



# **Qualpha Solutions**

## **QS-Sync**

### **Synchronization User Manual**

#### **Linking a School's Administration & E-Learning System**

**Qualpha Solutions**

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## 1. Introduction

QS-Sync is designed to create links between different database systems and serves to share data between systems. The current version of QS-Sync has been pre-compiled to link school administration systems with Moodle. The system has been tested against several different school administration systems, including MAZE and TASS. A total of four synchronization processes have been pre-built which synchronize: 1: Student profiles, 2: Staff profiles, 3: Teacher class lists and 4: Student class lists.

**Programming Language:** VB.NET 2005

**Supported Database type:** MySQL, MsSQL and ODBC

### Server requirement:

MySQL database Server 5.0.x or above

Minimum of 512M RAM

Minimum of 2GB Hard disk space

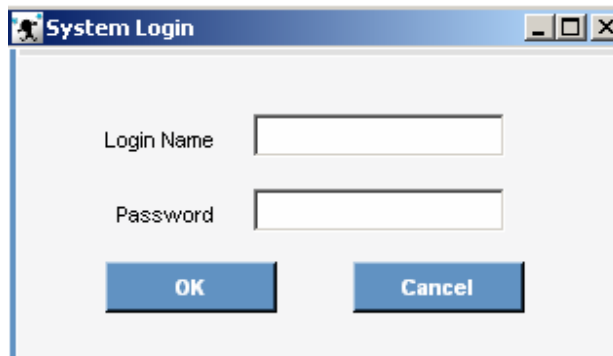
### Client requirement:

Microsoft .NET Framework 2.0 or above

Minimum of 256M RAM

Minimum of 1G Hard disk space

## 2. Accessing QS-Sync



The image shows a standard Windows-style dialog box titled "System Login". It features a title bar with a small icon on the left and minimize, maximize, and close buttons on the right. The main area of the dialog is light gray and contains two text input fields. The first field is labeled "Login Name" and the second is labeled "Password". Below these fields are two blue buttons with white text: "OK" and "Cancel".

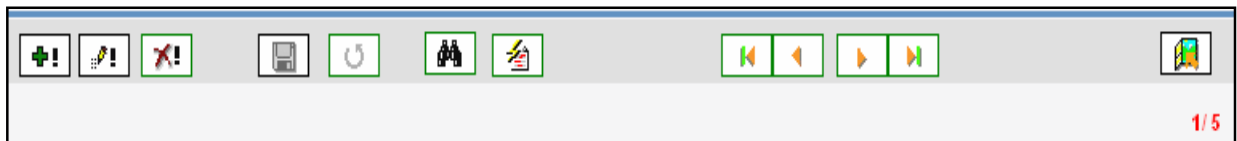
1. Enter your login name and password.
2. Click **“OK”** to log in.

### 3. System Configuration

After logging to the system, take the following steps to setup the QS-Sync system.

1. Go to **Database Connections** under System Admin to edit the source database and destination database information. (For details, read Chapter 15, Database Connections, page 18).
2. Go to **System Configuration** under System Admin to configure the system parameters like timetable period and semester etc. ( For details, read Chapter 17, System Configuration, page 20).
3. Go to **System SQL Commands** under System Admin to edit the SQL commands. Description and purpose of each SQL command is displayed at the bottom of the screen. (For details, read Chapter 16, System SQL Commands, page 19).
4. Use **View Data Sources** to check if data are valid in order to ensure data can be retrieved successfully from the source database. ( For details, read Chapter 13, View Data Sources, page 16).

### 4. General Features of Screens



**1/5:** 5- Total number of records; 1- It is the 1<sup>st</sup> record.



: **Add Record.**



: **Edit Record.**



: **Delete Record.**

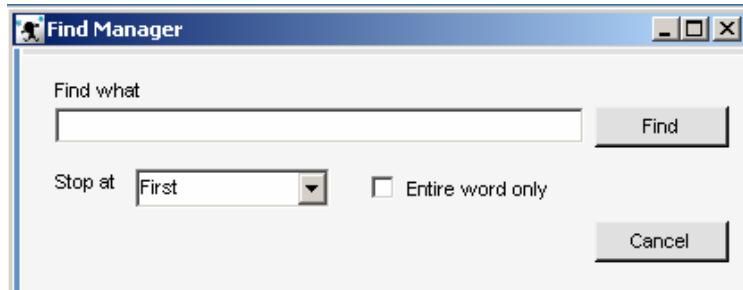


Changes made in the record will activate (Save Changes) & (Undo Changes) and disable other buttons. Remember to save or undo changes to enable other buttons.



: Search a particular record

After the click, Find Manager screen will be displayed.



**Find what:** Enter the key word here and click “*Find*”.

**Stop at:** To set the sequence of search results found.

*First:* Searching first record which matches the key word.

*Next:* Go to the next record which matches the key word.

*Previous:* Go to the previous record which matches the key word.

*Last:* Starting from the last record which matches the key word.

**Entire word only:** Only if the key word matches the whole word in the record will it be found. For instance, no search results found when “*Le*” is entered for searching “*Lee*”.

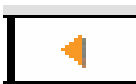
Click “*Cancel*” to exit the search screen.



: Refresh the screen after saving/deleting the changes.



: Jump to the first record.



: Previous record.



: Next record.



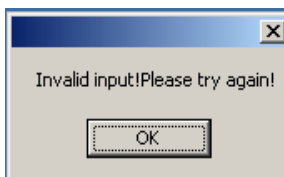
: Jump to the last record.



: Exit the screen.

**Note:** Changes made have to match the options in the dropdown lists. Otherwise, a warning will

be displayed.



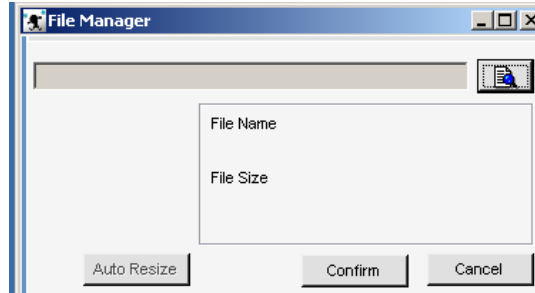
## 5. User Profile Information & Shortcut Panel


The screenshot shows a user interface with a profile picture placeholder and a 'Change' button. Below it, a welcome message reads 'Welcome: Tai Ming Chan'. To the right is a 'My Panel' section with a 'My Screens' dropdown menu and an 'Open' button. Below the welcome message is a 'My Profile' section with input fields for 'First Name' (Tai Ming), 'Last Name' (Chan), 'Email' (tmchan@classnetics.com), and 'Contact No' (1245432345). There are also fields for 'Current Password' and 'New Password', along with 'Call Help Desk' and 'Save' buttons.

### Change/ add a new profile picture

1. Click







2. Click  to browse to the file to be uploaded.
3. Click **“Auto Resize”** and **“Confirm”**.

### **My Screens**

This shows a list of data available to be displayed. The list of data is restricted to the user rights granted.

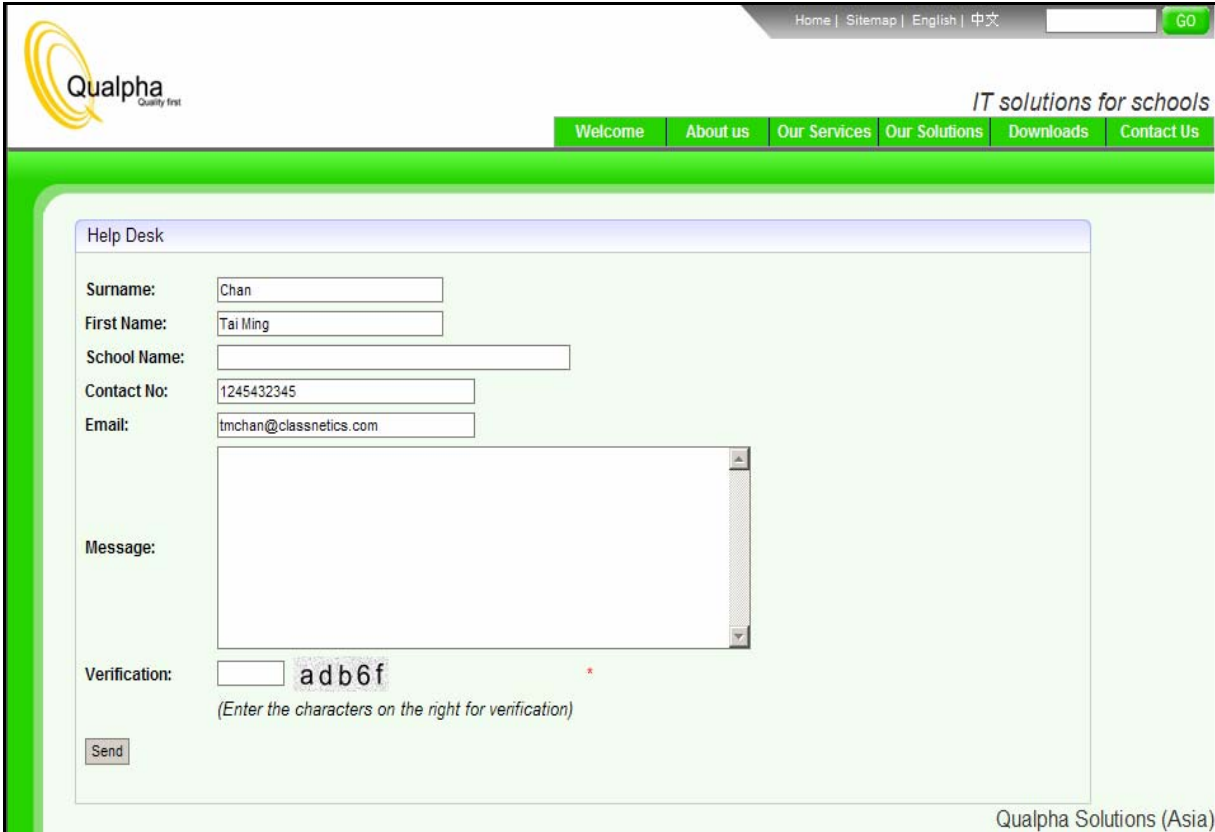
1. Click the dropdown list and choose a data to be displayed.
2. Click  .

## My Profile

The user's information is displayed here. To edit the information, make changes directly in the fields. Click  to save the changes.


## Call Help Desk

If you encounter problems, click  which will direct you to the Help Desk web page.

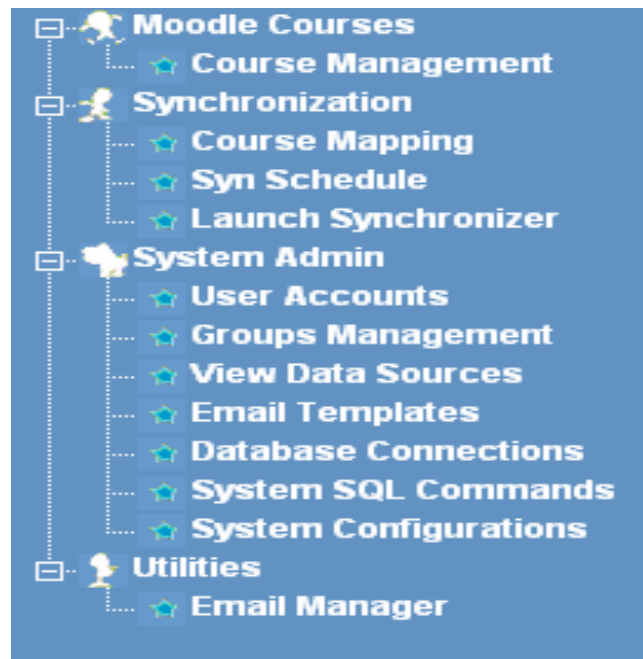


The screenshot shows a web browser window displaying the Qualpha website. The page has a green header with the Qualpha logo and navigation links: Home, Sitemap, English, 中文, and a GO button. Below the header is a green navigation bar with links: Welcome, About us, Our Services, Our Solutions, Downloads, and Contact Us. The main content area features a 'Help Desk' form with the following fields: Surname (filled with 'Chan'), First Name (filled with 'Tai Ming'), School Name (empty), Contact No. (filled with '1245432345'), and Email (filled with 'tmchan@classnetics.com'). There is a large text area for the 'Message' and a 'Verification' section with a small input box and the characters 'adb6f'. A 'Send' button is located at the bottom left of the form. The footer of the page reads 'Qualpha Solutions (Asia)'.

Your details will automatically be filled in.

1. Enter question(s)/problem(s) encountered in the **Message** box provided – also add the school name and verification code in corresponding boxes.
2. Click  and we will reply as soon as possible.

## 6. System Functions



### **Moodle Courses**

#### *Course Management:*

- Courses on the e-learning platform can be added/edited/deleted in this screen

### **Synchronization**

#### *Course Mapping:*

- Match the class list from the school administration system to the e-learning courses.

#### *Sync Schedule:*

- Setup the synchronization schedule for each process.

#### *Launch Synchronizer:*

- Launch the synchronization processor to start the synchronization.

### **System Admin**

#### *User accounts:*

- Create new user accounts and grant the user appropriate access rights.

#### *Group Management:*

- Create new groups and assign appropriate access rights to each group.

#### *View Data Source:*

- This is for data checking and debugging purposes. Select from the list to view different source data to ensure validity.

*Email Templates:*

- Create an email template to send a personalized email to a group(s) of recipients.

*Database Connections:*

- Create the database connection string which will be used to connect the school administration system as the source and the e-learning system as the destination. Supported database types include: MySQL, MsSQL and ODBC.

*System SQL Commands:*

- SQL commands created here will be used in various screens - for example, Course Mapping, Course Management and Synchronization Schedule. The SQL commands can be edited according to your network environment.

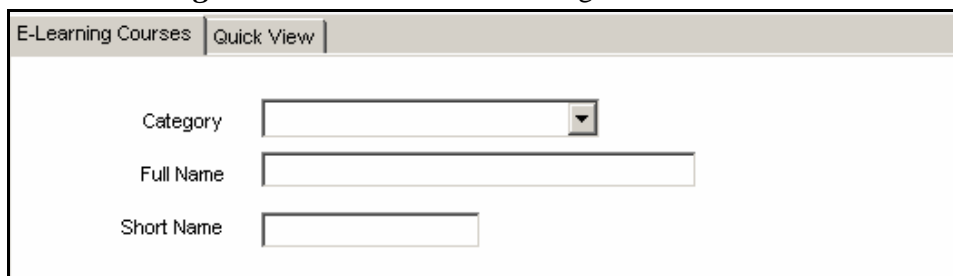
*System Configurations:*

- Configure each parameter value so they correspond to your network environment. For example, set the timetable period, semester etc.




*Email Manager:*

- Send personalized mass mails to student/staff/parents. Recipients' details can be loaded from either the school administration system or the e-Learning system.

**7. Course Management:** Edit or add e-Learning courses here.





Add a new record


1. Click  to add a new record.
2. Fill in the fields.
3. Click  to save changes or  to undo changes.

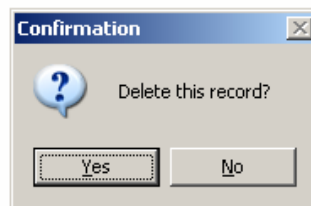
### Edit a record

1. Make changes directly in the fields. For **Category**, with a dropdown list, make changes directly in the field or choose from the list.

2. Click  to save changes or  to undo changes.

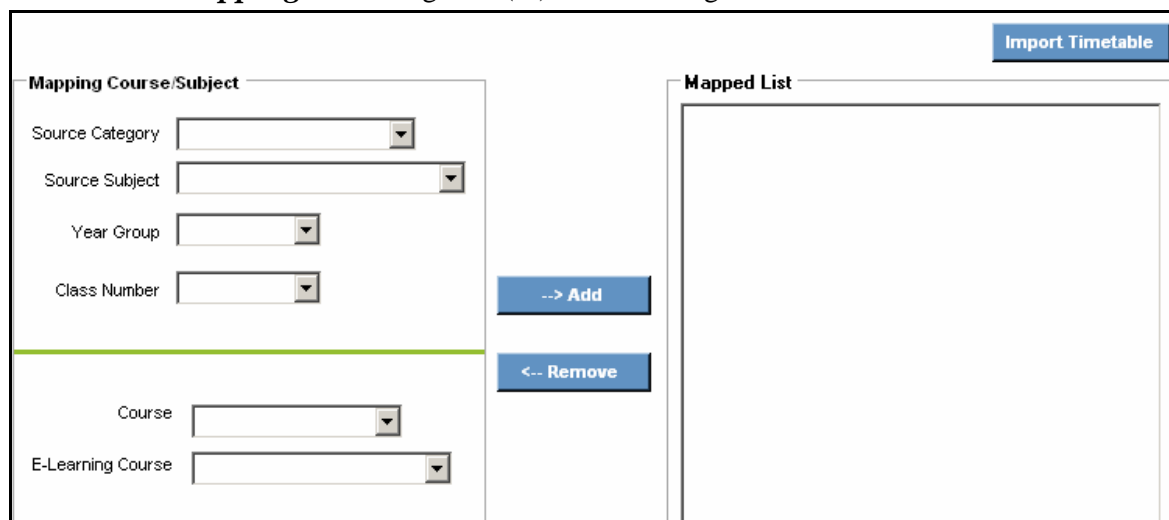
### Delete a record

1. Click  to delete a record.
2. A confirmation window will pop up. Click “**Yes**” to delete the record.




**Quick View:** List all records of e- Learning courses.

## **8. Course Mapping:** Matching class(es) to e-Learning courses.

The interface for Course Mapping is divided into two main sections. On the left, under the heading "Mapping Course/Subject", there are four dropdown menus: "Source Category", "Source Subject", "Year Group", and "Class Number". Below these is a horizontal line, followed by two more dropdown menus: "Course" and "E-Learning Course". To the right of these dropdowns are two blue buttons: "--> Add" and "<-- Remove". On the right side of the interface, there is a section titled "Mapped List" which contains a large empty rectangular area. In the top right corner of the interface, there is a blue button labeled "Import Timetable".

### Match class(es) to an e-Learning course

1. Import Timetable

Click  to import the latest teachers' class lists into the system for mapping.

2. Select class(es) to be matched. Fill in the fields or choose from the dropdown lists under Mapping Course/ Subject.

*Source Category:*

*Category of subjects*

*Source Subject:*

*Year Group:*

The year group of the class.


*Class Number:*

Number of the class(es) matched to the e-Learning course.

3. Match the selected class(es) to the e- Learning course.

*Course:*

*e - Learning course:*

4. Click  to match the class(es) to the course. The matched class(es) will be displayed in Mapped List.

### Remove the class(es) from the E-Learning course.

1. Select the class(es) to be removed from Mapped List. Hold **Ctrl** and select to select multiple classes.

2. Click .

**9. Syn Schedule:** To synchronize selected data in the school administration system with the e-Learning system.

### 3 Synchronization processes:

**Student/Staff Profile:** By choosing the student/staff profile data source from the school administration system, QS-Sync uses the student/staff email address as the unique key and verifies it against the e-Learning system for validity checking. If the user account exists, QS-

Sync will execute the profile update script which will update the staff/student's corresponding profile.

**Staff class list:** By matching the class lists from the school administration system with the e-Learning course, QS-Sync will use the matching information, retrieve all class lists to corresponding teachers and assign the teacher's ID into the respective e-Learning courses with teacher role. Multiple classes can be matched into the same e-Learning course.

**Student class list:** QS-Sync loads all student class list data and assigns each student's subject into the corresponding e-Learning course with student role.

**Notes:** Any new synchronization processes can be created per user request.

**Synchronization Process**  
Syn Process Description  For   
Source  <--> Destination   
Scheduled Time

### Set synchronization process schedule

1. Fill in the boxes or choose from the dropdown lists under Synchronization Process.

<i>Sync Process Description:</i>	Enter the description of the process here.
<i>For:</i>	Choose the type of data to be synchronized.
<i>Source:</i>	The source of data to be retrieved.
<i>Destination:</i>	The system where the retrieved data will be used.
<i>Scheduled Time:</i>	Set the time for the schedule to take place.

2. Click  to create a new schedule. The newly added schedule will be displayed in Available Sync Process.

**Available Syn Process**  
 8-TimeTable Synchronizatoin for Staff at:03:00:00  
 9-Timetable Synchronization for Student at:04:00:00

**10. Launch Synchronizer:** Run the synchronization process.



Click  to run the process.

To discontinue the running process, click “**Stop Process**”.

*Clear Messages:*

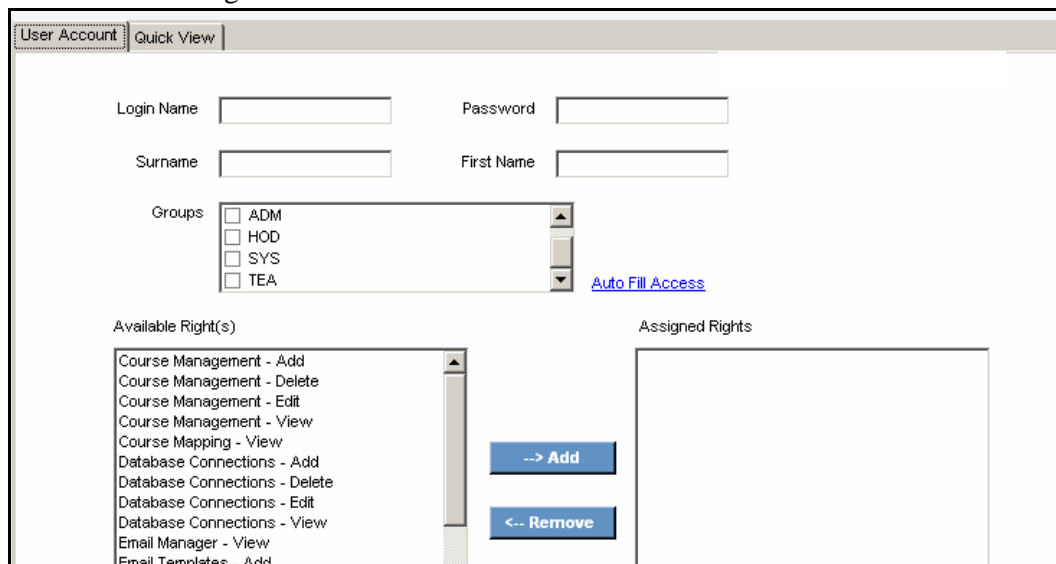
Clear the box.

*Hide Me:*

Hide the processor to the system tray area. Right click the

icon  to go back to the Launch Synchronizer window.






**11. User Accounts:** Create and manage user accounts. Accounts can be put into a group with the same access rights.







<i>Groups:</i>	ACC	- Account
	ADM	- Administration
	HOD	- Head of Department
	SYS	- System Administrator
	TEA	- Teacher

To create a new group or assign specific access rights to a group, go to **Group Management**. For details, read Chapter 12, Groups Management, page 14.


#### Add a new user account

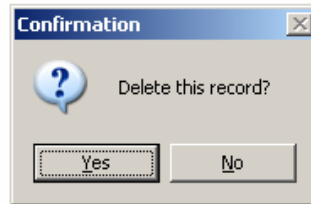
1. Click  to create a new user account.
2. Fill in *Login Name*, *Password*, *Surname* and *First Name*. All these fields are required to be filled in.
3. Select one or more box(es) of the group(s) to which the user belongs. The group's specific rights will be automatically added in *Assigned Rights* by clicking [Auto Fill Access](#).
4. Select one or multiple access rights from *Available Rights*. Hold **Ctrl** to select multiple rights.
5. Click  to move rights to *Assigned Rights*. Or  to remove rights from *Assigned Rights*.
6. Click  to save changes or  to undo changes.

#### Edit a user account

1. Make changes directly in the fields.
2. Click  to move rights to *Assigned Rights*. Or  to remove rights from *Assigned Rights*.
3. Click  to save changes or  to undo changes.

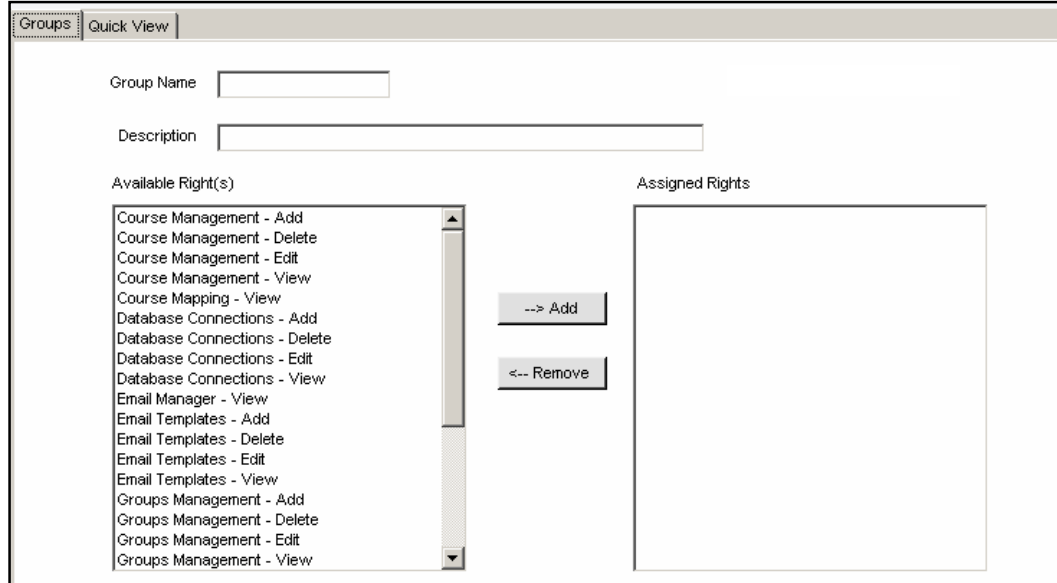
## Delete a user account

1. Click  to delete a record.
2. A confirmation window will pop. Click “Yes” to delete the record.








**Quick View:** List all records of user accounts.




**12. Groups Management:** This is used to change the access rights for the group(s) and add a new group with access rights.




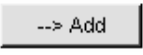
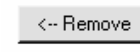


### Add a new group

1. Click  to create a new group.
2. Enter the group name and description.  
  
Select one or multiple access rights from *Available Rights*. Hold **Ctrl** to select multiple rights.
3. Click  to move rights to *Assigned Rights* or  to remove rights from *Assigned Rights*.
4. Click  to save changes or  to undo changes.


### Edit a group name

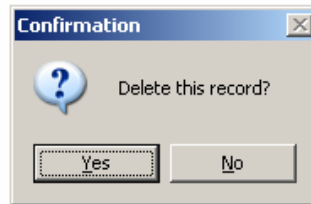
1. Click  to jump to a particular group.
2. Make changes directly in group name or/and description.
3. Click  to save changes or  to undo changes.

### Edit a group's access rights

1. Click  to jump to a particular group.  
  
Select one or multiple access right from *Available Rights*. Hold **Ctrl** and select to select multiple rights.  
  
Click  to move rights to *Assigned Rights*. Or  to remove rights from *Assigned Rights*.
2. Click  to save changes or  to undo changes.

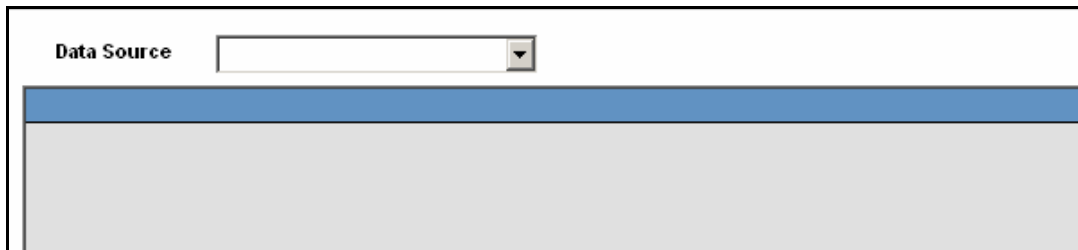
### Delete a record

3. Click  to delete a record.
4. A confirmation window will pop up. Click “Yes” to delete the record.



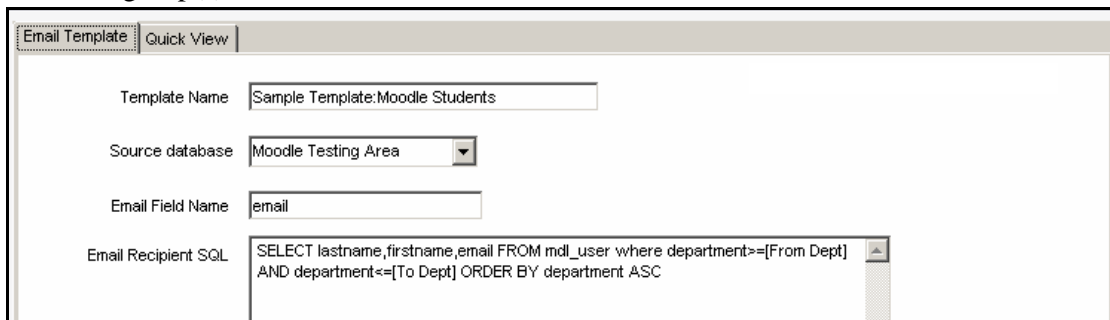
**Quick View:** List all records of groups.

**13. View Data Source:** To check data to be loaded into the system are valid.



Choose the data source from the dropdown list. The data will be displayed in the box.

**14. Email Template:** To create an email template which is used in Email Manager to send emails to group(s) of students and staff.



*Template Name:* Enter the name of the email template. For example, Sample Template: Moodle Students.

*Source database:*

*Email Field Name:* Field name of the email column

*Email Recipient SQL:* This is a command used to determine recipients of the email.



**Note:** An understanding of SQL is needed to use this function.

Email Template Content	Dear <<firstname>> <<lastname>>,  Please don't forget to do your assignment.  Rgs, Class Teacher
------------------------	---

*Email Template Content:* Enter the email text here. System variables can be used in order to personalize the email.

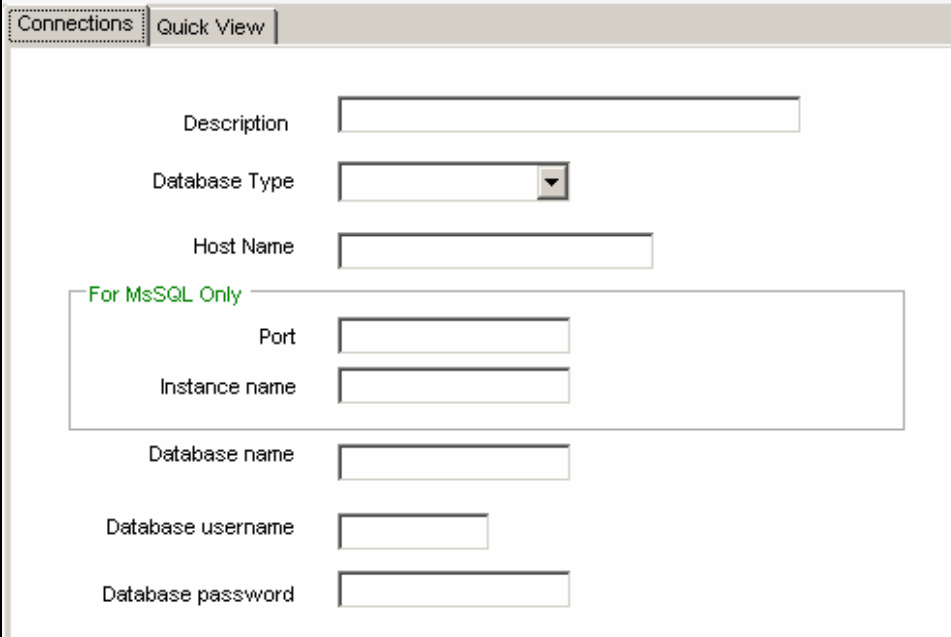
(The Email column indicates the field name. The Recipient SQL script must include the email column name.)

<<firstname>>: When the email is sent to the recipient, this is replaced by recipient's first name.

Click  to save changes or  to undo changes.

**Quick View:** List all records of email templates.

**15. Database Connections:** Create the connection between the school administration system as source and the e-Learning System as the destination. Supported database types include: MySQL, MsSQL and ODBC.



*Description:*

Enter the name of the connection here.

*Database Type:*

There are three database types to choose from. They include MySQL, MsSQL and ODBC.

*Host Name:*

The hosting machine and information of the database server

For MsSQL Only

*Port:*


*Instance name:*



*Database name:*

*Database username:*




*Database password:*

#### Add a new connection


1. Click  to create a new connection.
2. Fill in the fields. All fields are required to be filled in except Database Type.

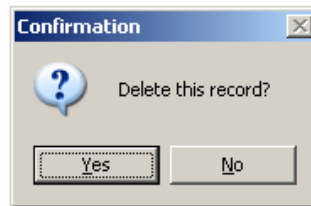
3. Click  to save changes or  to undo changes.

### Edit a connection

1. Click  to jump to a particular record.
2. Make changes directly in the fields.
3. Click  to save changes or  to undo changes.

### Delete a record

5. Click  to delete a record.
6. A confirmation window will pop up. Click “**Yes**” to delete the record.






**Quick View:** List all records of connections.

**16. System SQL Commands:** Commands created here are used in various functions - for example, in Course Management.

SQL Commands	Quick View
Command Query	<pre>SELECT id, name FROM mdl_course_categories</pre>
Order By	<pre>ORDER BY id ASC</pre>
<b>GroupBox:3</b>	
Used on screen(s)	Course Management
For database on	Destination
Description	Loading Course Categories into Category List
	Command Name LoadMoodleCategoryLi

**GroupBox3:** A description and purpose of each SQL command is displayed here.

Edit a command




1. Click  to jump to a particular group.
2. Make changes directly in the fields.
3. Click  to save changes or  to undo changes.

**Quick View:** List all records of commands.

**17. System Configurations:** Determine each parameter value corresponding to the network environment.

Configuration	Quick View
Parameter Value	<input type="text" value="07-08"/>
Description	<input type="text" value="Timetable Period"/>

Edit a command

1. Click  to jump to a particular group.
2. Make changes directly in the fields.
3. Click  to save changes or  to undo changes.

**Quick View:** List all records of configuration.

**18. Email Manager:** Send personalized emails to a group(s) of students or staff. Recipients' data can be loaded from either the school administration system or the e-Learning system.

### Send Emails

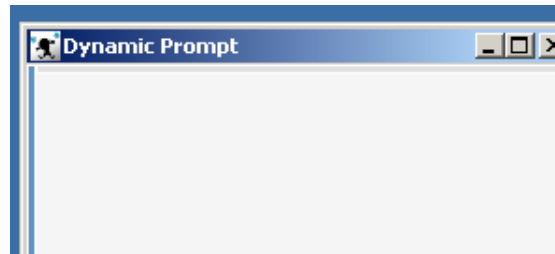
**From:** The user's email address will be automatically filled.  
**Cc:** Send the email to multiple recipients.  
**Bcc:** Send the email to other recipients without disclosing his/her email address.

**Email Status:** Status of the email: Sending or completed.

**No. of Sent Emails:** Number of emails sent to the recipients.

1. Click  to select the group(s) of recipients. A screen of Email Templates will pop up.

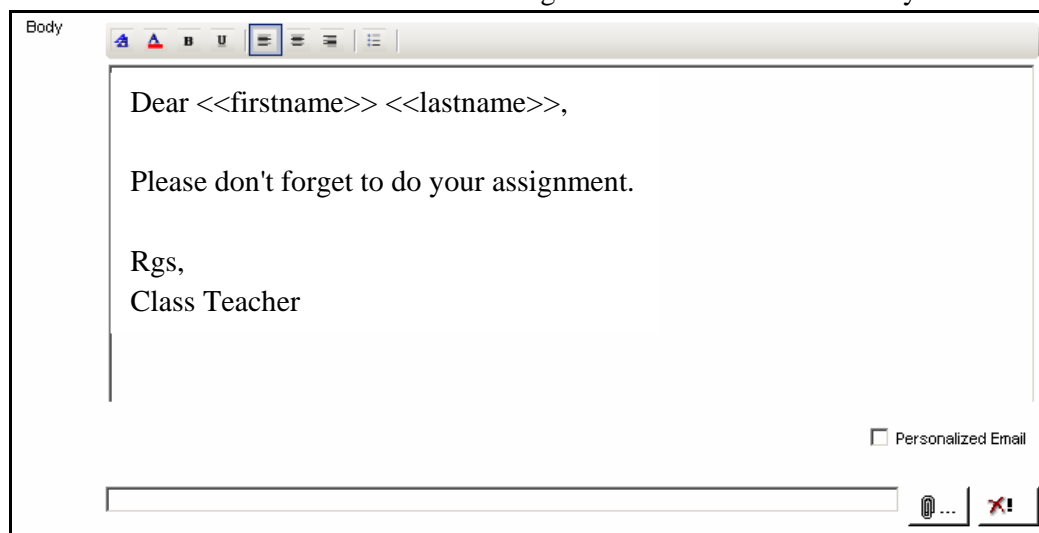
2. Select an email template created in Email Template. (For details, read Chapter 14, Email Template, page 16. ) A screen of groups of recipients will be displayed.



The options of groups of recipients is determined by Email Recipient SQL in Email Template. (For details, read Chapter 14, Email Template, page 16. )



Select the group(s) of recipients from the dropdown list, for example, from Y01A to Y03D or enter the roll group. To search particular/multiple discrete data, set the data range, for instance, from Y01A to Y01A. It is recommended to make use of the dropdown list to set the range to avoid setting an invalid or wrong data range.

3. Click “**OK**”. The template is then loaded into body area. List of selected recipients is displayed in **Quick View**.
4. Edit the email content. Text formatting toolbar is available to modify the content.



5. “**Personalized Email**”: When the box is ticked, all formatting effects will disappear in the email received and system variables <<firstname>> will be replaced by the recipients’ first names.

**Note:** If “Personalized Email” is not chosen, all formatting effects will be kept. However, system variables <<field name>> will not be replaced and <<firstname>> will be shown in the email received.

6. [Optional]: Click  to attach a file.  to remove the file.

7. Click  to send the email.

**Quick View:** List all the selected recipients.

**Email Log:** A review of the email sent.