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Appendices



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Appendices

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Appendix 1 - Project Charter

Name of the Candidate: N.M.S.A. Bandara

Registration No: 4/10005

Index No: 4/10005

eMail : sbandara@slida.lk

Title of the Project: A web based course management system for SLIDA

Executive Summary:

Sri Lanka Institute of Development Administration (SLIDA) is a training organization dedicated to train managers of the public sector. This institute conducts annually around 100 training courses, which are ranging from 1-day seminars to 1-year diplomas in various disciplines including management and IT subject areas. At present, all these courses are managed by a paper based system. This system has several drawbacks. In this project I expect to develop a user-friendly, automated on line course management system to overcome the existing drawbacks using present web technologies.



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Supervisor

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1. Introduction:

SLIDA is a training organization dedicated for training of public sector managers. This institute offers more than 100 different training programs (Courses) annually for the officers of Public Sector of Sri Lanka. These courses are ranged from one-day workshops to one-year diplomas in various disciplines such as Management, Languages, and IT. Currently a paper based course management system is used for managing the training programmes. This paper-based system is not efficient enough to cater for the increasing demand. Further it has significant drawbacks in generating up to date course statistics necessary for the management.

2. Problem Domain

On the current system, once the courses are published, government officers send their applications for courses they prefer. After receiving those applications to SLIDA, the registrar and her staff start to organize courses. First step of this process is creating a course file with relevant applications and other relevant documents. Next step is submission of the course file to the coordinator for selection of suitable participants for the course. After selecting the participants by the coordinator, registrar will send calling letters by informing them to come to SLIDA on commencing date of the programme. Further, the registrar and her staff do reservations of classrooms, reservation of hostel rooms for necessary participants etc.

After starting the course, maintenance of participants' attendance, issuing of attendance certificates, preparation of course certificates, payment of visiting lecture fees and maintaining of attendance of visiting lecturers are the parts of the duty of registrar and her staff.

Development of course timetable according to the curriculum, assigning lecturers to each module, informing the registrar and her staff to prepare required training materials etc are the duties of coordinator.

This system has following drawbacks.

- 2.1. Difficulty of collecting accurate training statistics, which are necessary for the management.
- 2.2. No proper way to find number of courses a particular participant participated within a calendar year.
- 2.3. Difficulty of handling the increasing workload.
- 2.4. No way to submit online applications for efficient processing

3. Project Goals and Objectives:

The project objective is to develop an efficient and effective web-based course management system to

- ❖ Generate course statistics
- ❖ Handle increasing work load
- ❖ Offer on line registration facilities for participants
- ❖ Reduce paper work

4. Similar work and relationship to the project:

At present, SLIDA has an Intranet, which is idle. This Intranet can be used for testing and implementing of this project.



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5. Scope of the Project:

Study of the existing system and design and implement a new web based system to improve the efficiency while minimizing the paper work. This new system will include facilities for SLIDA consultants and staff of the registrar to

- Develop and maintain courses online
- Store and maintain the details of participants
- Monitor participant's assessments for long-term courses such as Degrees, Diplomas etc.

Study of the existing system and design and implement a new web based system to improve the efficiency while minimizing the paper work. This new system will include facilities for SLIDA consultants and staff of the registrar to develop and maintain courses online.

All the activities described in section 2 of above will be taken into the new online system. System will provide web interfaces for feeding course details and participant details to the database. Based on course details provided to the system, it will generate emails for communicating between coordinators and registrar for necessary course information. Example: Once coordinator assigns a lecturer for a lecture session, a system-generated email will sent to relevant lecturer by inviting him to conduct the session. At end of each course, Registrar will be able to generate participant assessment reports and course certificates based on the performance information available with the system.

Further it will provide the web interface for remote participants to register online for courses. The system will generate and send emails to participants to acknowledge the receipt of the application. Once participants submit their online applications, these applications will be directed to the registrar as emails. System will produce necessary course statistics for requirement of SLIDA management.

Java, Java script, HTML, XML, PHP, Apache and MySQL technologies will be used for this project.



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6. Deliverables:

A web based course management system.

7. Parameters for the measurement of success:

Satisfaction of the clients, which will be measured by using the user comments collected through questionnaire.

8. Risk and Risk Mitigation Plan:

Software system may be rejected due to user un-satisfaction. That can be eliminated by continuous communication with domain users.

Government training policy may be changed. Such changes may be affected directly to fail the system. If government-training policy is changed before completing the project, it will be managed by making modifications to the system.

9. The Client or the Sponsor:

Sri Lanka Institute of Development Administration

10. Project Schedule: Gantt chart is attached

	Activity	No of Days	Start Date mm/dd/yy	End Date mm/dd/yy
1.	Project Commencement	0 days	Fri 7/8/05	Fri 7/8/05
2.	Requirement definition	4 days	Fri 7/8/05	Wed 7/13/05
3.	System study	7 days	Thu 7/14/05	Fri 7/22/05
4.	System & software design	10 days	Mon 7/25/05	Fri 8/5/05
5.	Coding	14 wks	Mon 8/8/05	Fri 11/11/05
6.	Unit Testing & Modification	1 wk	Mon 11/14/05	Fri 11/18/05
7.	Integration & testing	1 wk	Mon 11/21/05	Fri 11/25/05
8.	Preparation of Thesis	24 days	Mon 11/28/05	Thu 12/29/05
9.	Project End	0 days	Thu 12/29/05	Thu 12/29/05



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Student's Signature
Signature
Date:

Supervisor's
Date:

Appendix 2 - System Study and design

Existing System

Identified activities of SLIDA Course Management System

Following are the activities identified in the system study. The facts gathered in this document were taken from the interviews, and direct observation of the existing records at SLIDA Programme division.

Course management process is started with receiving of duly filed course applications to the Registrar. The next step is sorting of those applications on Course No and Title. Then, they open a course file for each new course and bind relevant applications into those document files.

When the closing date is over this files are submitted to the responsible coordinators to select participants and develop course timetable according to the scheduled dates.

After setting of course timetable and assigning lecturers for each and every session, coordinator should select suitable participants from the relevant applications and file is sent back to the registrar. Registrar sends invitation to the lecturers to conduct relevant lecture sessions (Registrar maintain list of resource persons information) and send selection letters to participants to informing them to report to relevant venue on commencing date and payment mode for the paid courses.

Once selection letters are sent, registrar is responsible for collecting course fee for paid programmes according to the budget. (for some courses individual payments, other courses, single payment for whole participants when program is sponsored by an organization).

Once course is commenced, arrangement of training materials for participants, maintenance of participant's attendance, payments for lecture fees for relevant lecturers are also done by registrar.

According to the schedule or special request from coordinator, registrar will arrange examinations for course or course modules. Assignments given for course modules and their marks also recorded by registrar and used these data for process of final results.

At the end of the each course, course evaluation is done through individual course evaluation forms collected from participants. Course evaluation system is used for analyze responses and prepare reports.

According to the attendance or final results (depend on applicable rules), registrar is responsible for preparation of participant's attendance certificates and course certificates.

At the end of the month, registrar will process a report about courses conducted by the month. This includes number of courses conducted by the month, number of participant days, total cost for the monthly programmes, total lecturer fees etc.

However, registrar needs to generate some adhoc reports also about the monthly progress on request of management.

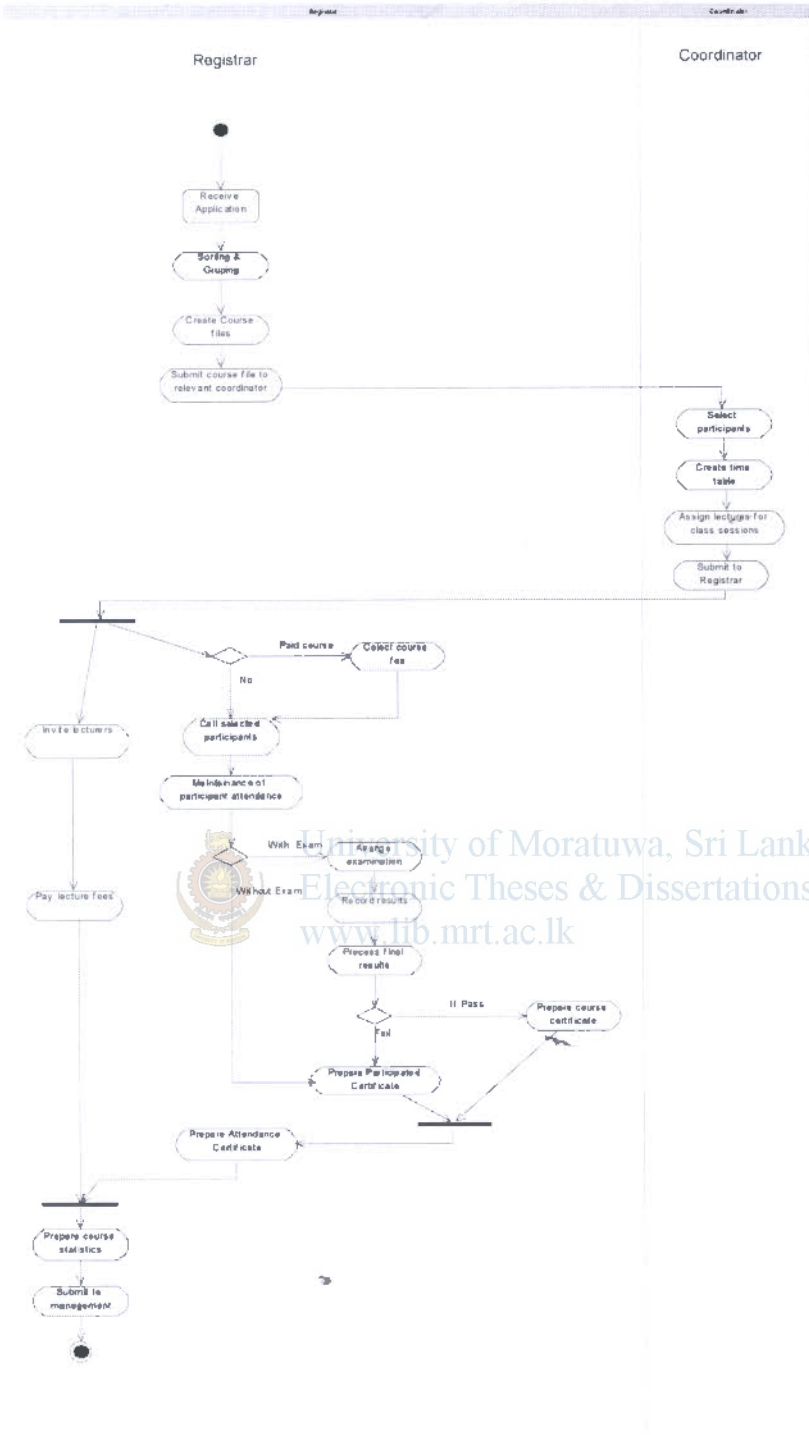


Figure 1: Detailed Activity diagram of the existing system

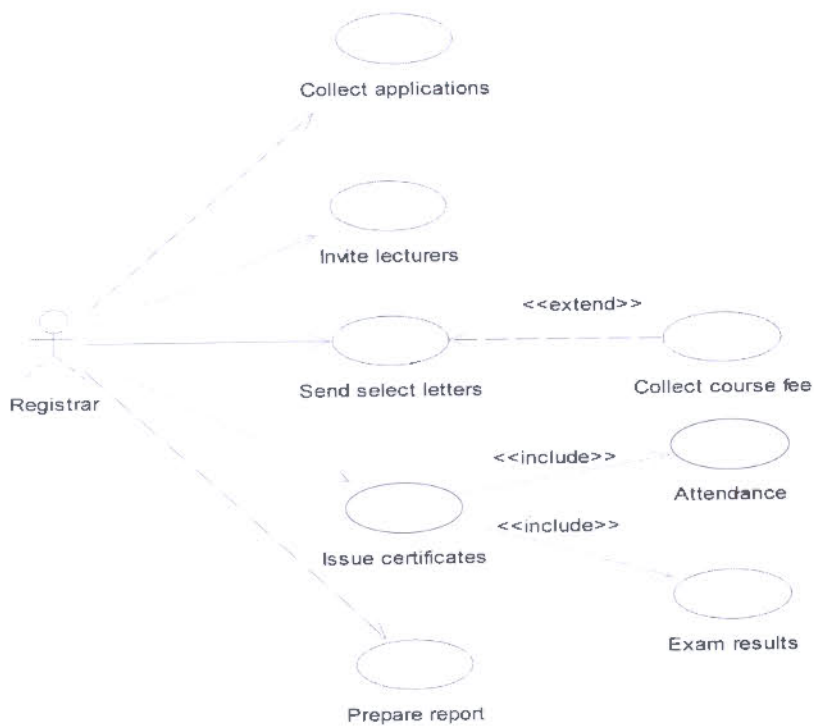



Figure 3: Registrar Use case *University of Sri Lanka.*
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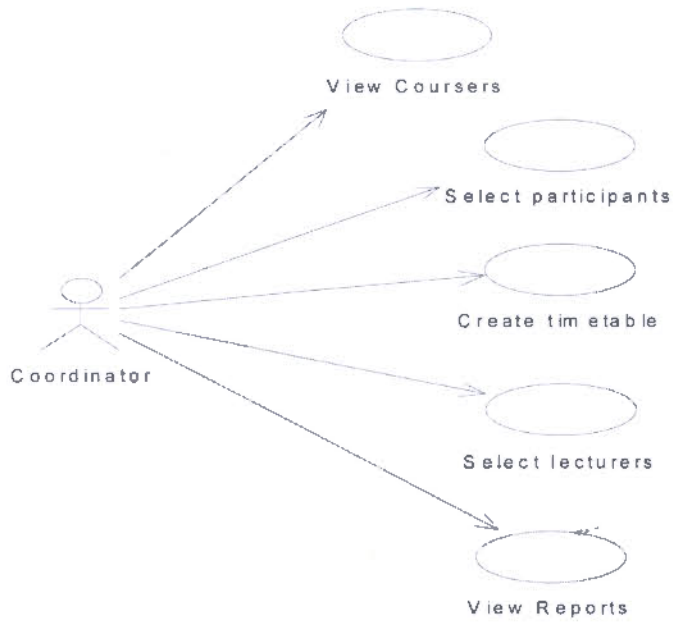


Figure 4:Coordinator Use case

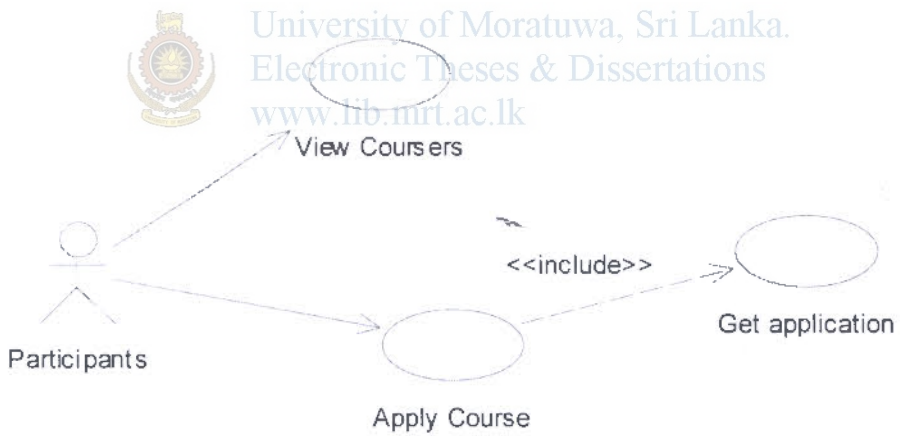


Figure 5: Participant Use case



Figure 6: Other Manager Use case

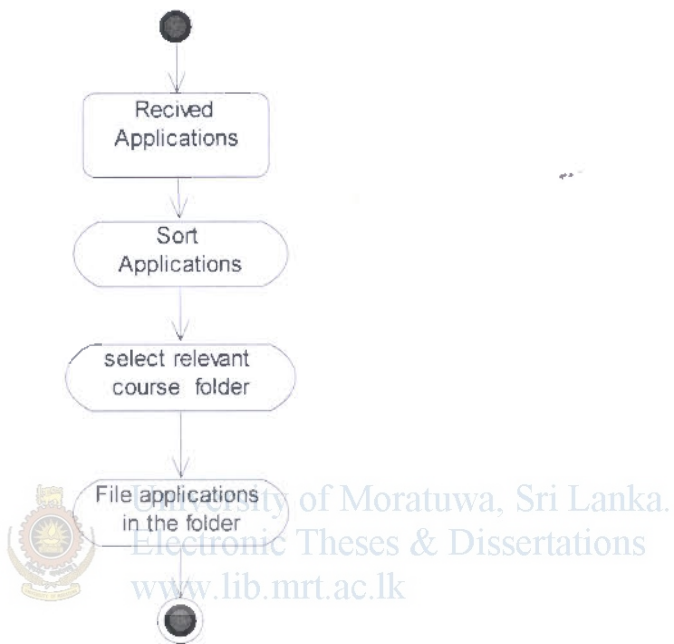


Figure 7: Activities of collecting application forms

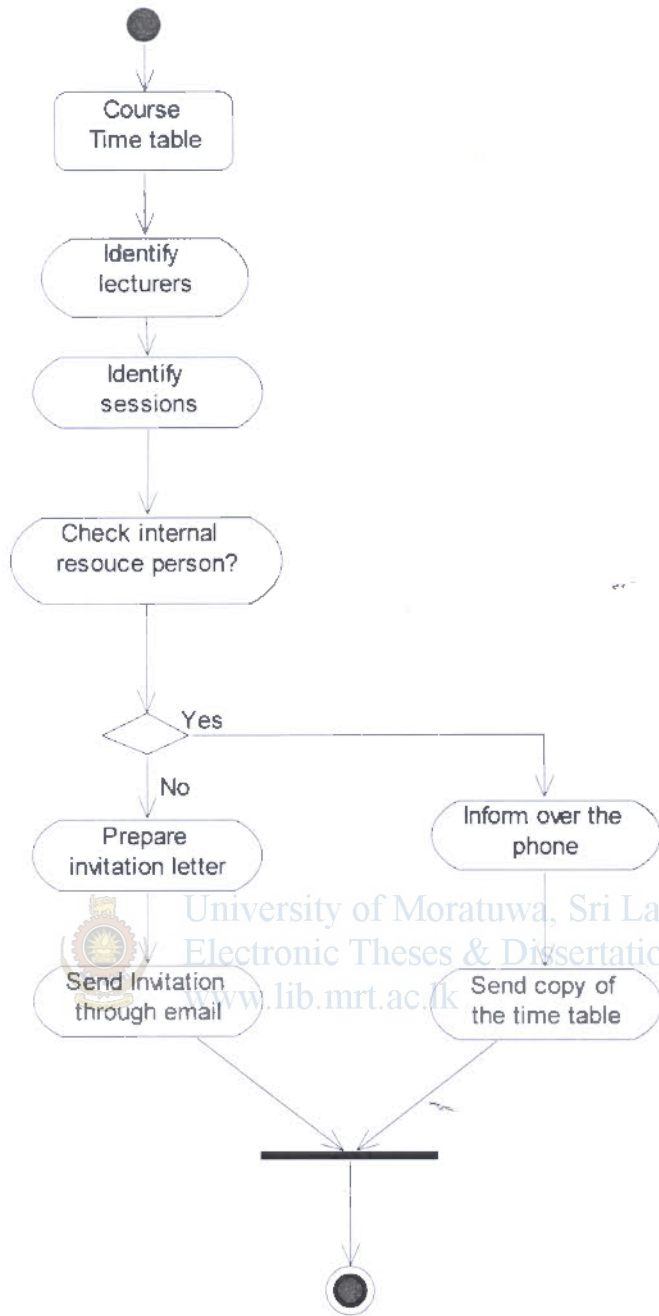


Figure 8 :Activities of Inviting lecturers



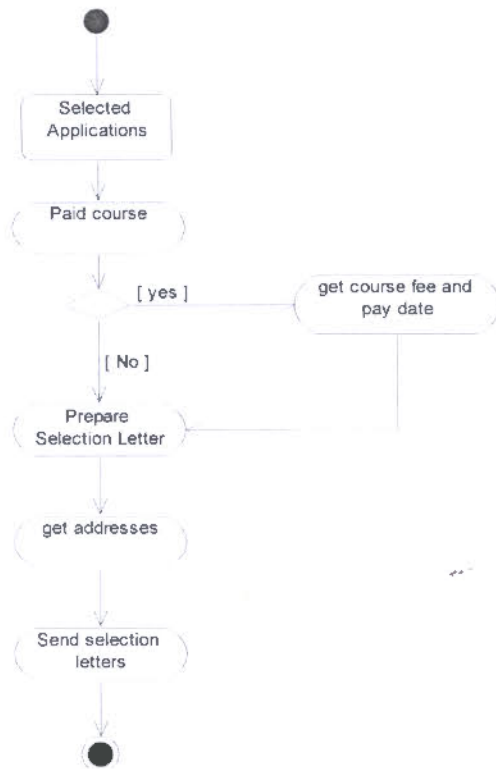


Figure 9: Activities involved in sending selection letter





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Figure 10: Activities involved in preparation of certificates

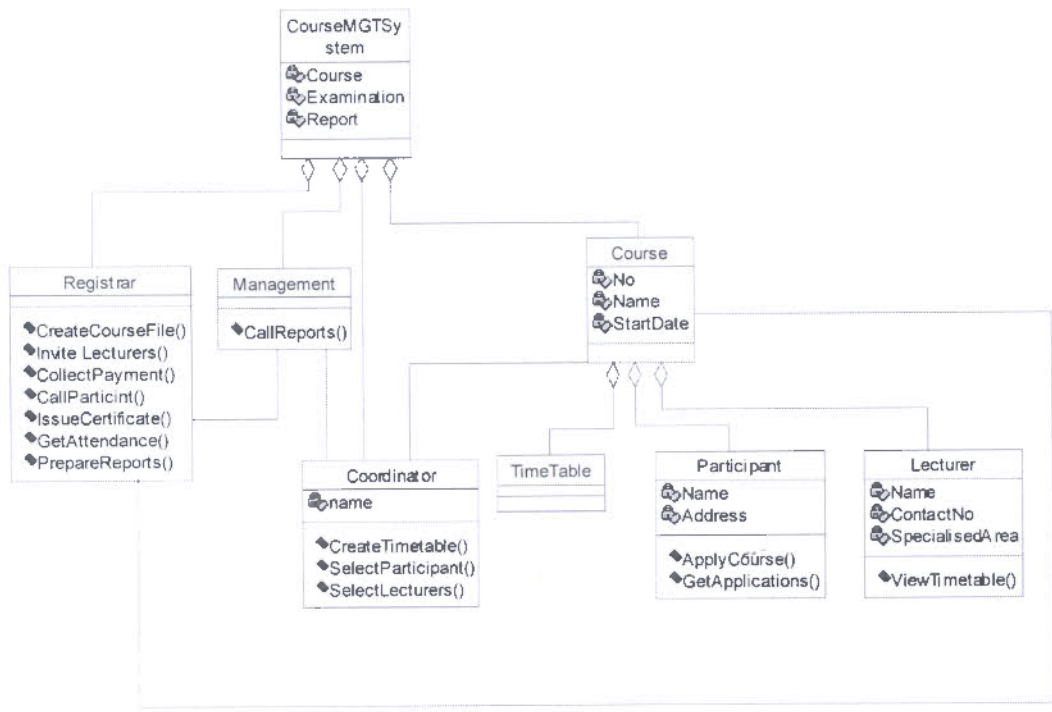


Figure 11: Object model of the existing System



Design of the Proposed System

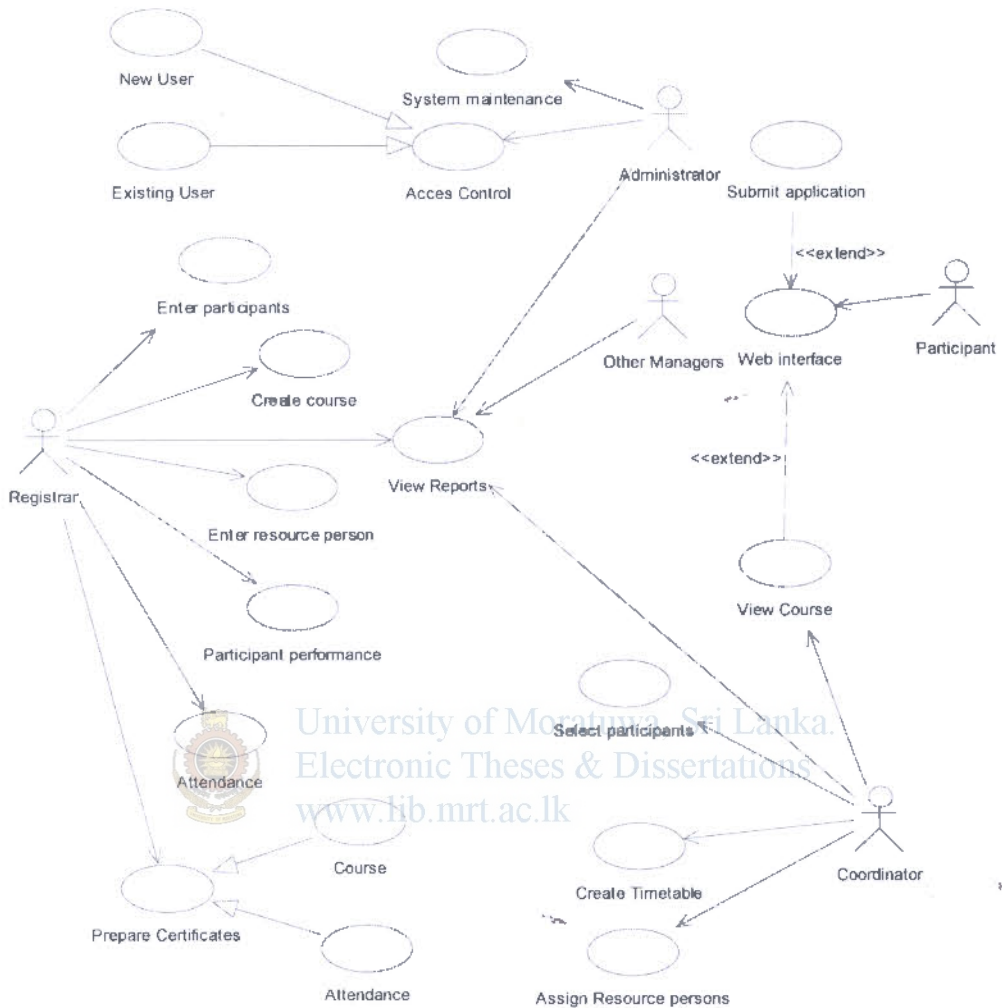
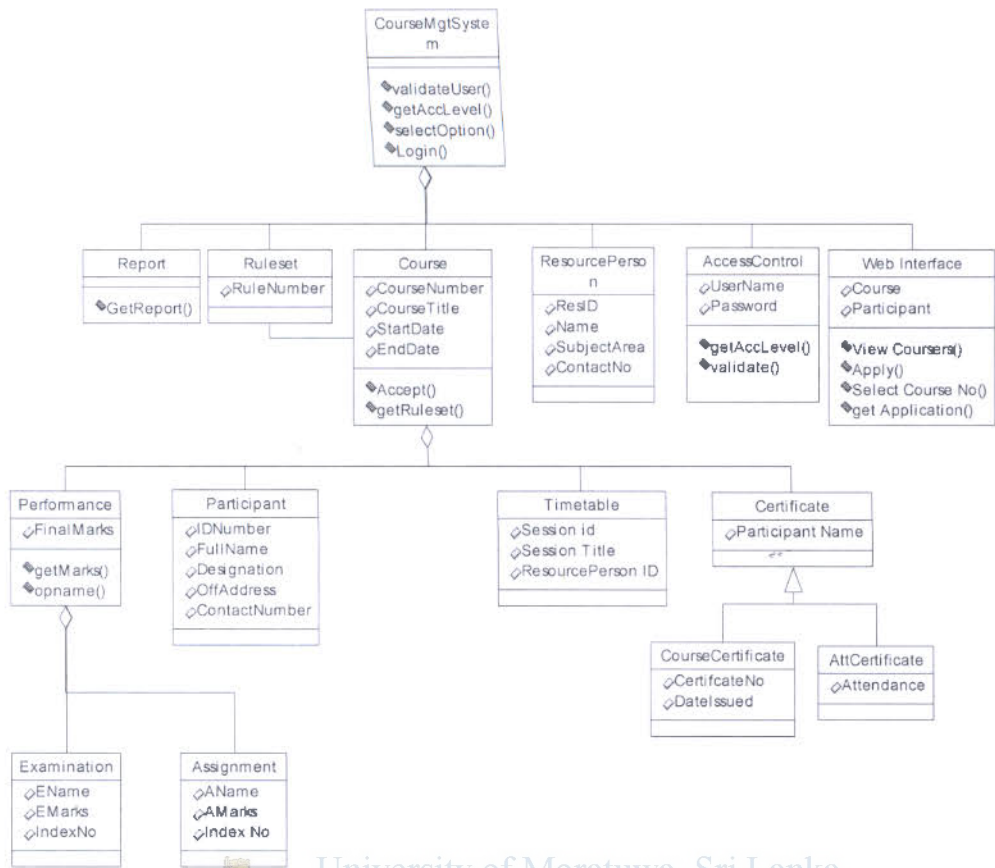


Figure 12: Detailed use case diagram for the proposed system



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Figure 13 :Initial Class diagram of the proposed system

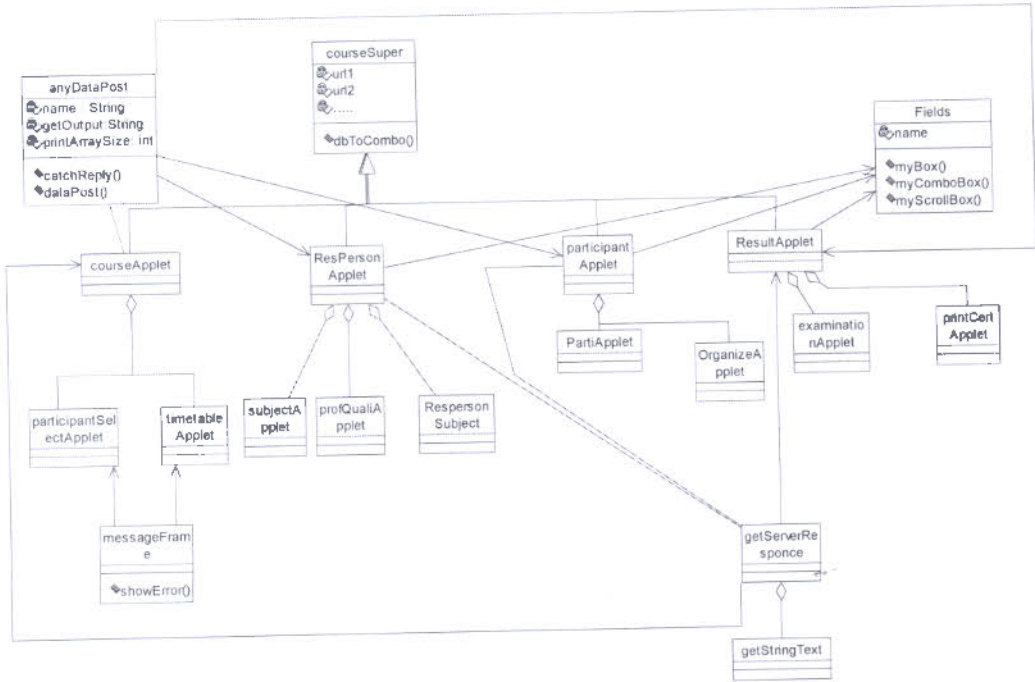


Figure 14 :Implemented class diagram

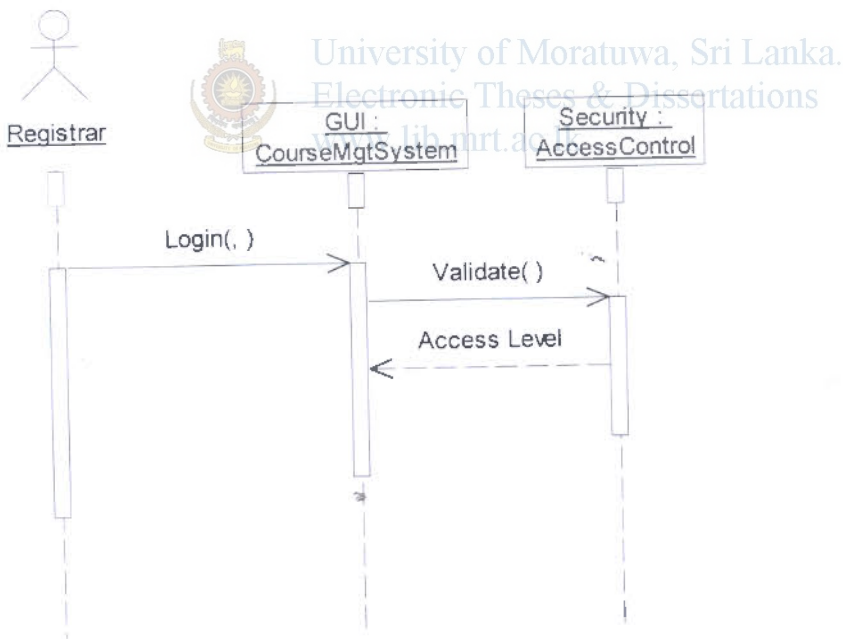


Figure 15 : Sequence of Operations – System Login

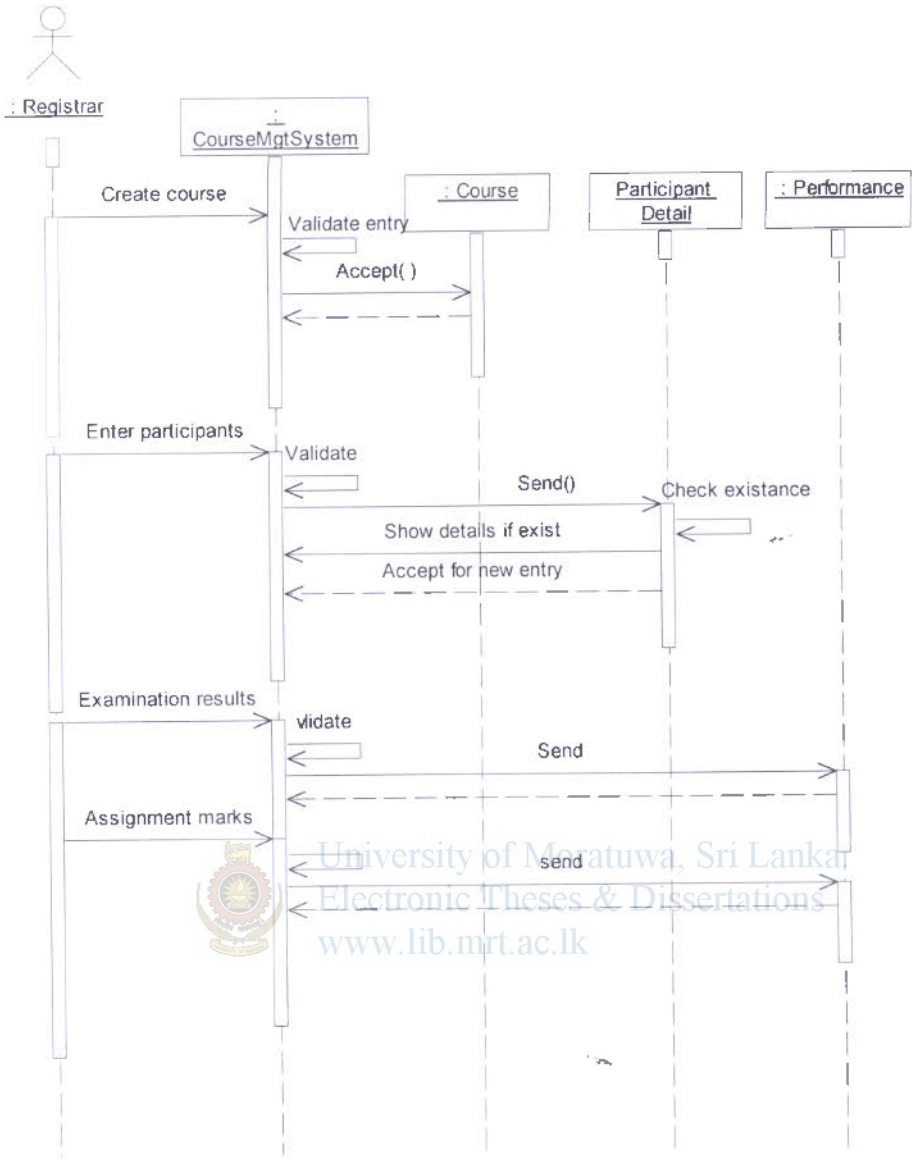


Figure 16 : Sequence of Operations – Create a course

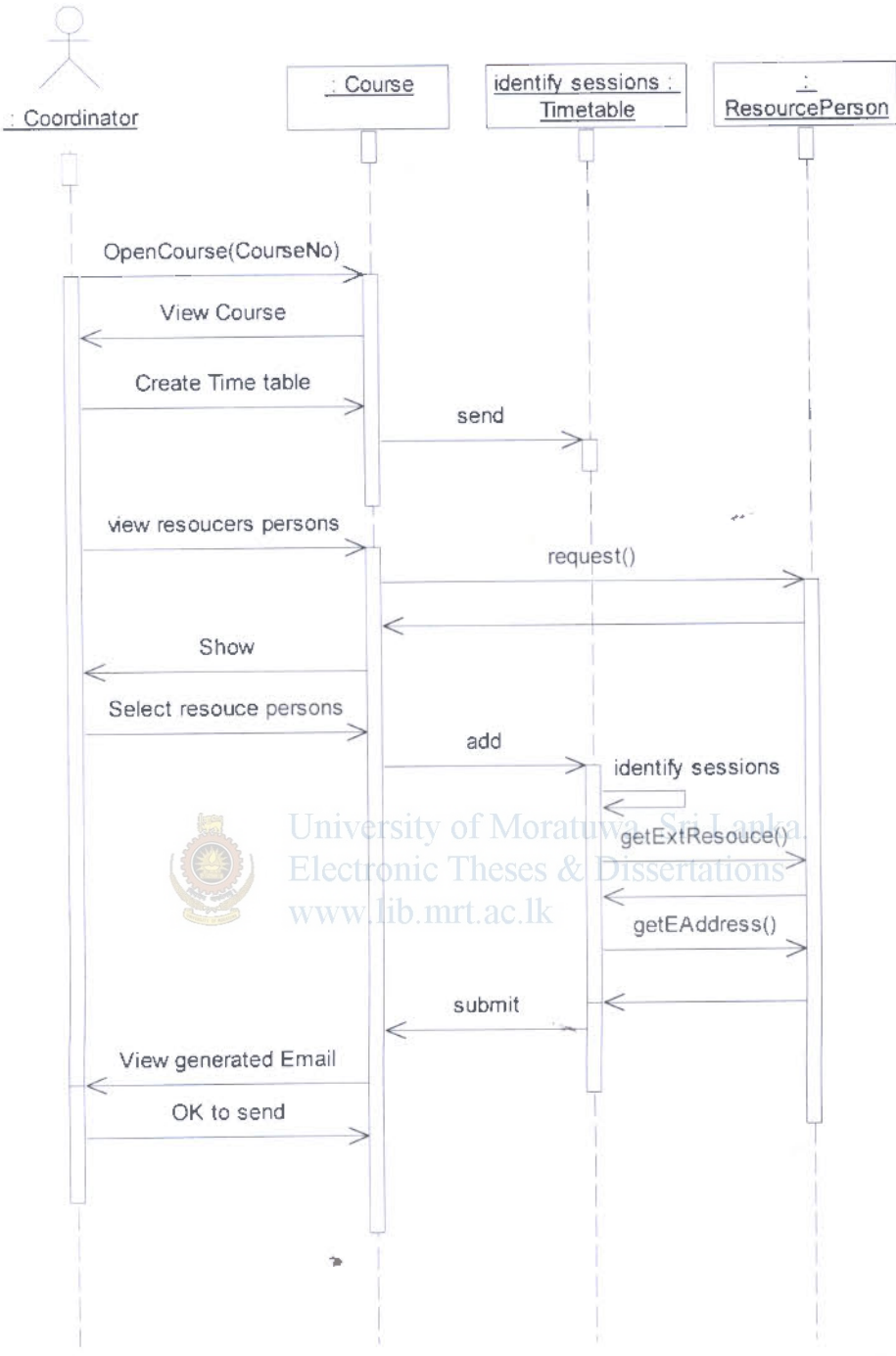


Figure 17 :Sequence of Operations – Creating a timetable

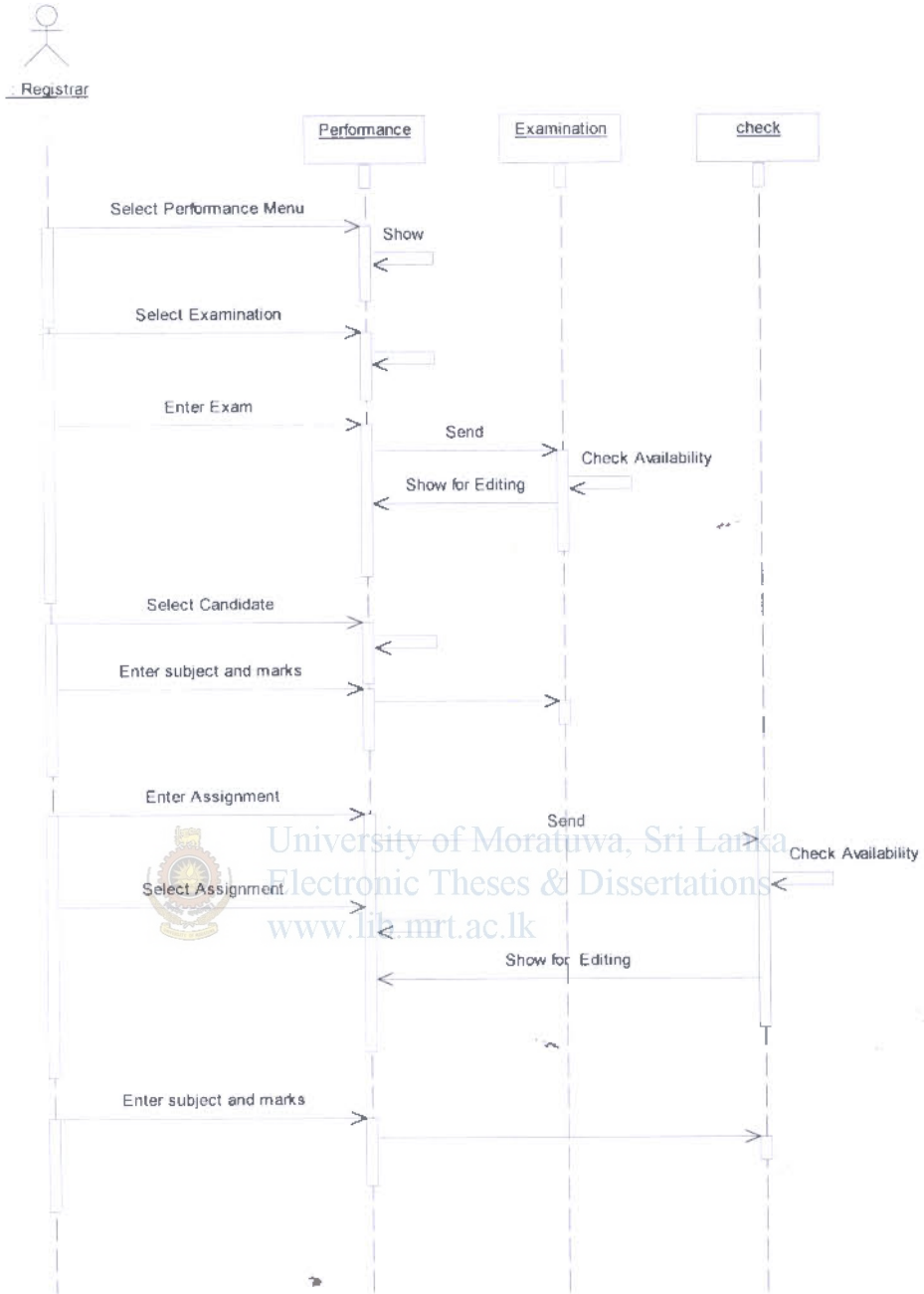
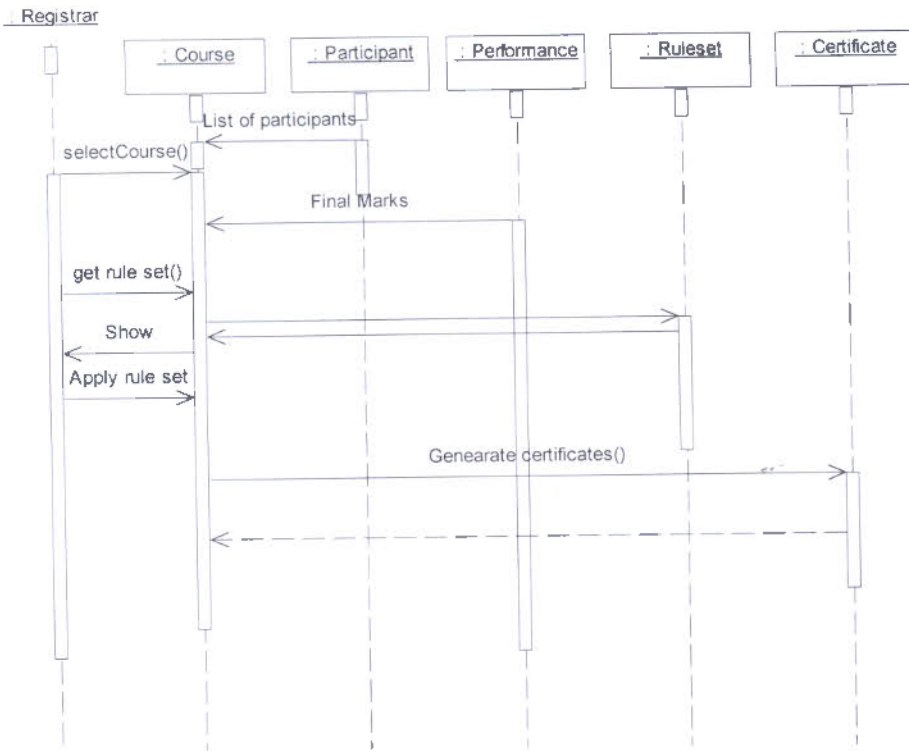
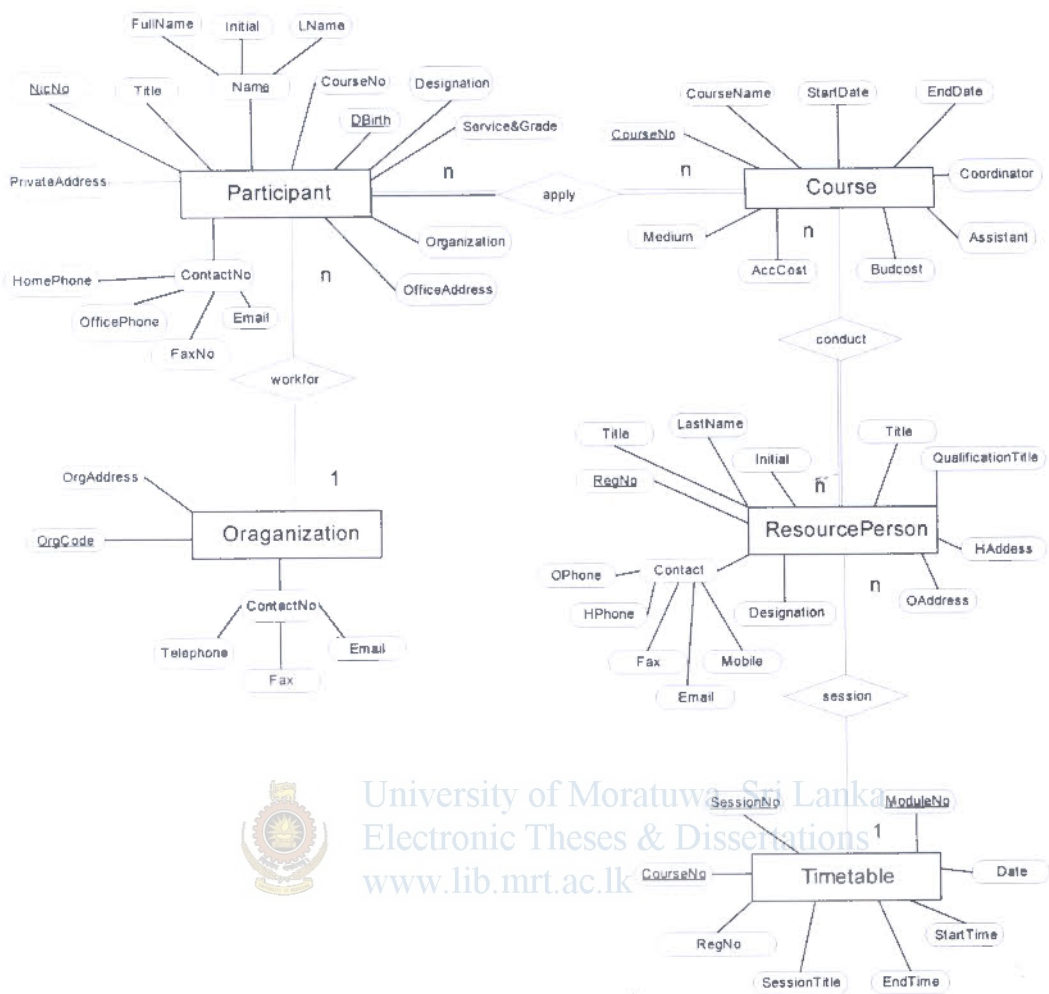


Figure 19 : Sequence of Operations – Participant performance




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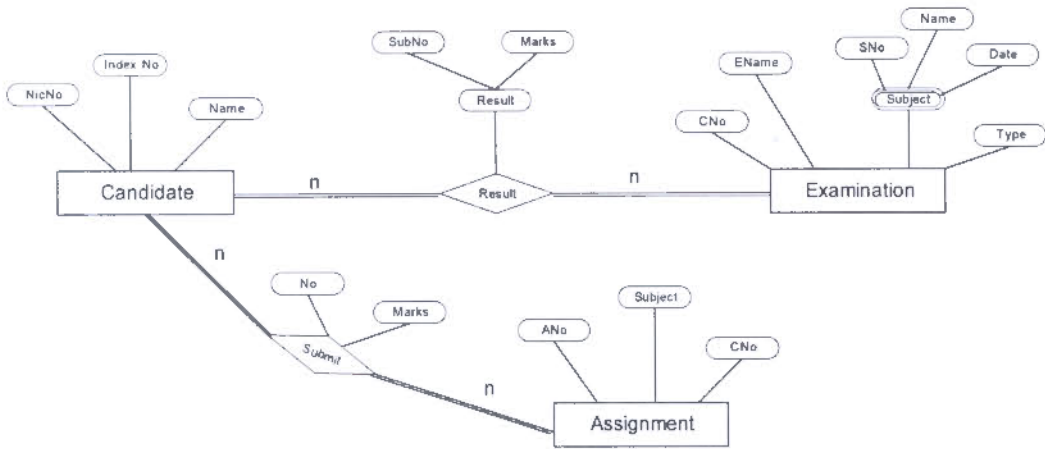
Appendix 3 - ER Diagrams



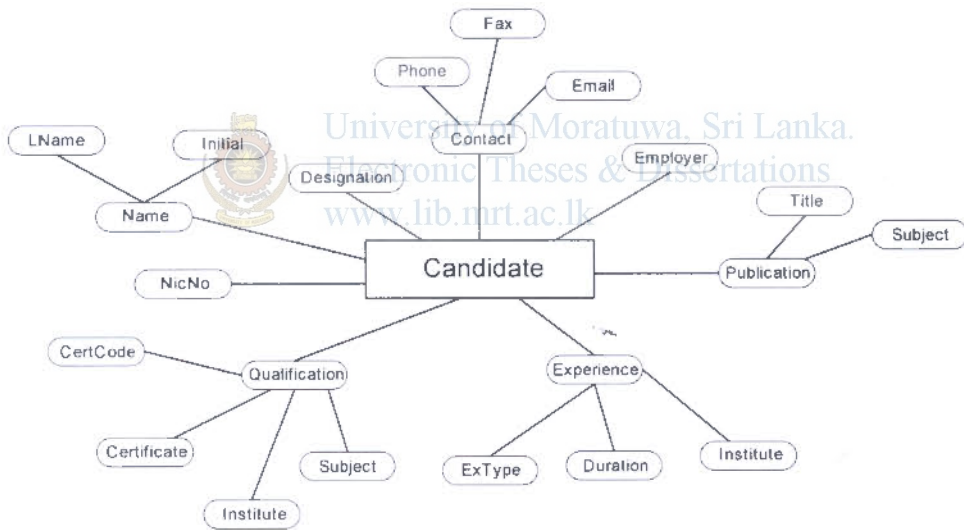
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Course Management Database





Examination Database



Participant Database

Appendix 4 – Database Schema

4.1 Course Management System – Database Schema

Course

CourseNo	Cname	sdate	edate	Medium	Coordinator	Assistant	Budcost	AccCost
----------	-------	-------	-------	--------	-------------	-----------	---------	---------

Applied

CourseNo	NicNo	DateApplied
----------	-------	-------------

Participant

NicNo	Title	FName	Initial	LName	Designation	DBirth	ServiceGrade
-------	-------	-------	---------	-------	-------------	--------	--------------

PriAddress	HPhone	Email	OrgCode
------------	--------	-------	---------

Organization

OrgCode	OrgName	OrgAddress	Telephone	Fax	Email
---------	---------	------------	-----------	-----	-------

TimeTable

SessionNo	CourseNo	ModuleNo	STime	ETime	SesTitle	ResoNo
-----------	----------	----------	-------	-------	----------	--------

ResourcePerson

ResoNo	Title	LName	Initial	OffPhone	HPhone	Email	MobPhone	Fax
--------	-------	-------	---------	----------	--------	-------	----------	-----

Designation	OffAddress	HomeAddress	Degree	Institute	PostDegree	PInstitute	Other	RpType
-------------	------------	-------------	--------	-----------	------------	------------	-------	--------

4.2 Database Schema - Examination Database

Examination

<u>ENo</u>	EName	Date	Type
------------	-------	------	------

Subject

<u>ENo</u>	<u>SubNo</u>	Subject
------------	--------------	---------

Result

<u>ENo</u>	<u>IndexNo</u>	<u>SubNo</u>	Marks
------------	----------------	--------------	-------

Candidate

<u>IDNo</u>	<u>IndexNo</u>	<u>ENo</u>
-------------	----------------	------------

4.3 Database Schema – Resource person database

resPerson

<u>nicNo</u>	Lname	Initial	OPhone	OFax	HPhone	Email	OffAddress	Designation	Employer
--------------	-------	---------	--------	------	--------	-------	------------	-------------	----------

Subject

<u>subNo</u>	Subject
--------------	---------

Teach

<u>nicNo</u>	<u>subNo</u>
--------------	--------------

Qualification

<u>certCode</u>	<u>nicNo</u>	<u>subNo</u>	Certificate	Institute	certType
-----------------	--------------	--------------	-------------	-----------	----------

Experience

<u>exCode</u>	<u>nicNo</u>	<u>subNo</u>	Duration	Institute
---------------	--------------	--------------	----------	-----------

Publication

<u>nicNo</u>	<u>subNo</u>	Title
--------------	--------------	-------



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exCode

1. Teaching
2. Consultancy
3. Research

certType

1. Educational
2. Professional

Duration

1. Hours
2. Years

4.4 Table Structures - Course Management Database

Course

Field Name	Data Type	Size
CourseNo	vvarchar	15
Cname	vvarchar	40
sdate	date	
edate	date	
Medium	vvarchar	10
Coordinator	vvarchar	25
Assistant	vvarchar	25
Budcost	decimal	10,2
AccCost	decimal	10,2
Ctype	vvarchar	5
category	vvarchar	6
maxparti	int	11
courseFee	decimal	10,2
userId	char	10

Ex: Ctype = Paid, Un paid

Applied

Field Name	Data Type	Size
CourseNo	vvarchar	15
NicNo	vvarchar	10
DateApplied	date	

Participant

Field Name	Data Type	Size
NicNo	vvarchar	10
Title	vvarchar	5

FName	varchar	30
Initial	varchar	10
LName	varchar	15
Designation	varchar	15
DBirth	date	
ServiceGrade	varchar	20
PriAddress	varchar	40
HPhone	varchar	10
Email	varchar	20
OrgCode	varchar	5

Organization

Field Name	Data Type	Size
OrgCode	varchar	5
OrgName	varchar	20
OrgAddress	varchar	30
Telephone	varchar	10
Fax	varchar	10
Email	varchar	20

TimeTable

Field Name	Data Type	Size
SessionNo	int	11
CourseNo	varchar	10
STime	time	
ETime	time	
SesTitle	varchar	40
ResoNo	varchar	10
inst1	varchar	4
inst2	varchar	4
stDate	date	



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4.5 Table structures - Examination Database

Examination

<u>Field Name</u>	<u>Data Type</u>	<u>Size</u>
CNo	varchar	15
EName	varchar	60
Type	varchar	10
userId	varchar	10

Subject

<u>Field Name</u>	<u>Data Type</u>	<u>Size</u>
CNo	varchar	15
SubNo	char	5
Subject	varchar	50
Date	date	

Result

<u>Field Name</u>	<u>Data Type</u>	<u>Size</u>
CNo	varchar	15
SubNo	char	3
IndexNo	varchar	10
Marks	decimal	4,1

Candidate

<u>Field Name</u>	<u>Data Type</u>	<u>Size</u>
CNo	varchar	15
NicNo	varchar	10
IndexNo	varchar	10

Attendance

<u>Field Name</u>	<u>Data Type</u>	<u>Size</u>
CNo	varchar	15
IndexNo	varchar	10
Attend	int	11

certrule

<u>Field Name</u>	<u>Data Type</u>	<u>Size</u>
CNo	varchar	15
PMark	decimal	4,1
AtLevel	decimal	4,1
Exam	varchar	4
Assign	varchar	4
Attend	varchar	4

4.6 Table Structures – Resource person database

resPerson

Field Name	Data Type	Size
nicNo	char	10
Lname	varchar	20
Intial	varchar	15
OPhone	varchar	10
OFax	varchar	10
HPhone	varchar	10
Email	varchar	25
Employer	varchar	25
Designation	varchar	25
OffAddress	varchar	50
Mobile	varchar	10
idCode	varchar - index	3

Subject

Field Name	Data Type	Size
subNo	smallint	
Subject	varchar	50

Teach

Field Name	Data Type	Size
nicNo	char	10
subNo	char	3

Qualification

Field Name	Data Type	Size
nicNo	char	10
subNo	char	3
Certificate	varchar	30
Institute	varchar	50



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Experience

Field Name	Data Type	Size
exCode	smallint	
nicNo	char	10
subNo	char	3
Duration	char	5
Institute	varchar	40

Publication

Field Name	Data Type	Size
nicNo	char	10
subNo	char	3
Title	varchar	40

4.7 Table Structures – Access database

Users

<u>Field Name</u>	<u>Data Type</u>	<u>Size</u>
initial	char	15
lname	char	20
designation	char	25
eaddress	char	30
paddress	char	75
<u>userId</u>	char	15
password	char	35
aclevel	char	15

Password

<u>Field Name</u>	<u>Data Type</u>	<u>Size</u>
<u>userId</u>	char	15
pwd	char	34



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Appendix 5 - Graphical User Interface Design

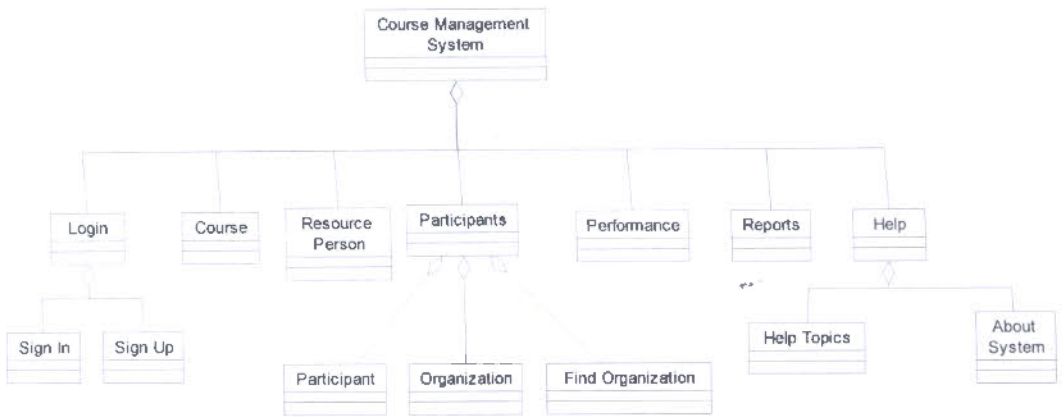


Figure 5.1 : Home Page

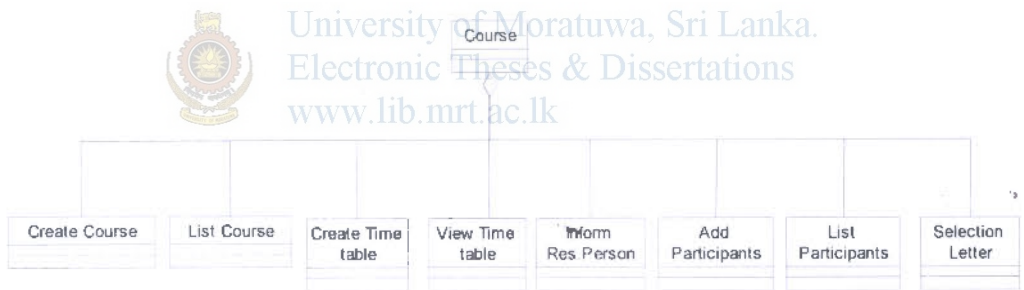


Figure 5.2: Course

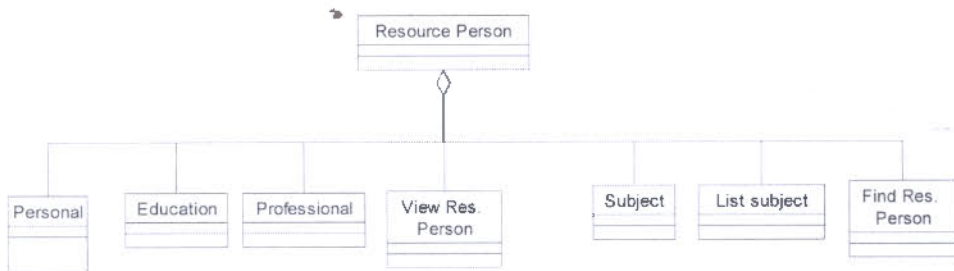


Figure 5.3: Resource Person

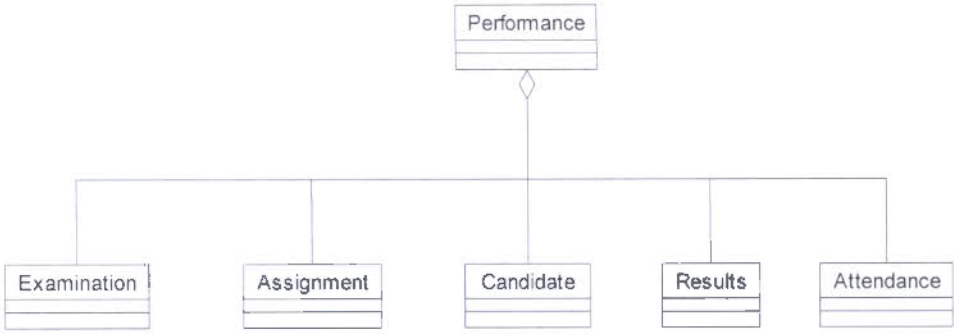


Figure 5.4 :Performance

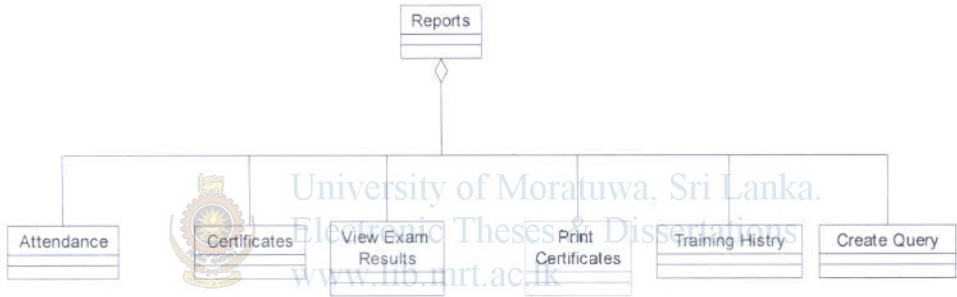


Figure 5.5 : Reports

Appendix 6 - Test Plan

1. Test Cases

Test 1: Login Sub system

Test No	Test	Steps needed to carried out the test	Expected result
1	Login	Open Login dialog box Enter user name and password	If password accepted, system menu will open
2	Sign Up	Open sign up dialog box Enter registration detail	User registration will accept, if entry is done by administrator or any authorized user
3	Change password	Open Change password dialog box Enter new password	Allow to change password if change is done by administrator or any authorized users

Test 2: Course Sub system

Test No	Test	Steps needed to carried out the test	Expected result
1.	Create Course	Open Create course dialog box Enter Data	If it is a new record. Accept. Other wise view existing information for editing
2.	List Courses	Open List courses dialog box	List all available courses
3.	Create Timetable	Open Create Timetable dialog box Add data	Allowed to add sessions only for user who created the course
4.	View Timetable	Open View Timetable dialog box	Show Timetable
5.	Inform Res. Person	Open Inform Res. Person dialog box.	Allow user to view timetable for send email to resource person.
6.	Add Participants	Open Add participant dialog box	Allow select participants for course on NIC No.
7.	List Participants	Open List Participants Dialog box.	List selected participants in detail

8.	Selection Letter	Open Selection Letter menu item.	Create word document for inform participants
----	-------------------------	----------------------------------	--

Test 3 : Resource Person Sub system

Test No	Test	Steps needed to carried out the test	Expected result
1	Personal	Open Resource person details data entry form	Allow data entry
2	Education	Open Education Dialog box,	Allow to enter educational details, and view subjects and capable areas
3	Professional	Open Professional Dialog box,	Allow to enter professional qualification
4	View Res. Person	Open View Res. Person Dialog box,	Show full details of a resource person

Test 4: Participants Subsystem

Test No	Test	Steps needed to carried out the test	Expected result
1	Participant	Open Participant Dialog box	Allows to enter participant data
2	Organization	Open Organization Dialog box	Allow to enter organization data
	Find Organization	Open Find Organization Dialog box	Allow to view available list of organizations

Test 5: Performance Subsystem

Test No	Test	Steps needed to carried out the test	Expected result
1	Examination	Open Examination Dialog box	Allows to enter examination detail
2	Subject Number	Open Subject Number Dialog box	Allow to enter Subjects
3	Assignment Details	Open Assignment details Dialog box	Allow to enter assignment details
4	Candidate Registration	Open Candidate Registration Dialog box	Allow enter NIC No's of candidates

5	Results	Open Results Dialog box	Allow enter examination and assignment results
6	Attendance	Open Attendance Dialog box	Allow enter total attendance of individual participant of a course

Test 6: Reports Subsystem

Test No	Test	Steps needed to carried out the test	Expected result
1	Attendance	Open Attendance Dialog box	View Attendance report based on given course Number
2	Certificates	Open Certificates Dialog box	Generate certificates on given course Number and issuing criteria
3	View exam results	Open View exam results Dialog box	Show exam results
4	Print Certificates	Open Print Certificates Dialog box	Allow to print certificates
5	Training History	Open Training History Dialog box	Allow to track training history of the given participant
6	Create Query	Open Create Query item	Allow to run SQL queries to extract data

Appendix 7 – Test Cases and Test Results

Methodology – Black Box Test

Menu Name: Login,

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

1. Administrator,
2. User,
3. Unauthorized access

No	Test Item	Level	Input	Expected Output	Actual Output
	SignIn	1	User ID : bandara	Open All Menu Items	Same
			Password : nmsa		
		2	User ID : thushari	Open All Menu Items	Same
			Password : remarks		
		3	User ID : jagath	Login not successful	Same
			Password : password		
	SignUp		Click Submit Button	Show Error Messages	Same
			Click Reset Button	Clear form	Same
		1	Data Set 1	Registration completed successfully	Same
			Data Set 2	Registration completed successfully	Same
			Data Set 3	Incorrect Email Address	Same
			Data Set 4	Incorrect Password	Same
		2	Data Set 5	You are not authorized	Same

Data Set 1:

Initial : WMSJ
 Last Name : Weerasuriya
 Designation : Programme Officer
 Email address: saman@slida.lk
 Postal address: Ellpitiy
 User Id : saman
 Password : password
 Access Level: User

Data Set 2:

Initial : NMSA
Last Name: Bandara
Designation: Programme Officer
Email address: sbandara@slida.lk
Postal address: SLIDA
User Id: bandara
Password : nmsa
Access Level : Administrator

Data Set 3:

Initial : Edward
Last Name: Perera
Designation : Consultant
Email address: edward.slida.lk
Postal address: Wattala
User Id : edward
Password : password
Re enter Password : password
Access Level : User

Data Set 4:

Initial : NM
Last Name: Kamal
Designation : Clerk
Email address: kamal@slida.lk
Postal address: Colombo
User Id : kamal
Password : password
Re-enter password : pességword
Access Level : User

Data Set 5:

Initial : SD
Last Name: Keragala
Designation : Programmer
Email address: sewwandi@slida.lk
Postal address: Polhengoda
User Id: sewwandi
Password : 25467
Re-enter password : 25467
Access Level : User

Menu Name: Course

Usage: For Data entry, editing and accessing course details.

No	Test Item	Level	Input	Expected Output	Accept	
	Create Course	1,2	Submit entry screen or empty Course Number Field	Invalid Entry	Same	
			Click Cancel	No changes	Same	
			Click Update	Invalid Entry	Same	
			Data Set 1	Status OK	Same	
			Course Number of Data Set 1	Show Detail	Same	
			Click Cancel	Clear Form	Same	
			Click Update with field content change	Status update	Same	
			Data Set 1.1			
			Click Submit with field content change	StatusOKDuplicate Entry	Same	
		2	Data Set 5	You are not authorized	Same	
	List Courses	1,2	Select Menu Item	List all available courses	Same	
	Create Timetable	1, 2	Allowed only to user who created relevant course	Allow to add sessions	Same	
			2006IT124 and click OK	Fill Course Name, From, To	Same	
			2006IT and click OK	No changes	Same	
			Data set 2 line by Line with click "add a session"	No messages	Same	
			Click Refresh Button	Clear Session details	Same	
			Click View Timetable	Appear course sessions at Text Area	Same	
			Click Update Button with session content change	Up dated	Same	
			Double Click Combo box	List Available resources persons codes	Same	
			Click Lec Initials	Add selected content of combo box to Lec Initials	Same	
			Click Inictl	Add selected content of combo box to Inictl	Same	
		Click Inictl	Add selected content	Same		

				of combo box to Inict2	
	View Timetable	1,2	2006IT124	Show Timetable	Same
	Inform Res. Person	1,2	2006IT124 and click send	Show Resource persons check boxes, "Send Email" Button and "View Timetable" Button	Same
			Click "ViewTimetable	Show Timetable	Same
			Click "Send Email"	Send timetable through email to Resource persons.	Same
	Add Participants	1,2	Data Set 3 with submit button	No messages	Same
			Data Set 3.1 with submit button	Duplicate Entry	Same
			Click "Cancel Button"	Clean Text boxes	Same
			Click "UP Date "button	No response	Same
	List Participants	1,2	2006IT124 and click Find	Show Course Number, Name, From To and list of selected participants detail	Same
	Selection Letter	1,2	2006IT124	Show existing MS-Word Version and hyperlink to view selection letter	Same
		1,2	Click Hyperlink	Open selection letter in MS-Word Format	Same

Create Course Form - Data Set 1

Course Number: 2006HR302
 Course Name: Diploma in Managing Human Resources
 Course Type: RG
 Start Date: 2006-01-23
 End Date: 2007-01-23
 Medium: English
 Coordinator: WA Jayasundara
 Assistant: Padma De Silva
 Budgeted Cost in Rs. 800000.00
 Actual Cost:
 Category: Paid

Number of Participants: 35
 Course Fee: 38000.00

Create Course Form - Data Set 1.1

Course Number: 2006HR302
 Course Name: Diploma in Managing Human Resources
 Course Type: RG
 Start Date: 2006-01-23
 End Date: 2007-01-23
 Medium: English
 Coordinator: WA Jayasundara
 Assistant: Padma De Silva
 Budgeted Cost in Rs. 800000.00
 Actual Cost: 800000.00
 Category: Paid
 Number of Participants: 35
 Course Fee: 38000.00

Course Menu - Data Set 2

Sess No.	Date	Start	End	Title	Lec	Inst1	Inst 2
0	2006-02-14	08:45:00	09:00:00	Inauguration	ER	SB	SW
1	2006-02-14	09:00:00	10:30:00	Introduction to Web technology	ER	KL	AB
2	2006-02-14	10:45:00	12:15:00	Web Technology	SB	KL	AB
3	2006-02-14	01:15:00	02:45:00	Web surfing	SB	ND	KL
4	2006-02-14	03:00:00	04:30:00	Web surfing	ER	KL	AB
5	2006-02-15	09:00:00	10:30:00	Basics in Email	SB	KL	AB
6	2006-02-15	10:45:00	12:15:00	Working with attachments	SB	KL	AB
7	2006-02-15	01:15:00	02:45:00	Creation of a webmail Accounts	SW	KL	AB
8	2006-02-15	03:00:00	04:30:00	Creation of Web mail Accounts	SW	KL	AB
9	2006-02-16	09:00:00	10:30:00	Web Technology as business applications	ER	KL	AB
10	2006-02-16	10:45:00	12:15:00	Web technology as Business Applications	SB	NH	AB
11	2006-02-16	01:15:00	02:45:00	Web technology as Business Applications	SB	NH	AB
12	2006-02-16	03:00:00	04:30:00	Web technology as Business Applications	ER	NH	AB
13	2006-02-17	09:00:00	10:30:00	Introduction to web designing	ER	NH	AB
14	2006-02-17	10:45:00	12:15:00	Creating static web pages using dream vi	SB	KL	NH

15	2006-02-17	01:15:00	02:45:00	Using Inline Images and Hyperlinks	ER	KL	NH
16	2006-02-17	03:00:00	04:30:00	Exercise	SW	AB	
17	2006-02-17	04:30:00	04:45:00	Evaluation	ER	SB	SW

Course Menu - Data Set 3

Course Number : 2006IT124

NIC Numbers

576133890V 815322889V 621092236V 497050650V

571470225V 470841184V 685970376V 345689210V

Selected Date : 2006-01-21

Course Menu - Data Set 3.1

Course Number : 2006IT124

NIC Numbers

576133890V 815322889V 621092236V 497050650V

571470225V 470841184V 685970376V 345689210V

Selected Date : 2006-01-21

Menu Name: Resource Person

Usage : For data entry and manipulation of Resource person data.

No	Test Item	Level	Input	Expected Output	Accept
	Personal	1,2	Click Submit Button	Error Message, Invalid Entry	Same
			Data Set 1	Open Resource person details data entry form	Same
			652257890V	Show rest of the data	Same
			Data Set 2 and click update	Add changers, show message about update	
			Click Cancel	Clear form	Same
	Education	1,2			

	View Subject		Click List	Show Subject codes	Same
			I, click List	Show subjects there code starting with I	Same
	Capable areas of Training		Data set 3 and click Add	Show data in text area,	Same
			Select I03 from text area and click Remove	I03 is remove from the system	Same
			Click Refresh	Clear Form	Same
	Qualified areas for training		Data set 4 and click Add	Show saved data at text area	Same
			Click Refresh button	Clear text fields	Same
	Professional qualifications data entry	1,2	Data set 5 and click Add	Show data in text area,	Same
	View Res. Person		234567892V	Show full details of a resource person	Same

Resource Person – Data Set 1

NIC No : 652257890V
 Last Name: Wickramarathna
 Initial: A
 Office Phone: 0112345678
 Office Fax: 0112345678
 Home Phone: 0365678119
 Mobile Phone: 0777445667
 Email: asoka@hotmail.com
 Employer Name: Distance Learning Center
 Designation: Consultant
 Office Address: No. 28/10, Malalasekara Mawatha, Colombo 7.
 ID Code: AW

Resource Person – Data Set 2

Home Phone: 0113456678
 Mobile Phone: 0712567890

Resource Person – Data Set 3

NIC No : 652257890V
 Subject Code: I01, I02, I03



Resource Person – Data Set 4

NIC No : 652257890V
 Certificate Name: Masters Degree
 Subject Code: I00
 Institute: University of Moratuwa

Certificate Name: Certificate
 Subject Code: I02
 Institute: SLIDA

Resource Person – Data Set 5

234567899V CIMA, Chartered, Atony at Law
 631251749V Member of Sri Lanka Computer Society, Member of IEE
 234567892V Member of Software Engineering Association, Sri Lanka
 234512488V CIMA


Menu Name: Participant

Usage : Use for participant data entry and manipulation.

No	Test Item	Level	Input	Expected Output	Actual Output
	Participant	1,2	Click submit button	Invalid Entry	Same
			Click Cancel button	Clear Menu	Same
			Data Set 1, Click Submit	No message, Record save	Same
			Data Set 2 , Click Update	No message, Record update	Same
			Data Set 3	Show Data set 3.1	Same
	Organization	1,2	Data Set 1	No messages, Record Save	Same
			MI, Click Update	No messages, Record update	Same
			Click Cancel	Clear Form	Same
	Find Organization	1,2	Click Find	Show organization details	Same
			Sr, Click Find	Show Data Set 2	Same
<i>No</i>	<i>Test Item</i>	<i>Level</i>	<i>Input</i>	<i>Expected Output</i>	<i>Actual Output</i>
	Subject	1,2	Data set 6 and click "submit Button"	Record Saved	Same
			Cancel	Clear Form	Same
			Data Set 6.1 and	Update Successful	Same

			click update button		
	List Subjects	1,2	Click Menu	Show available list of subjects with their codes	Same
	Find Res.Person		Data Set 6.2	List resource persons on capable subject areas	Same

Participant – Data Set 1

NIC No : 576133890V
 Title: Ms.
 Full Name: Jayanthi Wickremasekara
 Initial: J
 Last Name: Wickremasekara
 Designation: Deputy Director
 Date of Birth: 1957-05-12
 Service & Grade: SLAS Class II/I
 Address: Gangodawila Nugegoda
 Email Address:  jayanthi@gmail.com
 Home Telephone: 234567890
 Organization Code: C1

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Participant – Data Set 2

NIC No : 576133890V
 Title: Ms.
 Full Name: Jayanthi Wickremasekara
 Initial: J
 Last Name: Wickremasekara
 Designation: Deputy Director
 Date of Birth: 1957-05-12
 Service & Grade: SLAS Class II/I
 Address: Gangodawila Nugegoda
 Email Address: jayanthi@gmail.com
 Home Telephone: 234567890
 Organization Code: C1

Participant – Data Set 3

NIC No : 815322889V
 Title: Ms.

Full Name: Dayangani Ranaweera

Participant – Data Set 3.1

NIC No : 815322889V
Title: Ms.
Full Name: Dayangani Ranaweera
Initial: J
Last Name: Wickremasekara
Designation: Deputy Director
Date of Birth: 1957-05-12
Service & Grade: SLAS Class II/I
Address: Gangodawila Nugegoda

Email Address: **jayanthi@gmail.com**
Home Telephone: 234567890
Organization Code: C1

Organization – Data Set 1

Organization Code: C1
Organization Name: Sri Lanka Rupavahini
Address: No 120, Colombo 07
Telephone No: 0112592189
Fax No: 0112584566
Email: director@slrc.lk



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Organization – Data Set 2

List of Organizations

No	Org. Code	Name of Organization	Address	Telephone No.	Fax No.	Email Address
0	11	Sri Lanka Institute of Development Administration	No 28/10, Malalasekara Mw. Col	0112582181	0112584406	director@slida.lk
1	C1	Sri Lanka Rupavahini	No 120, Colombo 07	0112592189	0112584566	director@slrc.lk

No	Test Item	Level	Input	Expected Output	Actual Output
	Subject	1,2	Data set 6 and click "submit Button"	Record Saved	Same

		Cancel	Clear Form	Same
		Data Set 6.1 and click update button	Update Successful	Same
List Subject s	1,2	Click Menu	Show available list of subjects with their codes	Same
Find Res.Person		Data Set 6.2	List resouce persons on capable subject areas	Same

Resource Person – Data set 6

Subject No Subject Name

101 MS-Office
102 Internet & Email
103 Graphic Designing

Resource Person – Data set 6.1

Subject No Subject Name

102 Internet and Email
103 Working with Graphic and Graphic Designing

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Menu Name – Performance

Usage: Record and manipulate participants performance.

<i>No</i>	<i>Test Item</i>	<i>Level</i>	<i>Input</i>	<i>Expected Output</i>	<i>Actual Output</i>
	Examination	1,2	Click “Submit” button	No response	Same
			Click “Refresh” button	Clear Form	Same
			Click update button	No response	Same
			Data Set 1 and click “submit”	Saved Successful	Same
			Data Set 2 and Click update	Update Successful	Same
	Subject Number		1, Web Surfing, 2006-02-17 and click “Submit”	Record Saved Successfully	Same
			Click Refresh	Clear Form	Same
			1, Web Surfing, 2006-02-18 and click “Update”	Record Updated Successfully	Same
	Assignment Details		2006IT124, 1, Web Surfing, and click “Add” button	Record Saved Successfully	Same
			2006IT124, 1, Web Surfing, and click “Update” button	Record Updated Successfully	Same
			Click “Refresh”	Clear Form	Same
	Candidate Registration		2006IT124, 470841184V and click “Add” button	Clear NIC Number field and record saved	Same
			2006IT124,	Clear NIC Number	Same

		497050650V and click "Add" button	field and record saved	
		2006IT124, 497050650V and click "Remove" button	Clear NIC Number field and NIC No remove from the system	Same
		Click Refresh Button	Clear NIC Number Field	Same
Results	1,2	2006IT124 click "OK"	List relevant Index Numbers in Index Number Combo box	Same
Examination Marks	1,2	1, 1,50 click Add	Record Saved	Same
		1,2,60 click Add	Record Saved	Same
		2, 1, 45 click Add	Record Saved	Same
		2,2,45 click Remove	Record removed from the system	Same
		Click "Refresh"	Clear marks field	Same
Assignment Marks		1,1,60 and Click "Add"	Record Saved	Same
		1,2, 35 and Click "Add"	Record Saved	Same
		1,2, 35 and Click "Remove"	Record removed from the System	Same
		Click "Refresh"	Clear Marks	Same
Attendance	1,2	2006IT124,1,2 and click Add	Record Saved	Same
		2006IT124,2,4 and click Add	Record Saved	Same

	2006IT124,2,4 and click Remove	Record Removed from the system	Same
--	-----------------------------------	-----------------------------------	------

Performance – Data set 1

Course Number: 2006IT124

Name of the Examination: Effective Surfing and Communication through the web

Type of the Examination: Practical



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Appendix 8 – System Appraisal

System appraisal form

A Web based course management system

System appraisal form - users view

For office use only

User Type

Administrator

User

Guest

Administrator has system administrative privileges

User has privileges for data entry and modification

Guest has privileges for viewing data

Instructions to fill the form

Please study the system carefully. Select appropriate answers and underline on your satisfaction about the system.



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1 Course Management System Interface - Overall assessment

1.1 User friendliness

A. Very Good B. Good C. Normal D. Not up to the expected level

1.2 Speed

A. Very Good B. Good C. Normal D. Not up to the expected level

1.3 Appearance

A. Very Good B. Good C. Normal D. Not up to the expected level

1.4 Security

A. Very Good B. Good C. Normal D. Not up to the expected level

2 Login Menu operations

A. Very Good B. Good C. Normal D. Not up to the expected level

3 Course menu operations

A. Very Good B. Good C. Normal D. Not up to the expected level

4 Resource person menu operations

A. Very Good B. Good C. Normal D. Not up to the expected level

5 Participants menu operations

A. Very Good B. Good C. Normal D. Not up to the expected level

6 Performance menu operations

A. Very Good B. Good C. Normal D. Not up to the expected level

7 Reports menu operations

A. Very Good B. Good C. Normal D. Not up to the expected level

8 Help menu operations

A. Very Good B. Good C. Normal D. Not up to the expected level



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2. System Appraisal Results

		Responses % out of a sample of 10				
Overall assessment		A Very Good	B Good	C Normal	D Not up to the expected level	Total
1	User friendliness	0.0	30.0	70.0	0.0	100.0
2	Speed	70.0	20.0	10.0	0.0	100.0
3	Appearance	20.0	60.0	20.0	0.0	100.0
4	Security	40.0	60.0	0.0	0.0	100.0
Functionalities of menu items						
1	Login	10.0	60.0	30.0	0.0	100.0
2	Course	0.0	80.0	20.0	0.0	100.0
3	Resource person	0.0	60.0	40.0	0.0	100.0
4	Participants	10.0	70.0	20.0	0.0	100.0
5	Performance	20.0	60.0	20.0	0.0	100.0
6	Reports	40.0	50.0	10.0	0.0	100.0
7	Help menu	0.0	30.0	70.0	0.0	100.0

Table 1: Course Management System - Assessment values in percentages for User type standard

		Responses % out of a sample of 10				
Overall assessment		A Very good	B Good	C Normal	D Not up to the expected level	Total
	User friendliness	10.0	50.0	40.0	0.0	100.0
	Speed	30.0	60.0	10.0	0.0	100.0
	Appearance	20.0	60.0	10.0	0.0	90.0
	Security	40.0	30.0	30.0	0.0	100.0
Functionalities of menu items						
	Login	10.0	60.0	30.0	0.0	100.0
	Course	0.0	80.0	20.0	0.0	100.0
	Resource person	0.0	70.0	30.0	0.0	100.0
	Participants	10.0	40.0	30.0	0.0	80.0
	Performance	30.0	60.0	10.0	0.0	100.0
	Reports	20.0	50.0	30.0	0.0	100.0
	Help menu	0.0	20.0	80.0	0.0	100.0

Table 2: Course Management System - Assessment values in percentages for User type guest

Appendix 9 - Software Installation Guide

This system can be installed in two methods. To install the system on windows platform, you can use CMSInstaller. In this installation, system will be installed on to the active partition of the system (C:\>). All other platforms it is needed to install manually. Refer "readme.txt" file for further details.

It is necessary to recompile "courseSuper.java" file to set system path. That should be done manually. Details are shown in "7.3 setting java class path".

7.1 Installation using CMSInstaller:

Insert CD into the CD Drive

Change folder to Installation/CMS

Double click CMSInstall

Type option number you want to install

Follow the instructions given by the installation programme.

Open php.ini file with notepad, which is in window System32 or WINNT folder. This depends on the type of windows configuration and version.

Find the location of SMTP = Localhost and replace Localhost with IP address of relevant SMTP mail server. (This setting need to active for creating emails).

Find the location of "Keep sendmail_from" and delete it.

Restart Apache server and load "index.html" file at myweb folder.

Note: This installation program work only in Windows environment.

7.2 Manual Installation

For this manual installation, Apache, MySql and PHP installation should be completed before install the CMS system.

Copy “myweb” folder of the given CD to document root of apache server.

Write click on copied myweb folder and select properties and disable read only option.

Copy all sub folders of Datadb folder to data folder of your mysql data folder. Default data folder name is data in windows platform.

Open php.ini file with notepad, which is in window System32 or WINNT folder. This depends on the type of windows configuration and version.

Find the location of SMTP = Localhost and replace Localhost with IP address of relevant SMTP mail server.

Find the location of "Keep sendmail_from" and delete it.

Restart Apache server and load "index.html" file at myweb folder.



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7.3 Setting of java class path

Open “courseSuper.java” file on any java development environment such as “JPadpro”, “JCreator” or text editor like “notepad”. See java code of the courseSuper.java file. Replace the web address “http://www.sbandara.org” with new web sever URL. This file is available in php folder which is in courseMgt sub folder of myweb folder. This folder is located in your web root of the apache server.

```
import java.net.*;
import java.awt.*;
import java.awt.event.*;
import java.io.*;
import java.util.*;
import java.text.*;
import javax.swing.*;
```

```

public class courseSuper extends JApplet {

static String url02="http://www.sbandara.org/courseMgt/php/course.php";
static String
    url03="http://www.sbandara.org/courseMgt/php/OpenCoursedata.php";
static String url1="http://www.sbandara.org/courseMgt/php/SendtimeTable.php";
static String url2="http://www.sbandara.org/courseMgt/php/saveTimetable.php";
static String url3="http://www.sbandara.org/courseMgt/php/showTimetable.php";
static String url4="http://www.sbandara.org/courseMgt/php/giveTblSession.php";
static String url5="http://www.sbandara.org/courseMgt/php/openOrgData.php";
static String url6="http://www.sbandara.org/courseMgt/php/participantAdd.php";
static String url7="http://www.sbandara.org/courseMgt/php/Organiz.php";
static String
url8="http://www.sbandara.org/courseMgt/php/participantSelection.php";
static String url9="http://www.sbandara.org/courseMgt/php/Exam.php";
static String url10="http://www.sbandara.org/courseMgt/php/Assignment.php";
static String url11="http://www.sbandara.org/courseMgt/php/Result.php";
static String url12="http://www.sbandara.org/courseMgt/php/openData.php";
static String url13="http://www.sbandara.org/courseMgt/php/ResPerson.php";
static String url14 = "http://www.sbandara.org/courseMgt/php/resPersonSubject.php";
static String url15 =
"http://www.sbandara.org/courseMgt/php/resPerSubjectAdd.php";
static String url16 = "http://www.sbandara.org/courseMgt/php/AttendDetail.php";
static String url17 = "http://www.sbandara.org/courseMgt/php/OpenSubject.php";
static String url18 = "http://www.sbandara.org/courseMgt/php/subject.php";
static String url19 = "http://www.sbandara.org/courseMgt/php/ProfQuali.php";
static String url20 = "http://www.sbandara.org/courseMgt/php/PrecessCerti.php";

public void init()
    {

    }

Vector dbToCombo(String get,String url){
Vector myVector = new Vector();
String Ob;
getSeverResponse myResponse = new getSeverResponse();
myResponse.getResponse(get,url);
        myResponse.postData();
        Ob=myResponse.outX;
        //myResponse.showResponse();
        getStringText myText = new getStringText();
        myVector=myText.separateData(Ob);
return myVector;
}

String systemDate(){
    int A;
    Date today;
    String dateOut,DD,MM,YYYY;
    DateFormat dateFormatter;

```



```

        dateFormatter =
DateFormat.getDateInstance(DateFormat.DEFAULT);
        today = new Date();
        dateOut = dateFormatter.format(today).toString();
        A = dateOut.length();
        MM=dateOut.substring(0,3);
        DD=dateOut.substring(A-8,A-6);
        YYYY=dateOut.substring(A-4,A);
        MM=MonthNumber(MM);
        //System.out.println(dateOut + " " + currentLocale.toString());
        dateOut=YYYY+"-"+MM+"-"+DD;

        return dateOut;
    }

    String MonthNumber(String MMA){
    String MM="00";
        if(MMA.equals("Jan")) MM="01";
        else if(MMA.equals("Feb")) MM="02";
        else if(MMA.equals("Mar")) MM="03";
        else if(MMA.equals("Apr")) MM="04";
        else if(MMA.equals("May")) MM="05";
        else if(MMA.equals("Jun")) MM="06";
        else if(MMA.equals("Jul")) MM="07";
        else if(MMA.equals("Aug")) MM="08";
        else if(MMA.equals("Sep")) MM="09";
        else if(MMA.equals("Oct")) MM="10";
        else if(MMA.equals("Nov")) MM="11";
        else if(MMA.equals("Dec")) MM="12";
        return MM;
    }
}
}

```

Figure 7.1 : courseSuper.java

Recompile this java file using javac command. Now the system is ready for implementation.

7.4 Setting path for html files

Open "checkPassword.html" file using notepad or any text editor. This file is located at myweb folder which is available in your web root. Default apache web root is "htdocs". Find the following html tag line.

```
<form name=login method=post
```

```
action="http://www.sbandara.org/courseMgt/php/login.php" onsubmit="return  
checkpw()">
```

Replace this URL "http://www.sbandara.org" with current server URL



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Appendix 10 – User’s Manual

8.1. Course management system overview

8.1.1. How to open Course Management System:

After installation complete, you can open CMS home page by typing relevant URL in any Internet Browser such as Internet Explorer or Opera. Home page file name is index.html, which is at the myweb sub folder of your apache document root.

URL as an Example: <http://www.sbandara.org> in a apache web sever their address is “http://www .sbandara.org”.

8.1.2. This web based course management system is most suitable for Intranet environment. Using this system, users can

- record participant applications on course number and name
- prepare course timetable and assign lecturers for course sessions
- prepare selection letters to inform participants to attend course
- invite resource persons to conduct course sessions
- record participants assessment information such as examination results, assignment marks etc.
- prepare course certificate and attendance certificates
- extract course statistics

Note: This user guide assumes that the reader has a basic grasp of how to use a personal computer. Refer to the manuals supplied with your computer system for basic information on using the computer.

Details of each menu are given below.

8.2. Login

8.2.1. Login

System access is given only to registered users. To obtain valid User ID and password please contact Administrator

Administrator user Id: administrator

Password: password

After installation, it is needed to create another user Id with administrator privileges. This Administrator account password can be changed accessing through this new user Id.

8.2.2. Sign UP

System access is given only to System Administrator. Hence for creating user accounts, it is needed Administrator level access permission.

8.2.3. Change password

Administrator or any user who have administrator level access can change user passwords by using Change password menu item which is available in Login menu.

8.2.4. Remove user account

Administrator should do that using SQL commands. System does not facilitate for this process.

8.3. Create a course

This menu allows creating a course. Once you create a course using create course menu, system will allow you to create timetable. For the security reason, it is necessary to create timetable by the user who created the course (Course owner).

Course Number Format : YYYYCourseNumber

Ex : Course Number HR 302

Enter as 2006HR302

8.3.1. Course Types

RG - Regular course. A course scheduled in the Training Directory.

TC - Training Consultancy. A special course designed on special request from an organization.

OT - Other. A course belongs to none of above.

8.3.2. Invite Resource persons to conduct course sessions

User can send auto-generated email with Timetable as an attachment by using "Inform Res. Person" menu Item. This is also allows only to course owner.

8.3.3. Select Participants for the course

"Add Participants" menu item allow adding participants to a course. However, it is necessary to add participant details to participant database using "Participants" menu.

8.3.4. Create Selection Letter

Selection letter can be generated through the system to send individual participants to inform the participation details. This document will generate in MS-Word format for further processing.

8.3.5. List Courses

Using "List Courses" user can view course details.

8.3.6. View Timetable

By submitting the course number, user can view course timetable

8.3.7. List Participants

By submitting the course number, user can view selected participants for the relevant course.

8.4. Resource Person

This menu allows operating resource person details including data entry and manipulations.

8.4.1. Feeding of resource personal details

Personal details can be entered using “Personal” menu item. Relevant Educational qualifications and preferred teaching areas should be entered through “Education” menu item.

8.4.2. Removing capable areas for training and qualified areas

When you click mouse at Subject course text box in capable areas for training, it will list all existing details. Highlight the required text line and click relevant “Remove” button.

8.4.3. Professional Qualification

Professional qualifications should be entered through “Professional” menu item. Subject details should be entered before operating the “Education” menu item.

8.4.4. Viewing details of a selected Resource Person

To view details of a selected resource person, enter relevant Nic No., (National Identity card number) using “View Res. Person” menu item.

8.4.5. Entering of Subject codes and subjects

Use “Subject” menu item. It is necessary to use coding system to detect subject under various main categories. Ex: Information technology is a main category and Internet programming is a sub category coming under IT.

8.4.6. View Entered Subject List

Use “List Subject” menu item.

8.4.7. Find suitable resource personals for a selected subject

Use “Find Res. Person” menu item for this purpose. You should enter first few letters of subject name to find resource persons for the relevant subject.

8.5. Participants

8.5.1. Entering of Participants Data

Participant data should be entered using “Participant” menu item. Organizations and their codes should be entered before entering the participant’s data.

8.5.2. Entering of organizational data

Organizations should be fed using “Organization” menu item. It is recommended to use pre prepared coding system to track organization with in the database.

8.5.3. Find an organization or list of organizations and their codes

Use “Find Organization” menu item. Organization name or first few letters of Organization name can be used for searching.

8.5.4. Performance

This menu allows recording participant performance information such as examination results.

8.5.5. Examination details

Use “Examination” menu item to create examinations with their numbers names and subjects. It is recommended to use course name as examination number.

8.5.6. Examination Marks

Use “Results” menu item to enter Examination marks. It is necessary to feed candidate index numbers before activating this menu.

8.5.7. Candidate information

Use “Candidate” menu item to feed candidate index numbers.

8.5.8. Assignment details

Use “Assignment” menu item to create assignment details including assignment number, subject etc.

8.5.9. Assignment marks

Use “Results” menu item to enter assignment marks

8.5.10. Participant attendance

Use “Attendance” menu item to enter participant attendance. You can enter total individual attendance of candidates.

8.6. Reports

This menu provides facilities for Report preparation and printing.

8.6.1. Viewing and printing attendance report

Use “Attendance” menu item. Use print menu item from file menu for printing reports



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8.6.2. Viewing eligible candidates for awarding course certificates

Use “Certificates” menu item for this purpose. You can enforce one or more rules to check eligibility of participants.

Examination Results: Pass mark adjustable, Default is 40% .

Assignment marks:

Take assignment marks considering as total marks out of 100.

Attendance: Default is 80%. But it is adjustable.

Certificate generation facility is restricted only for the user who creates the examination.

8.6.3. Viewing examination results

Use “View Exam Results” menu item



8.6.4. Printing of course certificates

Use “Print Certificate” menu item. It is needed to submit course number and select certificate type before proceeds operation. Set rules using “Certificates” menu item before start the “Print certificate” menu.

8.6.5. Viewing list of coursers participated by a given participant

Use “Training History” menu item for this purpose. System searches all the coursers participated by the participants after giving his National Identity card number.

8.6.6. Querying using SQL/MySql commands

Using “Create query” menu administrator can run SQL/MySql quarries to extract information from the system.



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