

## Chapter 9 References

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## Appendix A

### Questionnaires for implementing online submission of assignments

This questionnaire has been used to seek the current situation of the IT skills and interest of the staff & students and the facilities available for the implementation of this Online Programme.

	Student	Lecture Internal	Lecturer External
<b>1. User Type</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Engineering Technology	Natural Science	Education	HSS
<b>2. Faculty</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>


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<b>3. IT Skills</b>	Very poor	Some what	Good	Very Good
My Computer knowledge is	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<b>4. Computer Availability</b>	Home	Office	Do not have
I have a computer facility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<b>5. Willingness</b>	Strongly Agree	Agree	Disagree	Strongly Disagree
I prefer to submit the assignment online	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Appendix B Questionnaires

### Questionnaires for Evaluation of Functions

This questionnaire has been used to evaluate

<b>Usefulness</b>	Strongly Agree	Agree	Disagree	Strongly Disagree	I don't know
1. It helps me to achieve the result that I want	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. It makes the things I want to accomplish easier to get done	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. It saves me time when I use it	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. It meets my needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<b>Ease of use</b>	Strongly Agree	Agree	Disagree	Strongly Disagree	I don't know
1. It is easy to use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. It is simple to use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. It is user friendly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. It requires the fewest steps possible to accomplish what I want to do with it.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. It is flexible	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. I can use it without written instructions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. I don't notice any inconsistencies as I use it.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- |                                                    |                          |                          |                          |                          |                          |
|----------------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 8. Both occasional and regular users would like it | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. I can recover from mistakes quickly and easily  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. I can use it successfully every time           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**Ease of learning**

Strongly Agree	Agree	Disagree	Strongly Disagree	I don't know
----------------	-------	----------	-------------------	--------------

- |                                    |                          |                          |                          |                          |                          |
|------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1. I learned to use it quickly     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. I easily remember how to use it | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. It is easy to learn to use it   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |



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**Satisfaction**

Strongly Agree	Agree	Disagree	Strongly Disagree	I don't know
----------------	-------	----------	-------------------	--------------

- |                                       |                          |                          |                          |                          |                          |
|---------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1. I am satisfied with it.            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. It works the way I want it to work | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. It is pleasant to use              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

## Appendix C Database structure

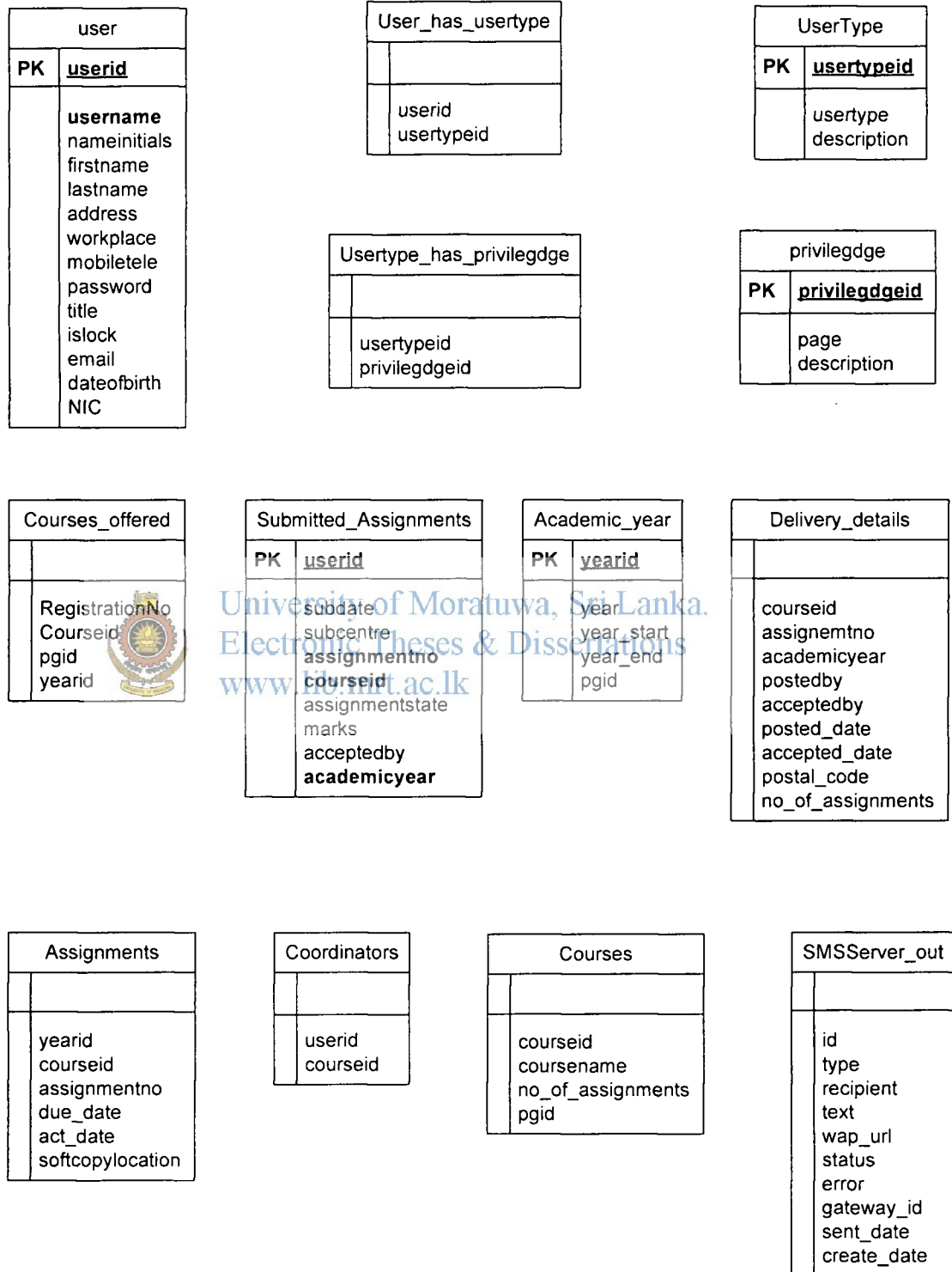


Figure 28 Database Structure

## Appendix D Flowcharts

This flowchart diagram describes the flow of the three types of messages delivering mechanism.

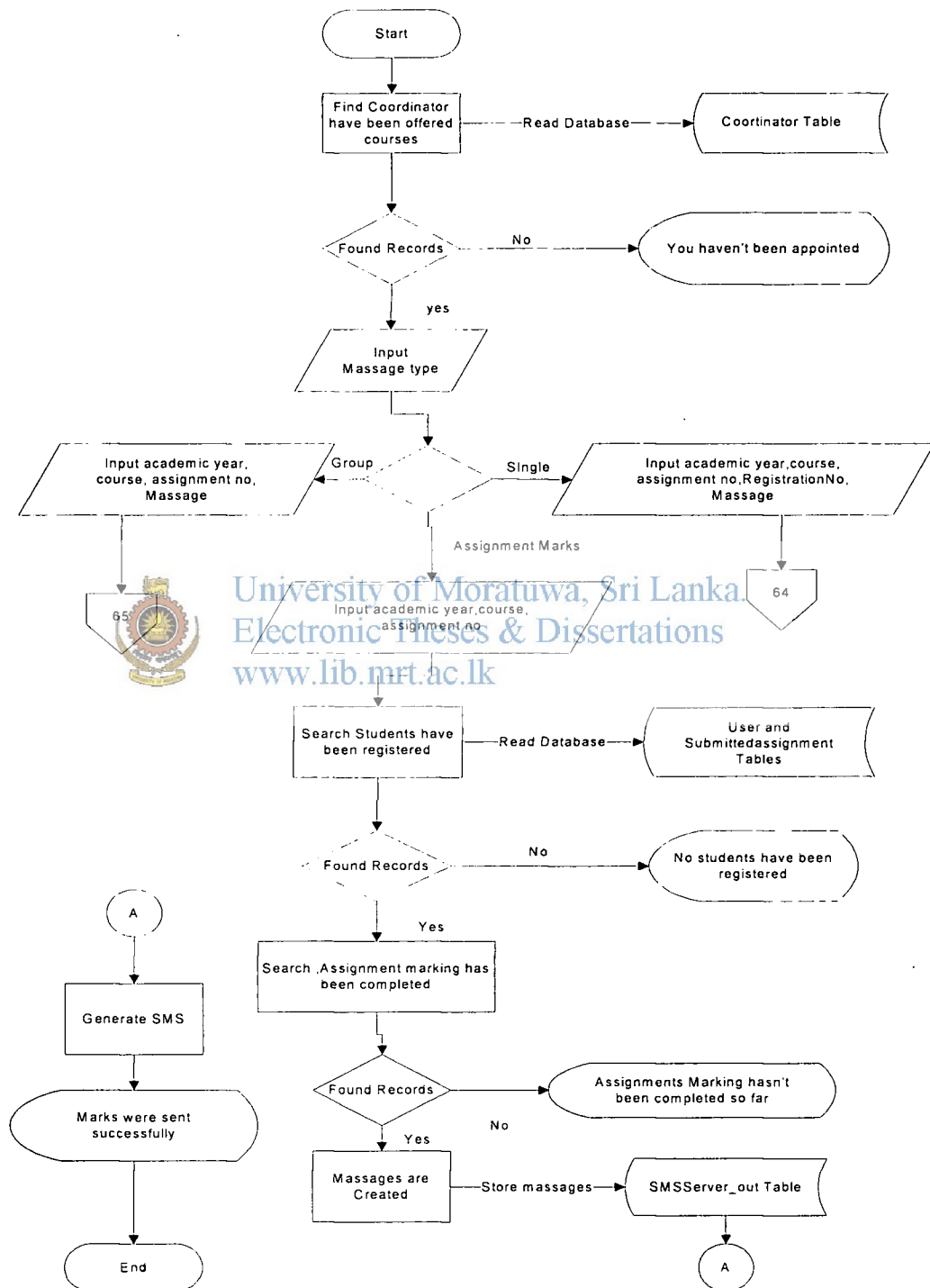
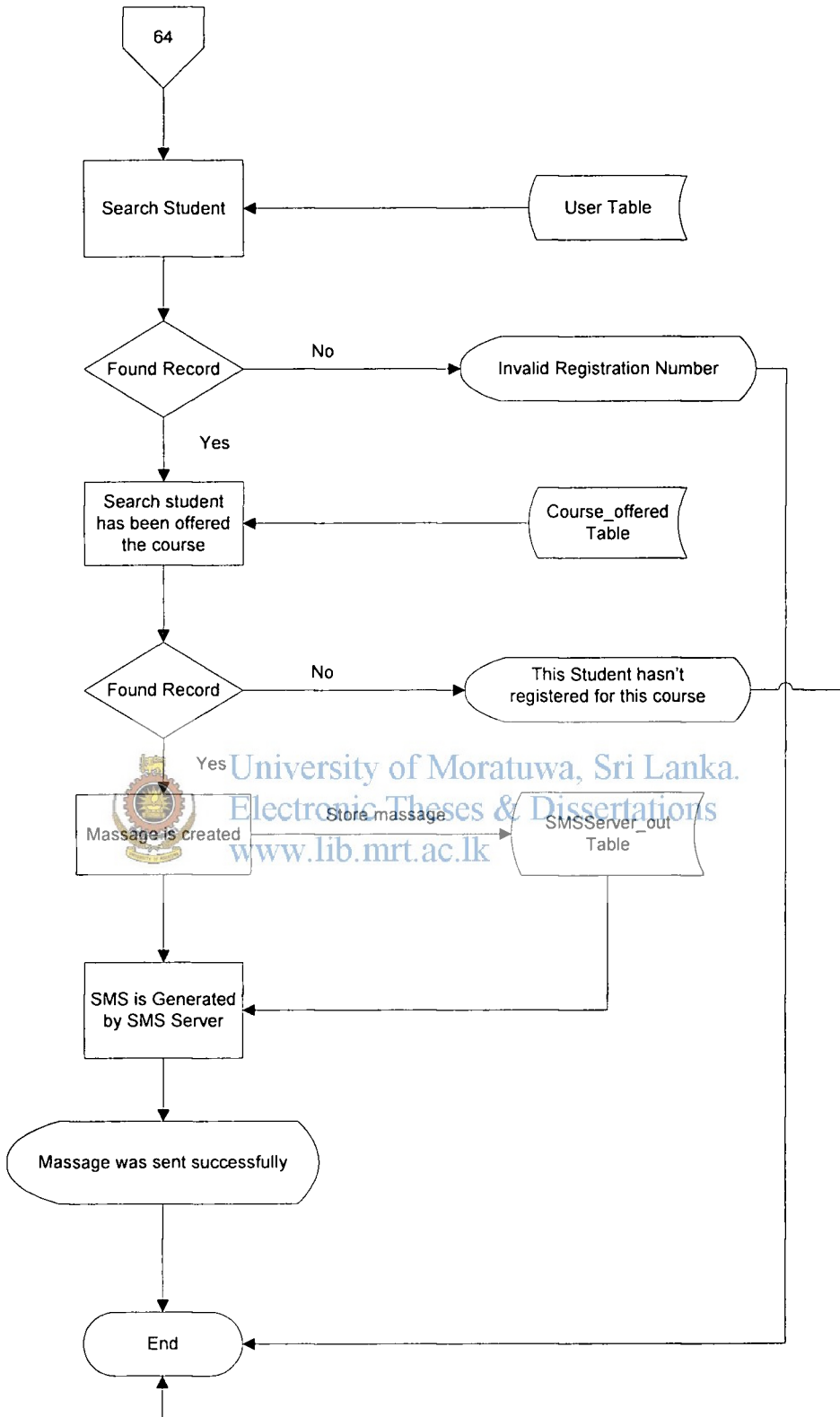
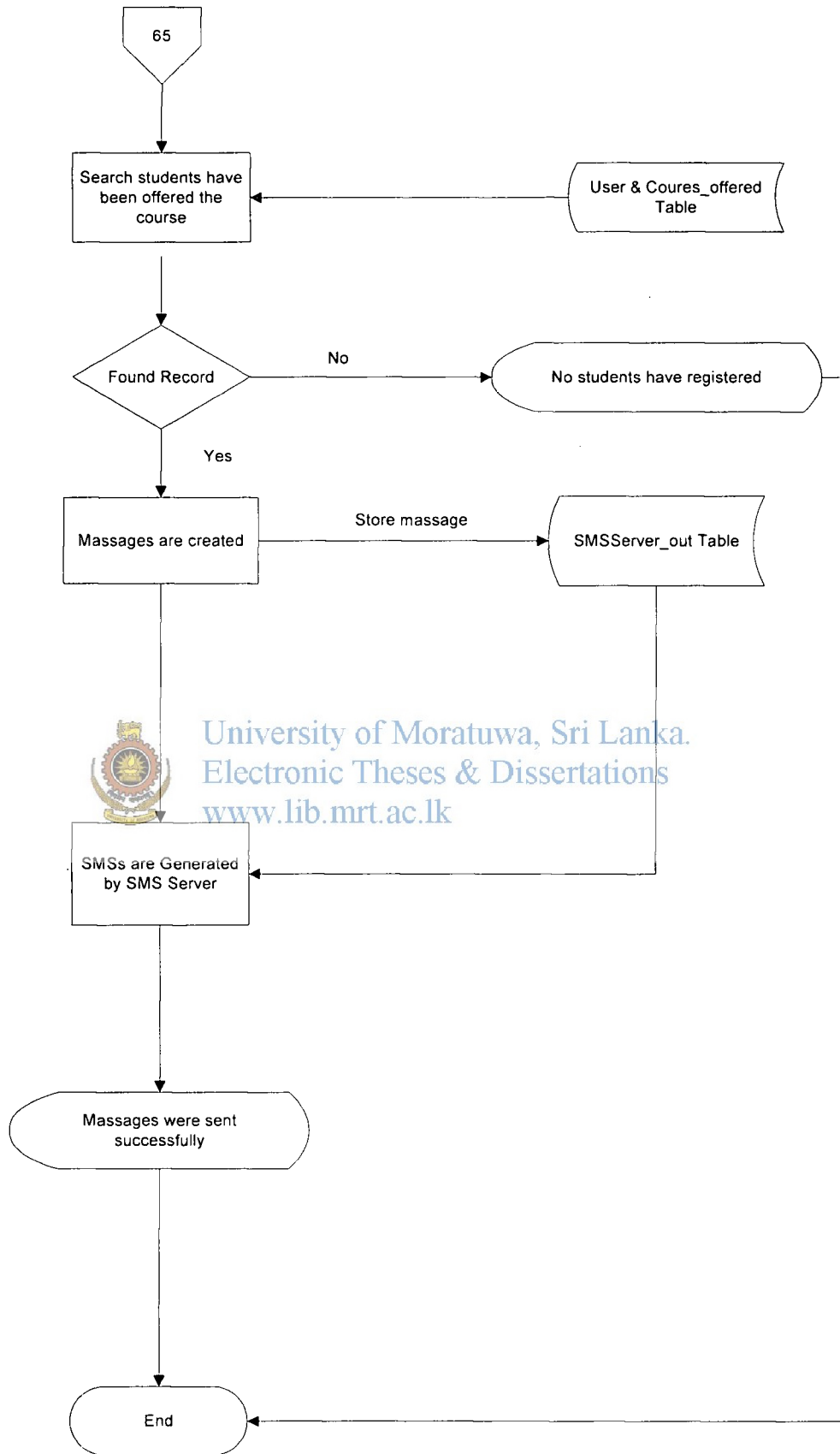


Figure 29 Flowchart diagram for sending messages





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This flowchart diagram describes the flow of the upload assignment process of the system.

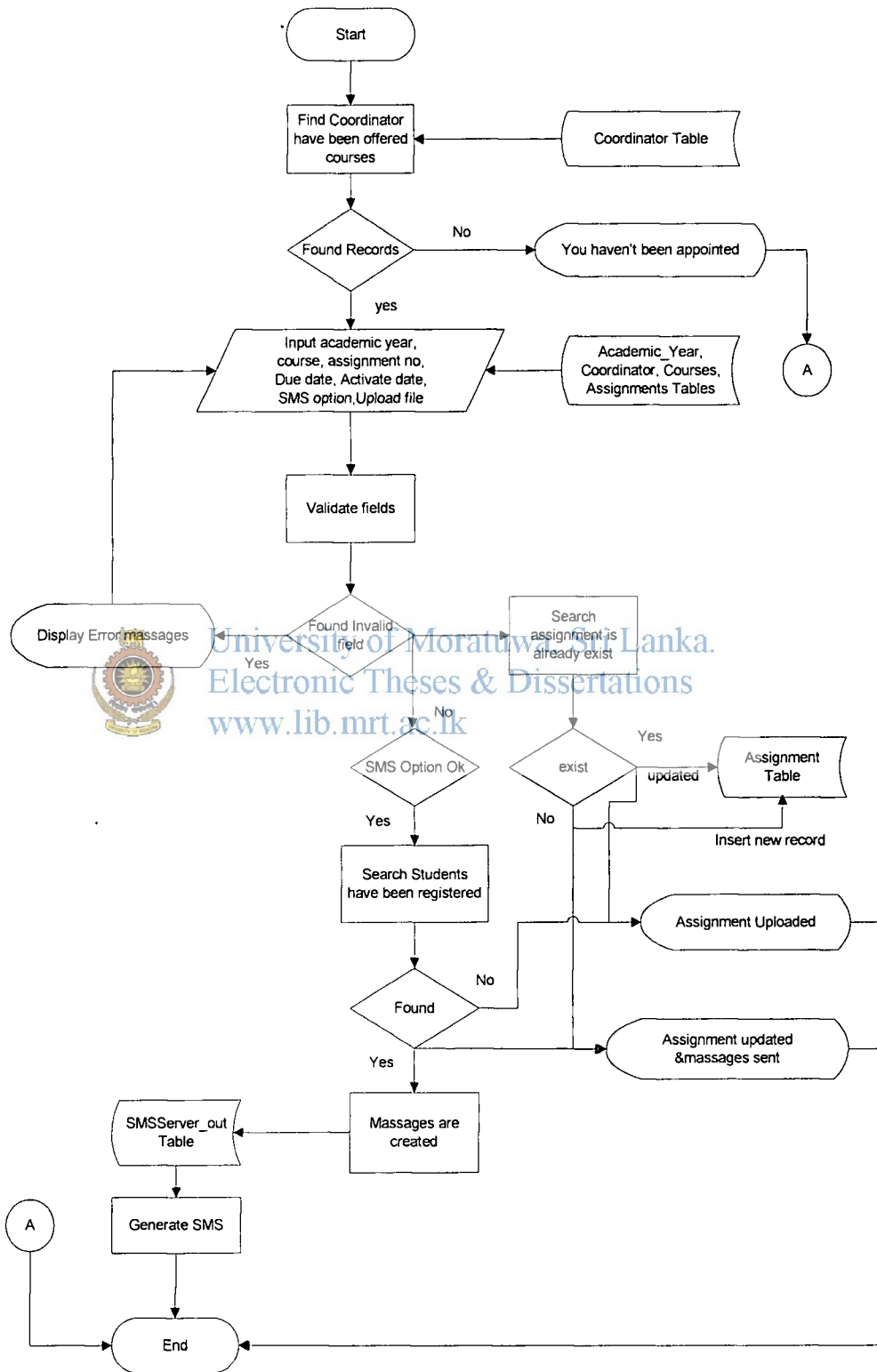


Figure 30 Flowchart diagram for upload assignment




## Appendix E Test plan

Black box testing methodology looks at, what are the available inputs for an application and what are the expected outputs that should result from each input. While developing all functions of this system, each on was checked individually using same test technology. After integrating all units, system was again tested using following test plan and few test data sets and result are given below

### Test cases

No	Test case	Steps needed to carried out the test	Expected result
1	<b>Login</b>	Open Login dialog box  Enter user name and password	If password and username accepted, system menu will open according to the user privileges  Otherwise Relevant message should be displayed
2	<b>Change Profile</b>	Click Edit My Profile Link  Display user details to be edited  Change required information  Press Edit Profile Button	Before saving data, system should check whether mandatory fields have been entered and they have been in correct format. Else relevant messages must be displayed.
3	<b>Change password</b>	Click Edit My Password Link  Enter old password  Enter New Password  Retype New Password  Press Change Button  Logout and Login using new password	If details are entered correctly message should be displayed as successfully password edited

No	Test case	Steps needed to carried out the test	Expected result
4	Add New User	Click Add New User Link  Enter the user details  Press Add User Button	Data entry form should be displayed  When presses Add User button, validation of each field should be checked and relevant messages must be displayed.  If there is no invalidation field ,message should be displayed as “Add User successfully “
5	Active User  	Click Activate User Link  Type User Name and  Press Search Button	User Search window should be displayed  If user is invalid, message display as “No Such User “  If user already activate ,message should be displayed as “User is already activated”  If user activate ,message display as “Successfully activate user”  If user deactivate, user details should be displayed in a form and “Yes” “No” option should also be available with question “Do you want to activate this user”. If “yes” button is selected ,message

			should be displayed as “Successfully activate the user” if “No” button is selected, message should be displayed as “Not user activated “
6	<b>Deactivate User</b>	<p>Click Deactivate User link</p> <p>Type user name and press Search button</p> <p>Press “Yes” button</p>	<p>Deactivate user window should be displayed</p> <p>If user deactivate ,message should be displayed as “This user is already deactivated”</p> <p>If user activate, user details should be displayed in the form and “Yes” , “No” button should also be available with question “Do you want to deactivate this user” if “Yes” button is pressed and selected user is Course Coordinator type user ,another question should be asked as “This user is Course Coordinator confirm deactivation?” with “Yes” and “No” button. If “Yes” button is selected, message should be displayed as “This user is successfully deactivated”. If “No” button is selected, message should be displayed as “This user is not deactivated”</p> <p>If selected user is not</p>



			Course Coordinator type user, message should be displayed as “This user is successfully deactivated”.
7	<b>Appoint Coordinator</b>	<p>Click Appoint Coordinator link</p> <p>Type user name and press search button</p> <p>Select course for coordinating and press appoint button</p>	<p>If username is invalid ,message should be displayed as “ Invalid Username”</p> <p>Otherwise next window should be displayed for selecting course and appoint.</p> <p>If user has been already appointed for that course, messages should be displayed as “Coordinator has been already appointed”</p> <p>If use can be appointed for selecting course , message should be displayed as “Successfully appointed “</p>
8	<b>Upload Assignment</b>	<p>Click upload assignment</p> <p>Select academic year</p> <p>Select course code</p> <p>Select assignment No</p> <p>Select due date</p> <p>Select activate date</p> <p>Select SMS option</p> <p>Press browse button and select required file</p>	<p>If Course Coordinator hasn’t been appointed ,message should be displayed as “You haven’t been appointed”</p> <p>If all option fill without SMS option ,display message as “upload assignment successfully “</p> <p>If SMS option is also activate,l display</p>



		Press upload button	message as "Upload assignment and sent messages successfully"
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## Appendix F Test case and test result


Methodology – Black Box Test

**Name: Login,**

Usage : For access control. There are four access levels.

1. Student
2. Receiving Officer
3. Course Coordinator
4. Administrator

No	Test Item	Level	Input	Expected Output	Actual Output
	Login		Click Login Button	Show Error Messages	Same
			Click Try Again Button	Display Login window	Same
		1	Data Set 1	Display User and Student Menu	Same
			Data Set 2	Display User and Student Menu	Same
		2	Data Set 3	Display User and Receiving officer Menu	Same
			Data Set 4	Display User and Receiving officer Menu	Same
		3	Data Set 5:	Display User and Course Coordinator Menu	Same
			Data Set 6:	Display message as “ Check your username and password”	Same
		4	Data Set 7:	Display User and User Admin menu	Same
			Data Set 8:	Display User and User Admin menu	Same

<b>Access Level: Student</b>	
<b>Data Set 1:</b> Username : 410035800 Password : 410035800	<b>Data Set 2:</b> Username : 410035807 Password : 410035807
<b>Access Level: Receiving Officer</b>	
<b>Data Set 3:</b> Username : sunitha Password : sunitha	<b>Data Set 4:</b> Username : imesha Password : imesha
<b>Access Level: Course Coordinator</b>	
<b>Data Set 5:</b>  Username : chulawansa Password : chula	<b>Data Set 6:</b> Username : nishantha Password : nisha
<b>Access Level: Administrator</b>	
<b>Data Set 7:</b> Username : admin Password : admin	<b>Data Set 8:</b> Username : nandana Password : nansan



**Name: Upload Assignments,**

Usage : There is one access levels.

1. Course Coordinator

No	Test Item	Input	Expected Output	Actual Output
	<b>Upload Assignment</b>	Data Set 1	Display message as "Uploaded Assignment and Sent Messages Successfully"	Same
		Data Set 2	Display message as "Uploaded Assignment Successfully"	Same
		Data Set 3	Display message as "PDF File type is only allowed "	Not Same
		Data Set 4	Display message as "Activate date cannot be empty "	Same
		Data Set 5	Display message as "Upload file can't be empty "	Same
		Data Set 6	Display message as "Due date can't be empty "  Display message as "Activate date can't be empty "	Same



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<b>Access Level: Course Coordinator (User name : Chulawansa ,Nishantha)</b>			
<b>Data Set 1:</b>		<b>Data Set 2:</b>	
Academic Year	2010_2011	Academic Year	2010_2011
Course	MPZ2310	Course	MPZ2311
Assignment No	1	Assignment No	1
Due Date	2011-01-17	Due Date	2011-01-20
Activate Date	2011-01-05	Activate Date	2011-01-05
SMS	Activate	SMS	Not Activate
Upload file	mpz23101.pdf	Upload file	mpz23111.pdf
<b>Data Set 3:</b>		<b>Data Set 4:</b>	
Academic Year	2010_2011	Academic Year	2010_2011
Course	MPZ2311	Course	MCC1103
Assignment No	2	Assignment No	1
Due Date	2011-01-30	Due Date	2011-01-05
Activate Date	2011-01-08	Activate Date	
SMS	Not Activate	SMS	Not Activate
Upload file	mpz23111.doc	Upload file	MCC11031.pdf
<b>Data Set 5:</b>		<b>Data Set 6:</b>	
Academic Year	2010_2011	Academic Year	2010_2011
Course	MCC1103	Course	MCC1103
Assignment No	3	Assignment No	1
Due Date	2011-02-05	Due Date	
Activate Date	2010-01-01	Activate Date	
SMS	Not Activate	SMS	Not Activate
Upload file		Upload file	MCC11031.pdf

## Appendix G Installation Guidance

### Installation

1. First install the WAMP ,using the WampServer2.0i file stored in the CD WAMP\_Installation folder. Then copy the “OUSLHAMS” folder to the document root.
2. Load the WAMP and run Phpmyadmin and import the database using text file stored in CD “DBTEXT” folder.
3. Open the httpd.conf file located in the :\\wamp\\bin\\apache\\Apache2.2.11\\conf folder and edit DocumentRoot “:~/wamp/www/ OUSLHAMS ”
4. Install the Java JDK 1.5 or above.
5. Copy the SMSLIB folder to C drive or Any other drive
6. File comm.jar copy to the JDKDIR/jre/lib/ext/ . comm.jar is located in /SMSLIB/COMMAPI/ folder (JDKDIR is a java installed folder in you machine)
7. File javax.comm.properties should go under JDKDIR/jre/lib/ javax.comm.properties is also located in /SMSLIB/COMMAPI/ folder
8. Library files (i.e. win32com.dll for Win32) should go under JDKDIR/jre/bin/ . win32com.dll is located in /SMSLIB/COMMAPI/ folder
9. File RXTXcomm.jar should go under JDKDIR/jre/lib/ext/ RXTXcomm.jar file is located in /SMSLIB/ rtx-2.1-7-bins-r2 folder
10. Connect the or GSM/GPRS modem to the USB port and find the serial drive number ( etc com1 or com2 .. )
11. Edit the SMSServer.conf file located in the folder \\SMSLIB\\dist\\classes\\ and change the “modem1.port=COM5” line. Here com5 should be replaced by relevant serial port drive number.
12. Structure of SMSServer.conf is given below

```
smsserver.balancer=RoundRobinLoadBalancer

# Lets add a modem

gateway.0=modem1, SerialModem

modem1.port=COM5

modem1.baudrate=115200

modem1.manufacturer=Nokia

modem1.model=6310i

modem1.protocol=PDU

modem1.pin=0000

modem1.inbound=yes

modem1.outbound=yes

modem1.smsc_number=

interface.0=db1, Database

db1.type=mysql

db1.url=jdbc:mysql://localhost:3306/ip?autoReconnect=true

db1.driver=com.mysql.jdbc.Driver

db1.username=nandana

db1.password=newpwd

db1.tables.sms_in=smsserver_in

db1.tables.sms_out=smsserver_out

db1.tables.calls=smsserver_calls

db1.batch_size=5

db1.retries=2

db1.update_outbound_on_statusreport=yes

settings.delete_after_processing=no

settings.send_mode = async

settings.timeframe.low=0900-2200

settings.timeframe.normal=0000-2359

settings.timeframe.high=0000-2359
```

