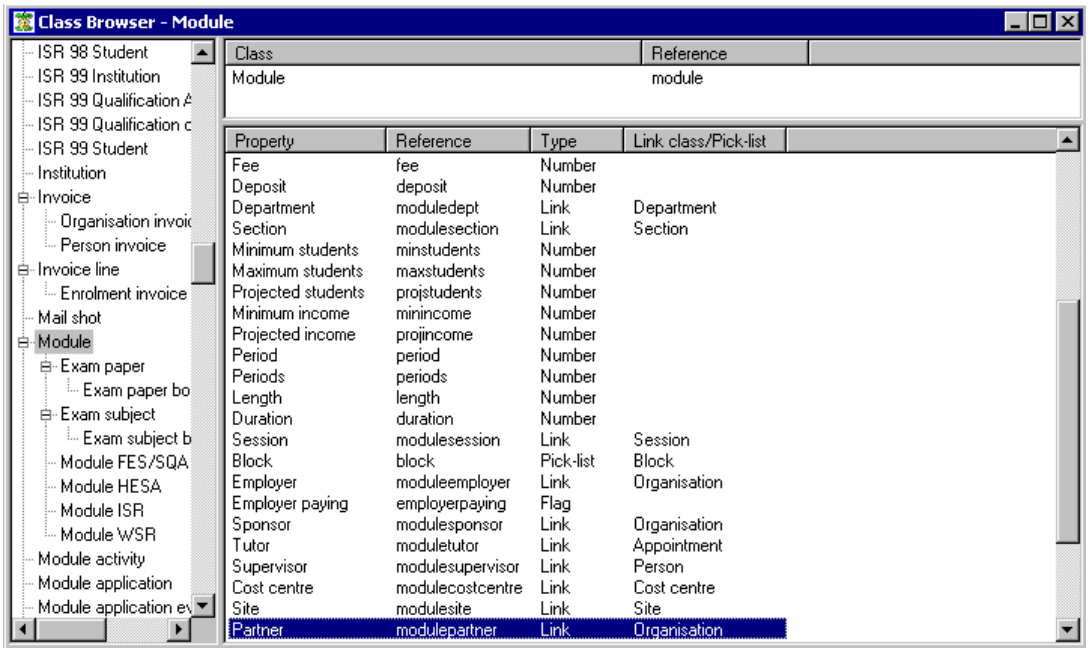



Figure 8-2 **Class Browser** Form - Module Partner Property Linked to Organisation Class

# Copying Property References

The Class Browser can be used to identify and copy a particular property reference that you may wish to use elsewhere in UNIT-e. For example, you may wish to identify a property reference for the purposes of mapping a search form into a configuration.

To assist with this, it is possible to copy a property reference from the Class Browser form. This can then be pasted wherever it is needed in another UNIT-e application. To copy a property reference:

1. Highlight the property reference you wish to copy in the **Property List** frame.
2. Right-click and select **Copy Property Reference** from the pop-up menu.
3. The property reference is copied to the clipboard. It can now be pasted into another UNIT-e application using the standard Windows **Paste** functionality (e.g. **CTRL + V**).

# Printing Class Details

To print a list of class details:

1. Open the **Class Browser** form.
2. Highlight the class you wish to print the class details for in the **Class List**.
3. Click on the **Print** button on the menu bar or select **File | Print** from the menu bar.
4. The **Print Class Definition** confirmation dialogue is displayed (Figure 8-3).

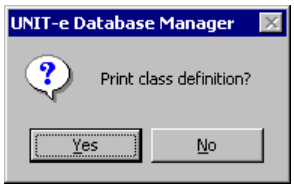



Figure 8-3 **Print Class Definition** Dialogue

5. The following information is printed to your currently defined printer:
   - Class Name.
   - Class Reference.
   - Contents of **Property List** frame for the class.
   - The title of the UNIT-e application you are using Class Browser with (e.g. UNIT-e Report Generator).
   - Current date and time.
   - Database name.
   - User name.

**Tip:** *Before printing check your printer setup is correct. To check your printer setup, select **File | Print Setup** from the menu bar.*

# Opening the Lookups Form

The **Lookups** form can be opened via Class Browser. This enables you to view Lookups information relevant to any Class Properties displayed in the Class Browser.

**Note:** *The Lookups form can only be accessed via Properties of the type "Lookup".*

To open the **Lookups form** via Class Browser:

1. Open the **Class Browser** form.
2. Highlight the class containing the Property you wish to view Lookups information for in the **Class** List.
3. Right-click in the **Link Class/Lookup** name column on any Property where the **Type** is set to "Lookup".
4. The **Lookups - [Name]** pop-up is displayed (Figure 8-4).




Figure 8-4 **Lookups - [Name]** Pop-up

5. Click on the **Lookups – [Name]** pop-up.
6. The **Lookups** form is displayed and the Lookup List you have chosen is initially selected in the **Lookups** list.
7. View, edit and define the Lookup Values as required.

**More information:** *See 'Chapter 3: Maintaining* Lookups' *(page 3-1).*

# Chapter 9: Using Query Executor

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# Overview

UNIT-e Query Executor offers you the following functionality:

- You can construct and run queries to extract information from your UNIT-e database. This information can be viewed on screen and saved to a file. You can also save the queries that you create so that they can be used again.
- You can run Query Executor scripts provided in software upgrade releases to update your database.

This chapter covers the following areas:


- Logging into Query Executor (see page 9-3)
- Running Scripts to Update your Database (see page 9-5)
- Running Queries (see page 9-7)


## Licence Requirements

The following licence is required to use Query Executor:

- Query Executor - QX

# Logging into Query Executor

The process of logging into UNIT-e Query Executor differs from that of most other UNIT-e products and varies depending on the method you use to access the application:

- Accessing Query Executor via the Product Directory or a Desktop Shortcut (see below)
- Accessing Query Executor via UNIT-e Workplace (see page 9-4)

## Accessing Query Executor via the Product Directory or a Desktop Shortcut

The login process via the Product directory or a Desktop shortcut varies depending on whether you are using Oracle or SQL Server.

- Oracle Login (see below)
- SQL Server Login (see below)

**Note:** *You can ignore the 'Licence not found' message on the **Database Login** form.*

### Oracle Login

1. The login screen shown in Figure 9-1 is displayed.
2. Select 'Oracle' as the **Database platform**.
3. Enter the **Connection string**. This is the TNS name (the mapping in the TNS file).
4. Enter the **Username** and **Password** for the database login (not your user login). For example, ulive plus the ulive password.

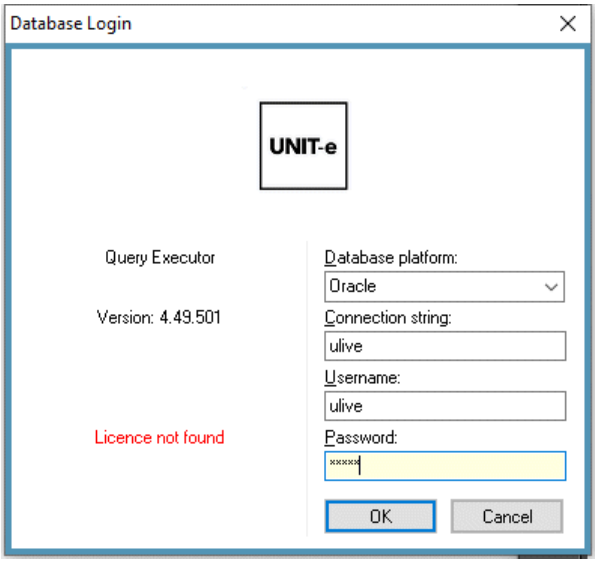



Figure 9-1 Oracle Login via Product Directory or Desktop Shortcut

### SQL Server Login

1. The login screen shown in Figure 9-2 is displayed.
2. Select 'SQL Server' as the **Database platform**.
3. Enter the **Connection string**. The same credentials are used as for SQL Server Management Studio.
4. Enter the **Username** and **Password** for the database login (not your user login). For example, ulive plus the ulive password.

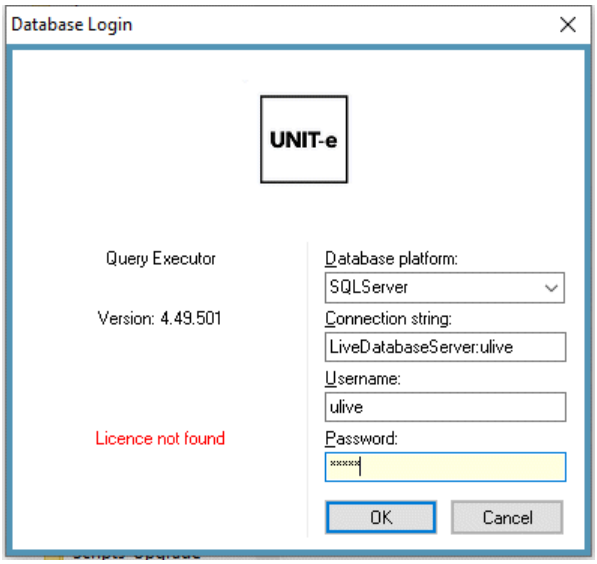



Figure 9-2 SQL Server Login via Product Directory or Desktop Shortcut

## Accessing Query Executor via UNIT-e Workplace

1. Check that you have rights to use Query Executor on the **Menu** tab in UNIT-e Database Manager (Users) [UDMUS.exe].
2. When you log in to Query Executor via UNIT-e Workplace the system displays the error message shown in Figure 9-3. This is because you logged into UNIT-e Workplace using your user login, not a database login. Click on the **OK** button to continue.

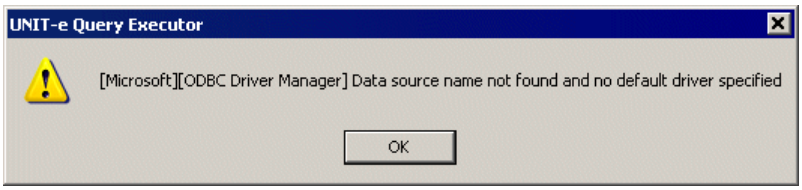



Figure 9-3 Login Error via UNIT-e Workplace

3. You are then taken into the Query Executor login form (Figure 9-1). Proceed with an Oracle or SQL Server login, as appropriate.

# Running Scripts to Update your Database

Query Executor enables you to run scripts to update your database. These are supplied as part of a platform release and are listed separately from System Transfer scripts.

1. Open UNIT-e Query Executor [UQX.exe] (Figure 9-4).

**More information:** *See 'Logging into Query Executor' (page 9-3).*

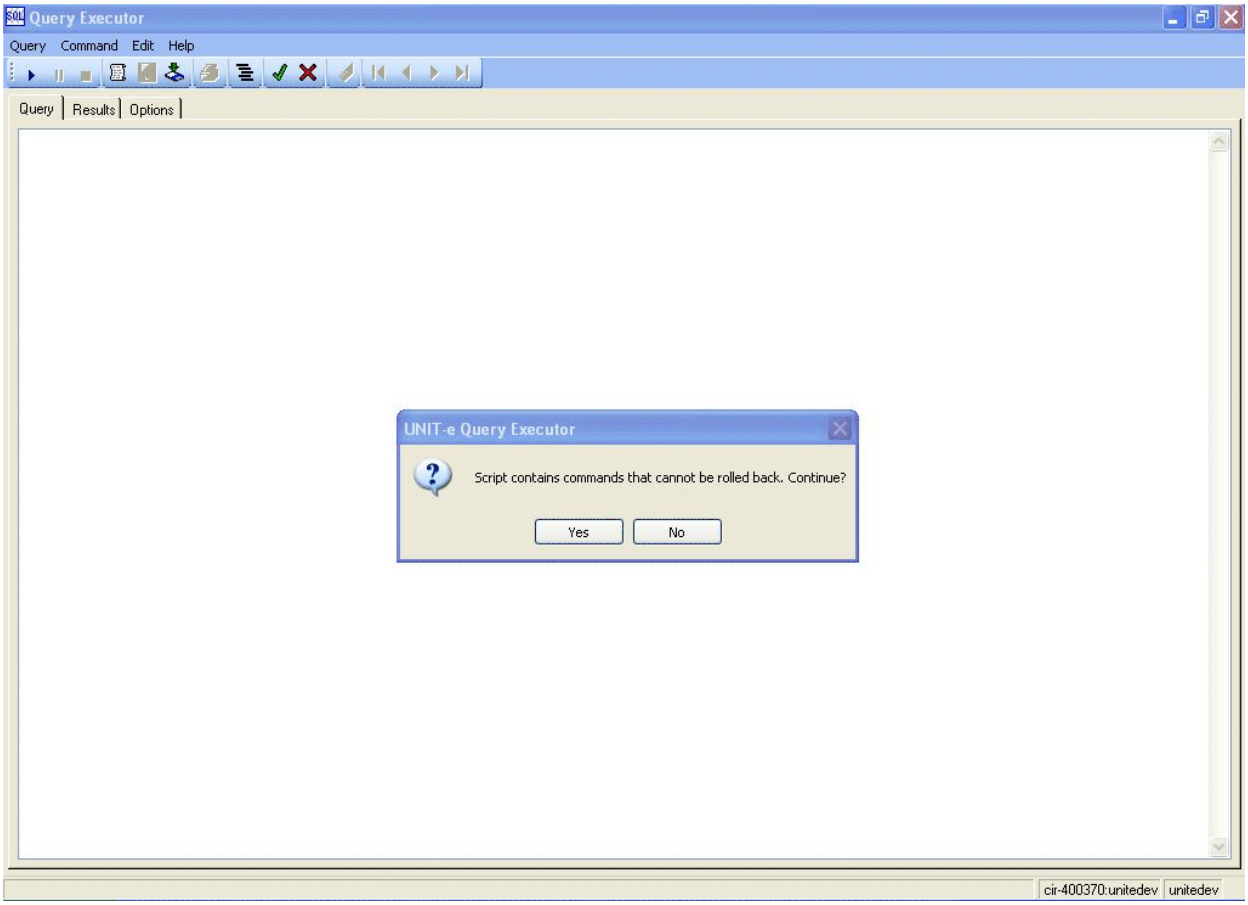



Figure 9-4 **Query Executor** – **Query** Tab

2. Select **Command | Script** from the menu bar or click on the **Script** button to browse for the appropriate script.
3. Select the script and click on the **OK** button to continue.
4. The system displays the dialogue shown in Figure 9-5, warning you that the script contains commands that cannot be rolled back. Click on the **Yes** button to continue.

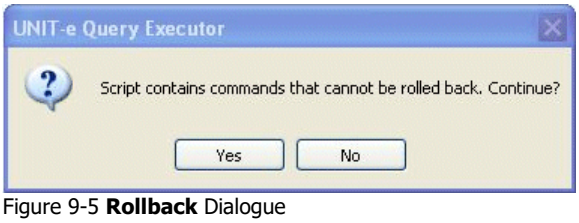



Figure 9-5 **Rollback** Dialogue

5. When the process is complete the system displays the dialogue shown in Figure 9-6.

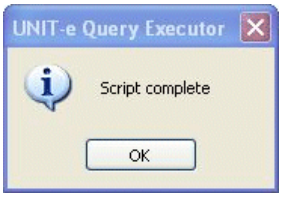



Figure 9-6 **Script complete** Dialogue

# Running Queries

Using Query Executor you can enter SQL statements to retrieve information from your database.

1. Open UNIT-e Query Executor [UQX.exe] (Figure 9-4).

   **More information:** *See 'Logging into Query Executor' (page 9-3).*

   **Note:** *Query Executor remembers and displays the last SQL statement that you ran and displays it when you open the application.*

2. Enter a SQL statement (Figure 9-7) and click on the **Play** button to run the query.

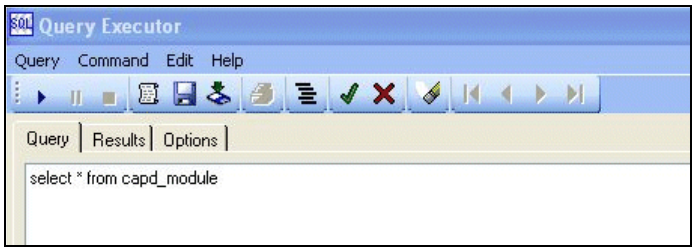
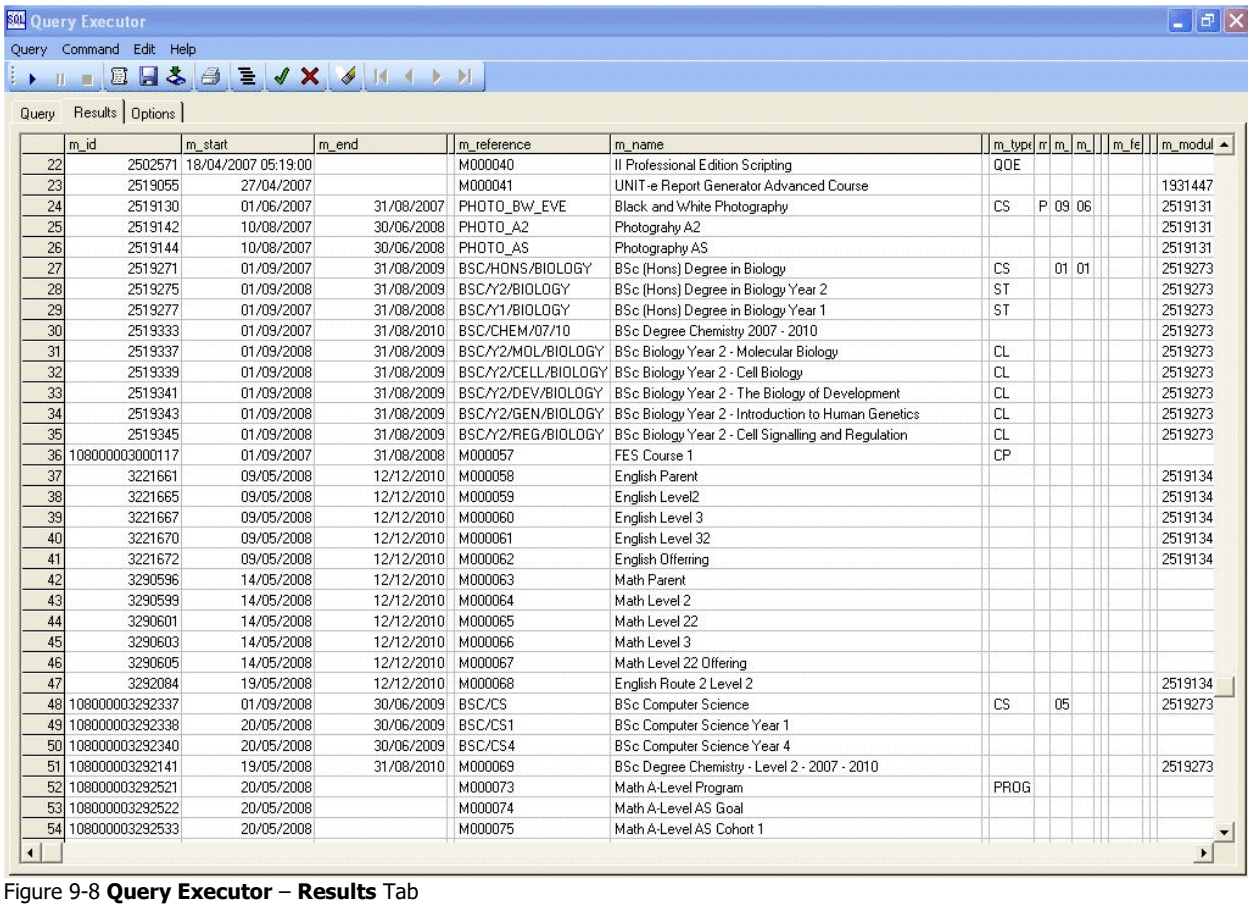



Figure 9-7 **Query Executor SQL Statement 1**

3. The results are displayed on the **Results** tab (Figure 9-8).




| | m_id | m_start | m_end | m_reference | m_name | m_type | m | m_ | m_ | m_fe | m_modul |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 22 | 2502571 | 18/04/2007 05:19:00 | | M000040 | II Professional Edition Scripting | QOE | | | | | |
| 23 | 2519055 | 27/04/2007 | | M000041 | UNIT-e Report Generator Advanced Course | | | | | | 1931447 |
| 24 | 2519130 | 01/06/2007 | 31/08/2007 | PHOTO_BW_EVE | Black and White Photography | CS | P | 09 | 06 | | 2519131 |
| 25 | 2519142 | 10/08/2007 | 30/06/2008 | PHOTO_A2 | Photograhy A2 | | | | | | 2519131 |
| 26 | 2519144 | 10/08/2007 | 30/06/2008 | PHOTO_AS | Photography AS | | | | | | 2519131 |
| 27 | 2519271 | 01/09/2007 | 31/08/2009 | BSC/HONS/BIOLOGY | BSc (Hons) Degree in Biology | CS | | 01 | 01 | | 2519273 |
| 28 | 2519275 | 01/09/2008 | 31/08/2009 | BSC/Y2/BIOLOGY | BSc (Hons) Degree in Biology Year 2 | ST | | | | | 2519273 |
| 29 | 2519277 | 01/09/2007 | 31/08/2008 | BSC/Y1/BIOLOGY | BSc (Hons) Degree in Biology Year 1 | ST | | | | | 2519273 |
| 30 | 2519333 | 01/09/2007 | 31/08/2010 | BSC/CHEM/07/10 | BSc Degree Chemistry 2007 - 2010 | | | | | | 2519273 |
| 31 | 2519337 | 01/09/2008 | 31/08/2009 | BSC/Y2/MOL/BIOLOGY | BSc Biology Year 2 - Molecular Biology | CL | | | | | 2519273 |
| 32 | 2519339 | 01/09/2008 | 31/08/2009 | BSC/Y2/CELL/BIOLOGY | BSc Biology Year 2 - Cell Biology | CL | | | | | 2519273 |
| 33 | 2519341 | 01/09/2008 | 31/08/2009 | BSC/Y2/DEV/BIOLOGY | BSc Biology Year 2 - The Biology of Development | CL | | | | | 2519273 |
| 34 | 2519343 | 01/09/2008 | 31/08/2009 | BSC/Y2/GEN/BIOLOGY | BSc Biology Year 2 - Introduction to Human Genetics | CL | | | | | 2519273 |
| 35 | 2519345 | 01/09/2008 | 31/08/2009 | BSC/Y2/REG/BIOLOGY | BSc Biology Year 2 - Cell Signalling and Regulation | CL | | | | | 2519273 |
| 36 | 108000003000117 | 01/09/2007 | 31/08/2008 | M000057 | FES Course 1 | CP | | | | | |
| 37 | 3221661 | 09/05/2008 | 12/12/2010 | M000058 | English Parent | | | | | | 2519134 |
| 38 | 3221665 | 09/05/2008 | 12/12/2010 | M000059 | English Level2 | | | | | | 2519134 |
| 39 | 3221667 | 09/05/2008 | 12/12/2010 | M000060 | English Level 3 | | | | | | 2519134 |
| 40 | 3221670 | 09/05/2008 | 12/12/2010 | M000061 | English Level 32 | | | | | | 2519134 |
| 41 | 3221672 | 09/05/2008 | 12/12/2010 | M000062 | English Offerring | | | | | | 2519134 |
| 42 | 3290596 | 14/05/2008 | 12/12/2010 | M000063 | Math Parent | | | | | | |
| 43 | 3290599 | 14/05/2008 | 12/12/2010 | M000064 | Math Level 2 | | | | | | |
| 44 | 3290601 | 14/05/2008 | 12/12/2010 | M000065 | Math Level 22 | | | | | | |
| 45 | 3290603 | 14/05/2008 | 12/12/2010 | M000066 | Math Level 3 | | | | | | |
| 46 | 3290605 | 14/05/2008 | 12/12/2010 | M000067 | Math Level 22 Offering | | | | | | |
| 47 | 3292084 | 19/05/2008 | 12/12/2010 | M000068 | English Route 2 Level 2 | | | | | | 2519134 |
| 48 | 108000003292337 | 01/09/2008 | 30/06/2009 | BSC/CS | BSc Computer Science | CS | | 05 | | | 2519273 |
| 49 | 108000003292338 | 20/05/2008 | 30/06/2009 | BSC/CS1 | BSc Computer Science Year 1 | | | | | | |
| 50 | 108000003292340 | 20/05/2008 | 30/06/2009 | BSC/CS4 | BSc Computer Science Year 4 | | | | | | |
| 51 | 108000003292141 | 19/05/2008 | 31/08/2010 | M000069 | BSc Degree Chemistry - Level 2 - 2007 - 2010 | | | | | | 2519273 |
| 52 | 108000003292521 | 20/05/2008 | | M000073 | Math A-Level Program | PROG | | | | | |
| 53 | 108000003292522 | 20/05/2008 | | M000074 | Math A-Level AS Goal | | | | | | |
| 54 | 108000003292533 | 20/05/2008 | | M000075 | Math A-Level AS Cohort 1 | | | | | | |

Figure 9-8 **Query Executor** – **Results** Tab

4. Use the fields on the **Options** tab (Figure 9-9) to adjust the way in which the data is displayed. The settings that you choose depend on whether you plan to print the data or save it to a file.

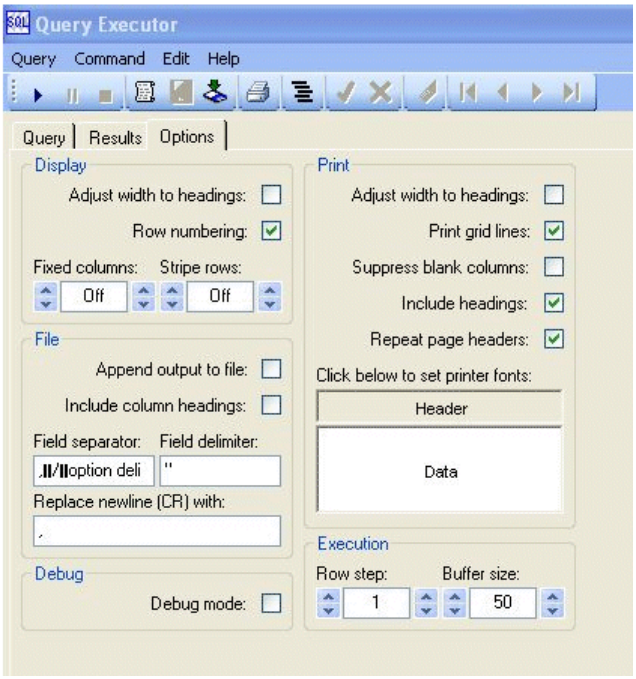



Figure 9-9 **Query Executor** – **Options** Tab

**More information:** *Refer to the "UNIT-e Report Generator" Handbook (URG.pdf) for further information about the fields on this form.*

5. You now have various options:

   – Select **Command | File** from the menu bar or click on the **File** button to save the results to a file.

   – Select **Command | Save** from the menu bar or click on the **Save** button to save the query for future use.

   – Use the **Play** buttons to re-run the first, previous, next or last query run in this session.

**Note:** *Oracle users also have the option to view the query plan. See below for further details.*

## Query Plans (Oracle users only)

Details of the Query Plan are displayed on the **Results** tab and are available by selecting **Command | Plan** from the menu bar or by clicking on the **Plan** button. The plan shows what will be used to carry out the query. For example, Figure 9-7 shows a simple SQL statement. The plan for that statement is shown in Figure 9-10.

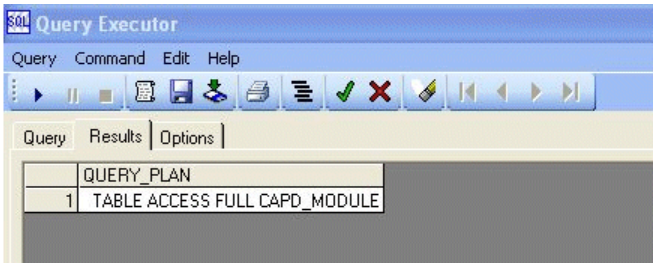



Figure 9-10 **Query Executor** – **Query Plan 1**

If the SQL statement is extended (Figure 9-11), the Query Plan is adjusted (Figure 9-12), in this example showing the addition of an index range.

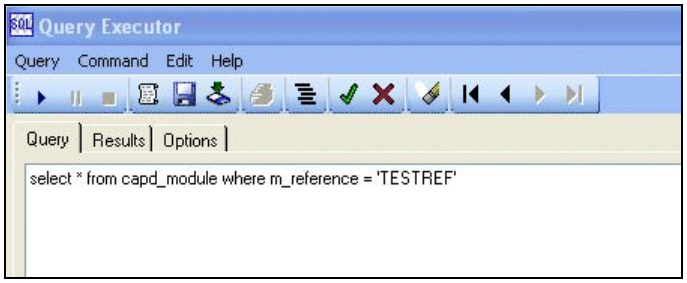



Figure 9-11 **Query Executor SQL Statement 2**

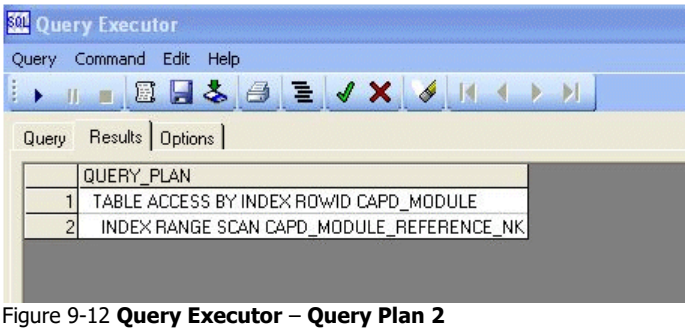



Figure 9-12 **Query Executor** – **Query Plan 2**

# Chapter 10: Database Management Reports

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Business Rules Checks ..... 10-2

Groups and User Reports ..... 10-3

Skillwise Link Check ..... 10-3

SSRS Report Server Analysis ..... 10-3

Warehouse Report ..... 10-3

Users Activity ..... 10-3

**Database Management Reports Form** ..... **10-4**

# Overview

An II application, Database Management Reports, is provided that enables you to access database management Reporting Services reports.

A default embedded menu is provided for the application (dm.cap_reports) which includes the following groups of reports:

- Audit Reports (see below)
- Business Rules Checks (see below)
- Groups and User Reports (see below)
- Skillwise Link Check (see page 10-3)
- SSRS Report Server Analysis (see page 10-3)
- Warehouse Report (see page 10-3)
- Users Activity (see page 10-3)

**More information:** *These reports are also accessible via the **System Reports** menu in the UNIT-e Report Catalogue application. For further details on any report, refer to the "UNIT-e Report Catalogue" handbook (UREPC.pdf).*

*For details on embedded menus, refer to the "UNIT-e Embedded Menus" handbook (UEMB.pdf).*

**Note:** *When running a report, if the message 'This report requires a default or user-defined value for the report parameter (parameter). To run or subscribe to this report, you must provide a parameter value' is displayed, click the **Refresh** button to display the Parameter Area and enter the required parameters.*

*If you run a report, leave it on screen and move the focus from the application, when you return to the report you may find that you've lost the parameter pick-lists. Close the report and reopen it again to correct this.*

## Audit Reports

The following audit analysis reports are available:

- Audit Analysis by Action (dm0002_p)
- Audit Analysis by Application (dm0006_p)

  **Note:** *By default this report calculates the Logon Count from the 1st January of the current year. If you wish to enter an alternative date, click on the **Refresh** button to access the Parameter Area.*

- Audit Analysis by Class (dm0001_p)

## Business Rules Checks

The following reports are provided for analysing Business Rules:

- Duplicates:
  - Duplicate Audit Business Rules (dm0004l)
- Module to Enrolment Defaulting:

  When setting up default Business Rules using the System reference sequence template functionality, some rules will not take effect due to system processes, e.g. rules overwritten by the Module to Enrolment automated defaulting.

  The following market-specific SSRS reports are provided that list any such redundant Business Rules:

- Default Business rules overwritten by Module FES_SQA to Enrolment FES_SQA defaulting (che_dm0001_l).rdl
- Default Business rules overwritten by Module HESA to Enrolment HESA defaulting (chedm0001_l).rdl
- Default Business rules overwritten by Module ISR to Enrolment ISR defaulting (cfedm0001_l).rdl
- Default Business rules overwritten by Module LLWR to Enrolment LLWR defaulting (chedm0001_l).rdl

## Groups and User Reports

The following reports allow you to monitor users' group memberships, access and data rights:

- Memberships (dm0013_l)
- Data Access (dm0010_l)
- Filters (dm0011_l)
- Masks (dm0012_l)
- Application Access (dm0009_l)
- Groups and Users Paths (dm0005_l)

## Skillwise Link Check

The following report allows you to view transactions that have failed between UNIT-e and Skillwise:

- Check Failed Transactions in UNIT-e to Skillwise Link (vqmi_checkfailed_l)

## SSRS Report Server Analysis

These reports enable you to list SSRS reports and analyse usage data for them:

- SSRS Report List by Data Source (cgn.rc.ssrs001)
- SSRS Report Execution Analysis (cgn.rc.ssrs002)
- SSRS Unused Reports (cgn.rc.ssrs03)

## Warehouse Report

The following report lists the scheduled warehouse processes:

- Warehouse Schedule Summary (dm0003_l)

## Users Activity

The following report details the users currently logged in to UNIT-e applications:

- Users currently logged in (dm0008_p)

# Database Management Reports Form

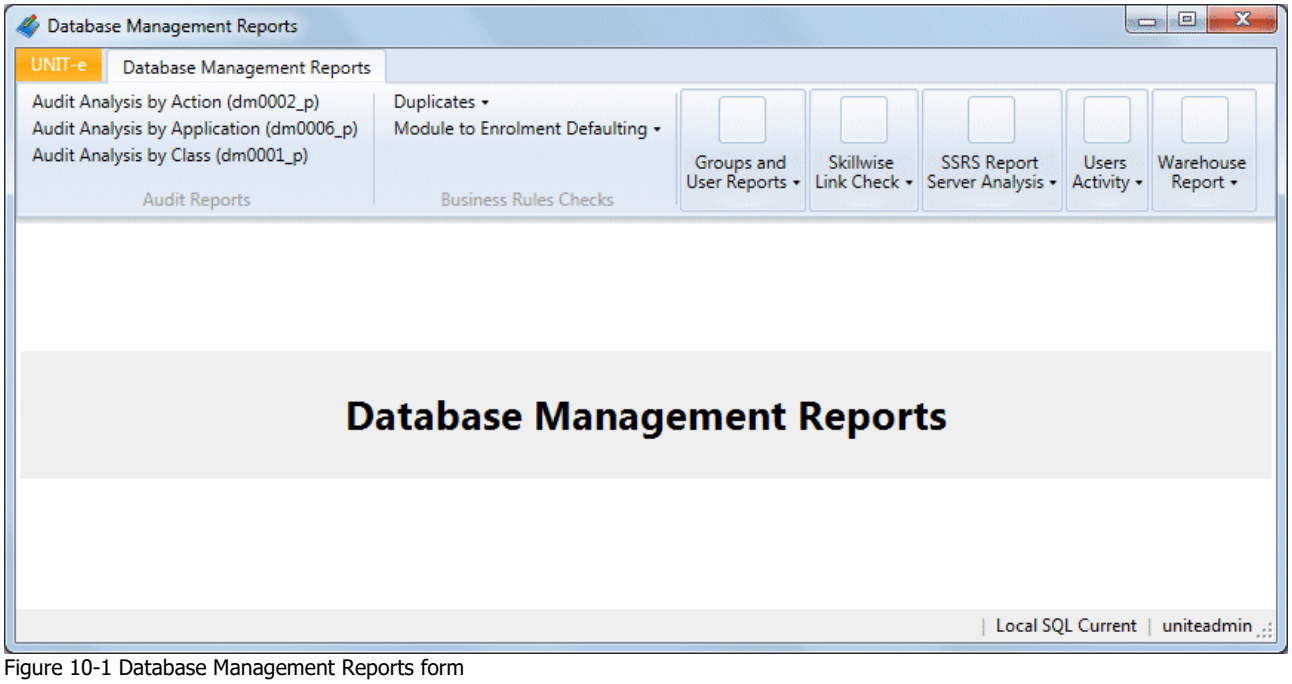



Figure 10-1 Database Management Reports form

# Chapter 11: Appendices

**Appendix A: Previous Enhancements ..... 11-2**

4.37 Enhancements ..... 11-2

4.36 Enhancements ..... 11-2

4.32 Enhancements ..... 11-2

4.28 Enhancements ..... 11-2

4.27 Enhancements ..... 11-2

# Appendix A: Previous Enhancements

The following enhancements were made for previous releases:

## 4.37 Enhancements

- Student merging (see page 5-15):

  Previously it wasn't possible to merge student/stranger records if they both included enrolments on the same module. A setting is now provided that allows you to switch on/off merges for these records:

  - Application\Student Merging\Rules\Enrolment

## 4.36 Enhancements

- Importing Tables and Columns (see page 4-8)
  - A note has been added to this section to highlight the fact that the DMCI licence is required if you wish to import external classes.
  - A new section has been added for an additional step required in Oracle only.

## 4.32 Enhancements

- Merging Students (see page 5-16):
  - Point 8 of this procedure has been updated to indicate that the error log is saved to the directory specified in the UNIT-e Online Stranger Transfer Service.exe.config file, and isn't defined by a setting.

## 4.28 Enhancements

- Database Management Reports (see page 10-3):
  - The SSRS Report Server Analysis reports have been added to the Database Management Reports application.
  - An updated version of the embedded menu (dm.cap_reports) is provided.
- Lookup Codes (see page 3-5):
  - An amendment has been made to the section about National1 codes, as these are used by various reports, not just returns reports.

## 4.27 Enhancements

- Documentation:
  - The 'Database Management Reports' chapter has been updated (see page 10-2).

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