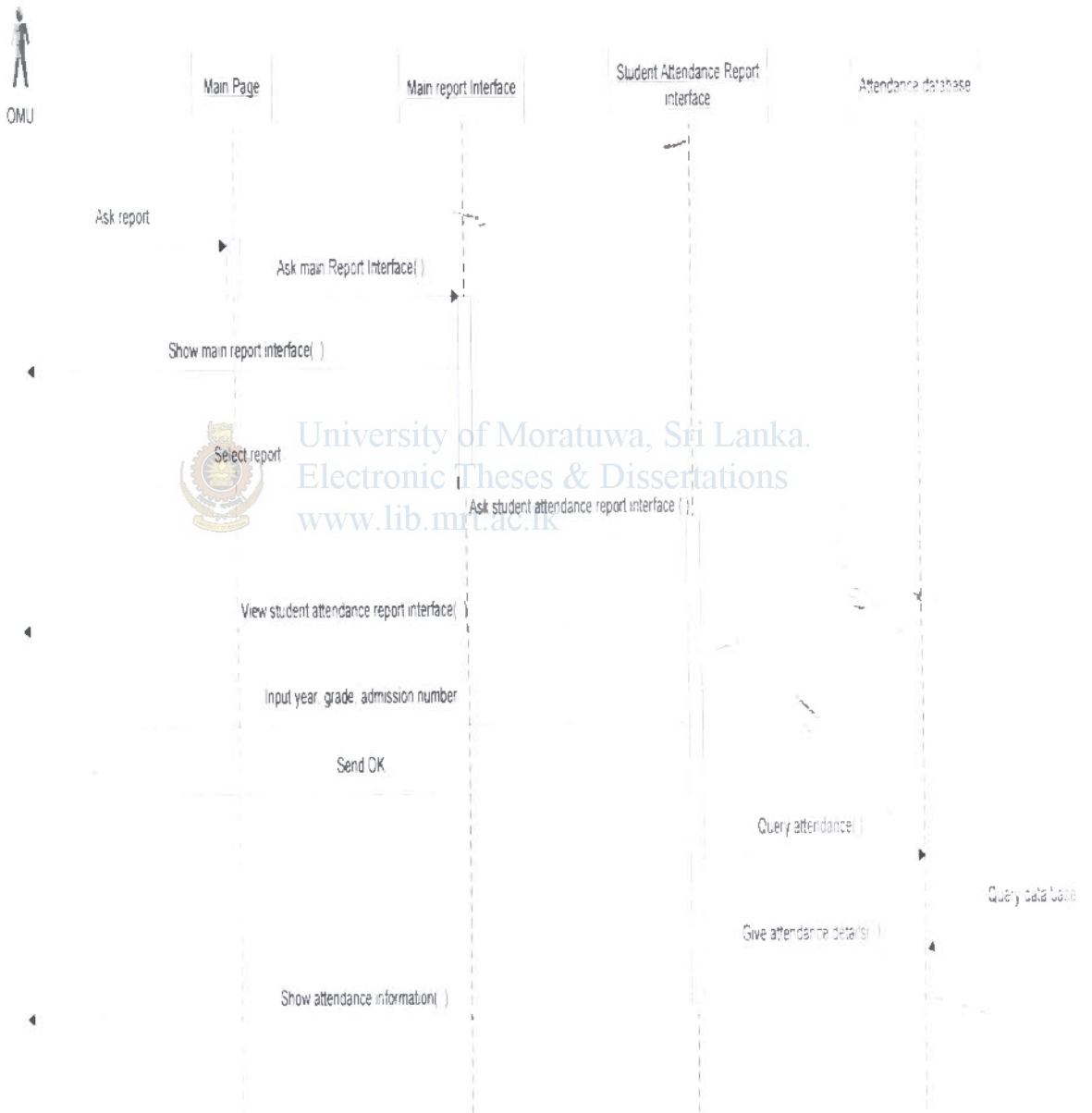
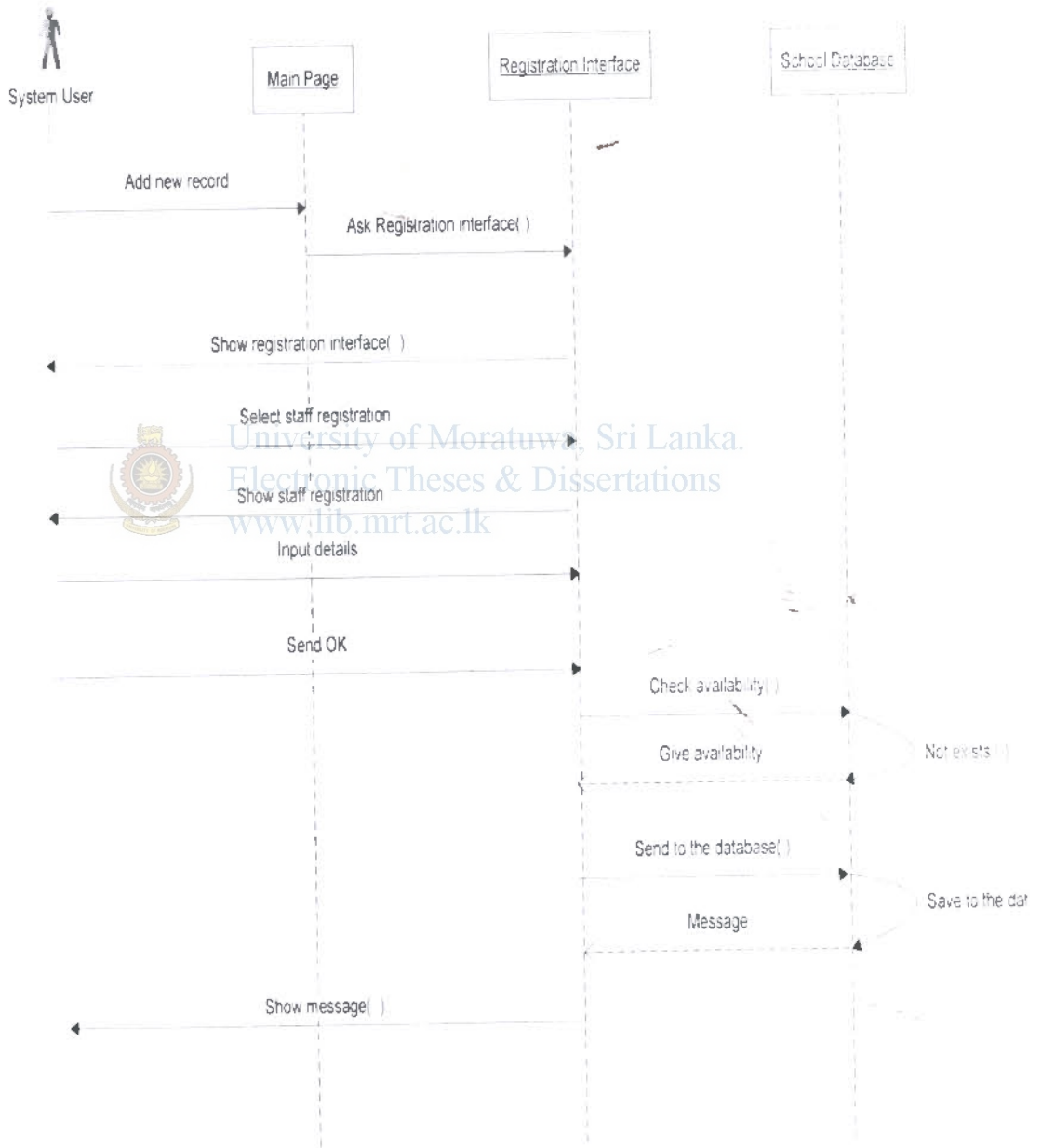


4. Report generating IV



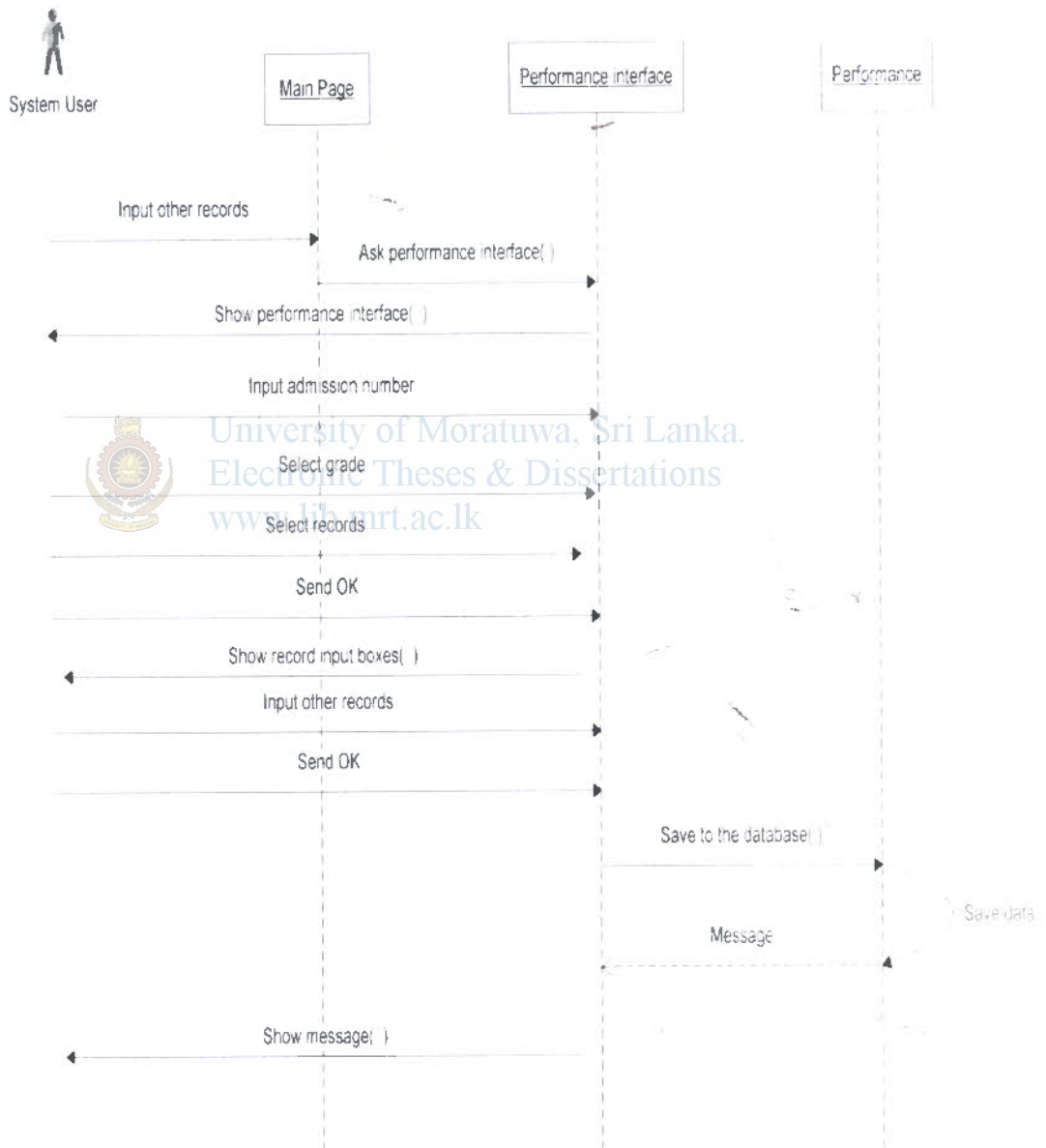
5. Staff Registration ii



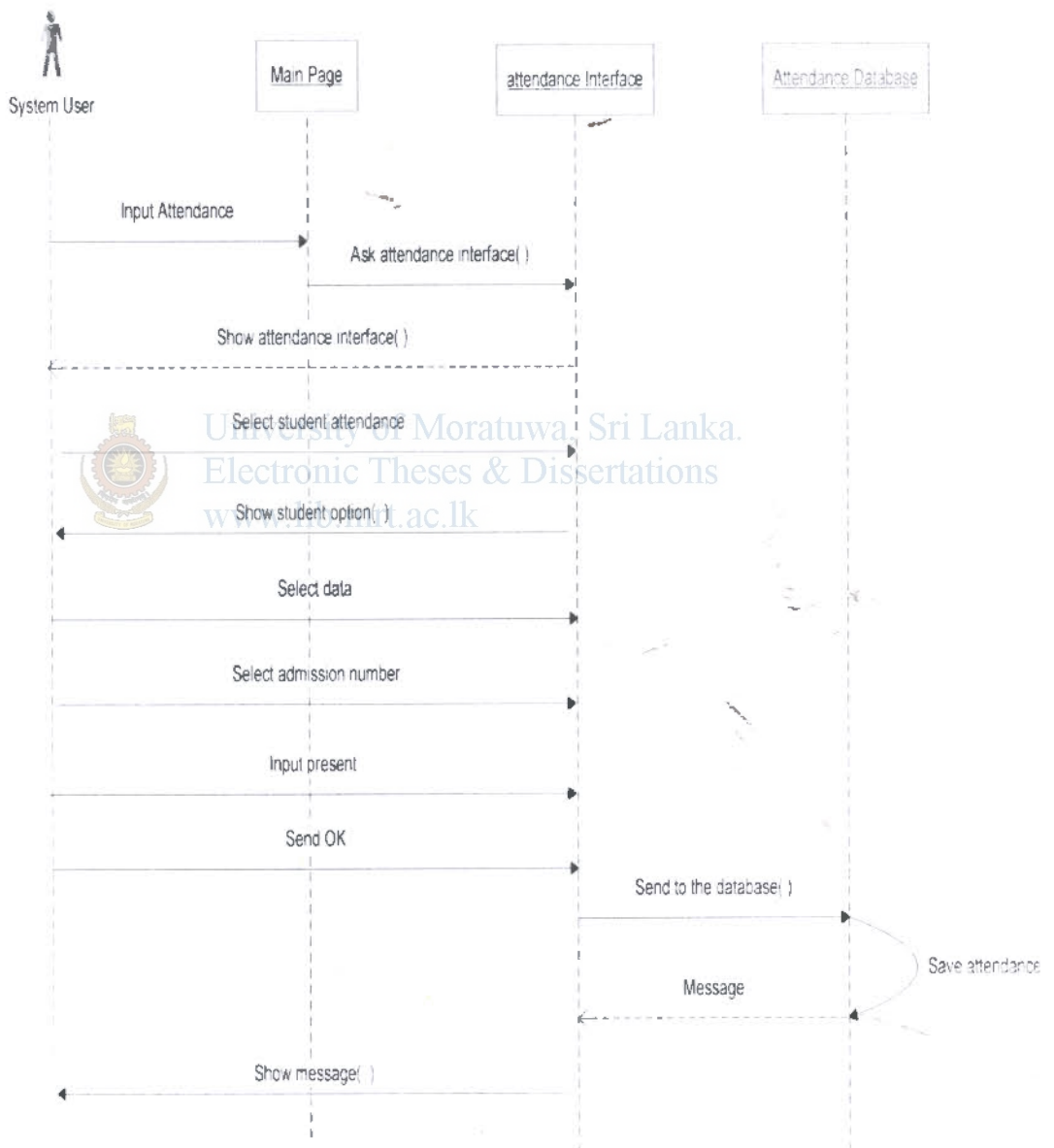
6. Input Exam marks



7. Input Other Records



8. Input Attendance I



Appendix D

Use Case Descriptions

Use Case Description 1

Name	Add User
Actors	System Administrator
Pre-Conditions	
Post Conditions	User must be add to the database
Data Flow	<ol style="list-style-type: none">1. System Administrator selects add user2. System shows add interfaeæ3. System Administrator adds user name4. System Administrator inputs password5. System Administrator sends OK<ol style="list-style-type: none">6.1 If not found username and password7. System saves to the database
Exception	<ol style="list-style-type: none">6.2 If found username and password8.1 System shows message



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Use Case Description 2

Name	Delete User
Actors	System Administrator
Pre-Conditions	Selected user must be available
Post Conditions	Selected user must be deleted
Data Flow	<ol style="list-style-type: none">1. System Administrator selects delete user2. System shows users3. System Administrator selects user name4. System administrator sends delete<ol style="list-style-type: none">5.1 If user exists6. System deletes user
Exception	<ol style="list-style-type: none">5.2 If user not exists,7. System shows message

Use Case Description 3

Name	System log-in
Actor	OMU (Office Management unit)
Pre-Conditions	OMU must have username and password to log-in to the system
Post Conditions	OMU should be able to access the system
Data Flow	<ol style="list-style-type: none">1. OMU requests log-in to the system2. System shows log-in3. OMU enters username and password4. System checks username and password1.1 If username and password found,6. System shows log-in interface
Exception	<ol style="list-style-type: none">1.2 If username and password not found,7. System shows log-in interface

Use Case Description 4



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Name	Report Generating
Actors	OMU(Office Management Unit)
Pre-Conditions	Student and staff information must be available
Post Conditions	Report must be produced
Data Flow	<ol style="list-style-type: none">1. OMU selects report generating interface2. System shows report generating interface3. OMU selects option1.3 If OMU selects result sheet,2. System shows result sheet interface
Exception	<ol style="list-style-type: none">5.2 If student information selected,3. System shows student information interface5.3 If staff information selected,8. system shows staff information interface5.4 If attendance details selected1. System shows attendance details interface

Use Case Description 5

Name	Student and Staff Registration
Actors	System Operator
Pre-Conditions	Student must be qualified from the interview
Post Conditions	Student and staff must be registered
Data Flow	<ol style="list-style-type: none">1. Student or staff member submit applications form2. System Operator adds new record3. System allocates admission number4. System shows registration interface5. System operator inputs student or staff information6. System Operator sends OK7.1 If the student or staff member not exists,8. System saves to the database9. System shows message
Exception	<ol style="list-style-type: none">7.2 If the student or staff member exists,10. System shows message

Use Case Description 6



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Name	Input Exam Marks
Actors	System Operator
Pre-Conditions	Student must be sat for the exam
Post Conditions	Exam marks must be input to the database
Data Flow	<ol style="list-style-type: none">1. System Operator selects input results interface2. System shows input results interface3. System Operator inputs admission number4. System Operator selects grade5. System Operator sends OK6. System shows student result input boxes7. System Operator inputs results8. System Operator sends OK9. System saves to the database10. System shows message System Operator views message
Exception	

Use Case Description 7

Name	Input Records
Actors	System Operator
Pre-Conditions	Student must be engaged in other activities
Post Conditions	Student's records must be input to the database
Data Flow	<ol style="list-style-type: none">1. System Operator selects input records interface2. System shows input records interface3. System Operator inputs admission number4. System Operator selects grade5. System Operator sends OK6. System shows student records input boxes7. System Operator inputs records8. System Operator sends OK9. System saves to the database10. System shows message11. System Operator views message
Exception	

Use Case Description 8



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Name	Input Attendance
Actors	System Operator
Pre-Conditions	Student and staff must be registered
Post Conditions	OMU must be marked the attendance to the database
Data Flow	<ol style="list-style-type: none">2. System Operator selects input attendance interface3. System shows input attendance interface4. System Operator selects each admission number5. System Operator marks all attendance6. System Operator sends OK7. System saves to the database8. System shows message9. System Operator views message
Exception	

Use Case Description 9

Name	Back up and Recovery
Actors	System Operator
Pre-Conditions	
Post Conditions	Back up and recovery must be completed
Data Flow	<ol style="list-style-type: none">1. System Operator selects back up interface2. System shows back up interface3. System Operator sends make backup4. System makes back up5. System shows message6. System Operator views message
Exception	



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Appendix E

Check List

Software Requirements	Use Case	Activity Diagram/ Sequence Diagram	Use Case Description
1	1.0 Add User 2.0 Delete User 3.0 System Log-in	1.0 Add User ✓ 2.0 Delete User 3.0 System Log-in	1.0 Add User 2.0 Delete User 3.0 System Log-in
2,4	5.0 Student & staff registration	5.0 Student & staff registration	5.0 Student & staff registration
5	6.0 Input exam marks	6.0 Input exam marks	6.0 Input exam marks
6	7.0 Input other records	7.0 Input other records	7.0 Input other records
3	8.0 Input attendance	8.0 Input attendance	8.0 Input attendance
8	9.0 Back up & recovery	9.0 Back up & recovery	9.0 Back up & recovery
7	4.0 Report generating	4.0 Report generating	4.0 Report generating

Interfaces

1. Add Staff personal Details Interface

Staff Personal Details

Staff ID

Name

Address

TP No

Mobile

Date of Birth

Nationality Religion

Educational Qualifications

Professional Qualifications

Special Abilities

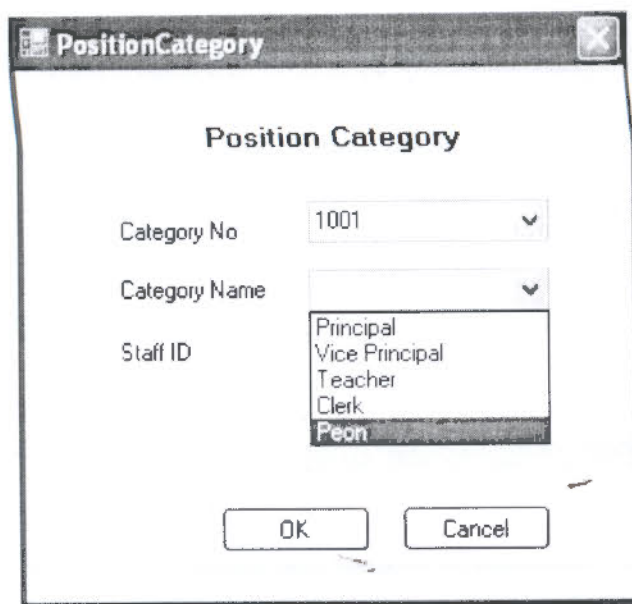
Subjects Teaching

Extra Activities

Service Period

Section ID

2. Position Category Interface



The screenshot shows a dialog box titled "PositionCategory". It contains three input fields: "Category No" with the value "1001", "Category Name" which is empty, and "Staff ID" which has a dropdown menu open. The dropdown menu lists the following options: Principal, Vice Principal, Teacher, Clerk, and Peon. At the bottom of the dialog box, there are two buttons: "OK" and "Cancel".

3. Appointment Category Interface



The screenshot shows a dialog box titled "AppointmentCategory". It contains three input fields: "Appointment Category No" with the value "100", "Appointment Category Name" with the value "Graduate Teacher", and "Staff ID" which is empty. At the bottom of the dialog box, there are two buttons: "OK" and "Cancel".

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4. Staff Attendance Interface

Staff Attendance

StaffID: 101

Date: Monday, October 20, 2008

In: 7:30 AM

Out: 10:30 AM
1:30 PM

OK Cancel

5. Student Attendance Interface

Student Attendance

ADNo:

Date: Monday, October 20, 2008

OK Cancel

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6. Delete User Interface



Use Name

7. Obtain Marks Interface



 **Obtain Marks**

ADNo

SubjectID

Year ▼

Term ▼

Marks

Grade ▼

Place

Appendix G

Reports

1. Staff Personal Details

10/20/2008

Staff Personal Details



StaffID	StaffName	Address	TPNO	Mobile
1	Ms. Nanda De Silva	24, 1st Lane, Dattaram	112335446	777070702
10	R L Supewa	Dewala Rd, Maharagan	112434543	712552234
12	BC Rupasingam	67A, Hardy Rd, Daluwa	112913641	727788567
13	SGK Samarakkody	16, Rajamalwatta Rd, E	112707702	0
14	D Navoda	267, Biyagama	11488408	77535400
15	S Pathirawadana	21, Kiruppu Road, Boo	114884222	714161470
16	K K Nimalan	Maharagama Rd, Pituva	119993221	0
17	M Sunil Kanthi	Nugombo Road, Ebadun	825561786	777771967
18	P P Priyantha	Nedimala, Dehwala	112344325	813355067
19	S Meeqanapola	15C, NHS, Polhena, Kk	112906015	722195406
20	API Ranjan	Yasodara Rd, Malabe	112561784	779159612
21	M Kanthi Kumari	25, Temple Lane, Udhv	112343434	772324251
22	Mrs. WPNDe Silva	1st Lane, Hattaramulla	112488468	771212121
23	P Hewawagam	24, Castle Street, Colo	114903222	714799894
24	KK Premalunga	90, Kandy Road, Daluq	112913641	0

2. Staff Attendance Details

STAFF ATTENDANCE DETAILS

Name	Date	In Time	Out Time
D Navoda	2008 12 09	9:30 AM	1:30 PM
P Hewawagam	2008 12 15	7:30 AM	1:30 PM
Ms. Nanda De Silva	2008 12 11	7:30 AM	1:30 PM
D Navoda	2008 12 13	7:30 AM	1:30 PM
S Pathirawadana	2008 12 13	7:30 AM	1:30 PM
M Sunil Kanthi	2008 12 12	7:30 AM	1:30 PM
P P Priyantha	2008 12 12	7:30 AM	1:30 PM
Nandana Samarasinghe	2008 12 12	7:30 AM	1:30 PM

3. Student Personal Details

AD/No	Name	Grade	Class	Address	TPNo	DOB	Nationality	Religion	TransportMode	FatherOccupation	Father
1111	Prasad	10	Neun		111111111	10/8/2008 5:17	Sinhalese	Buddhist	private car	SLAS	07753
1231	Suman	10	Sawan	Colombo	222222222	10/8/2008 1:15	Muslim	Islam	BBB	mt	58285
1234	Kamal	10		Tel	131321312	10/8/2008 12:57			test	test	test
2222	Nawara	8	Sawan	NELM uasna P	011245678	1/10/1994 12:36	Sinhalese	Buddhist	School Van	Lawyer	077712
2223	Indran	7	Nawel	Temple Rd, Ralm	011245678	9/20/1990 1:04	Malay	Christianity	School Van	Farmer	No
3456	Mawa	6	Du	NHS Mahitvega	011488001	7/30/1980 10:54	Sinhalese	Buddhist	school van	Engineer	no
9999		4	Du	Mahitvega		10/15/2009	Sinhalese	Buddhist			

Appendix H

Test Cases

Test Case 3 : Add Staff Personal Details

Usage To enter data of the staff. Using this form System Operator can enter all the information regarding the staff members personal details.

Test Item	Input	Expected Output	Actual Result
Add Staff Personal Details	Enter incorrect Staff ID No	Couldn't save information (ID No is incorrect)	Same
	Enter correct details	Information saved successfully	Same
	Enter Staff ID No which has already added	Couldn't save information (IDNo is already taken)	Same
	Enter incorrect name with numeric values	Couldn't save information (Name is incorrect)	Same
	Enter only correct Staff ID No without the other information	Couldn't save information (Enter data for blank fields)	Same

Test Case 4 : Add Marks

Usage To enter marks of the student. Using this form System Operator can enter marks for the students.

Test Item	Input	Expected Output	Actual Result
Add Marks	Enter incorrect AD No	Couldn't save information (AD No is incorrect)	Same
	Enter correct details	Information saved successfully	Same
	Enter marks without Ad No	Couldn't save information (Enter AD No)	Same
	Enter marks with wrong data format	Couldn't save information (Data is incorrect)	Same
	Enter only correct AD No without the other information	Couldn't save information (Enter data for blank fields)	Same

Appendix I

SRS

Student Administrative System
System Requirement Specification



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Dammika Hewavitharana

MSc/06/10010

University of Moratuwa

1.0 Feasibility Study

1.1 Economic Feasibility

1.1.1 Cost of Resources needed for School Administrative System

- The overall estimated cost for hardware resources:
 1. 5 PCs
 2. A server
 3. 5 UPS for one office
 4. 5 Printers

These Resources are available in school therefore installation fee can be reduce.

- As this organization has most of needs the actual cost will be on rearrangement.

1.1.2 Training cost;

Already there is trained staff in IT. Therefore It is no need a hard training. Development of the system is done at no cost and Training is done at no cost.

1.1.3 Development Cost;

The development of the system is done at no cost

1.2 Technical Feasibility

❖ Development Risk

The administration may decide to change the proposed system before completing the project. It may affect the goals and schedules which were proposed.

❖ Resource Availability

The client organization currently has following hardware and software components.

- 15 PCs
- One server
- 8 Printers
- 8 UPSs

Network:

- Local Area Network
- Internet (ADSL)

Required Hardware & Software resources by the proposed system;

Hardware:

- 8 PCS
- 2 Printers

Software

- Design tool : UML
- Development Environment: SQL Server, C#
- Report Tool : Crystal Report
- Operating System : Windows XP

Knowledge on C# and SQL Server. And familiar with the Project Management. Required the ability to access internet to gather additional information and knowledge.

Technology

Use the knowledge about Object Oriented Methodology, Software Engineering and other Programming Languages and also Internet Programming gained from the MSc Program to design the System and use UML to do the designing.

1.3 Legal Feasibility:-

1.3.1 Agreement

Signed agreement with the school administration .According to the agreement all the changes of the system must be done under the school administration.

1.4 Possible System:-

There was not computer base system in School .This is the first computer based system proposed for the school.

1.5 Cost Benefit Analysis

❖ Time

- An integrated system will provide access to management information for a wide range of scheduling, planning, management purpose.
- Entire details of the institute able to get accurate results the student will be safe for long –period of time as we maintain the regular persistent database.
- When required reports ,lists and certificates, it makes time saving.

❖ Data storing,

- The present system is used the manual record book system to store the data, but the propose system is an automated one.
- Protect the data from misplacement and insects.
- Reduce the data storing capacity.

❖ Data Quality,

- The institute able to get accurate results.
- Data sharing easy and give up human errors .It makes the data accuracy.
- Data will not be redundant, duplicated, and misplaced since there is a central database in the School

2.0 Software Requirements

2.1 Functional requirements:-

- 1). The system shall allow only authorized personnel to log-in.
- 2). Users of the system shall input data from.
 1. Student registration form
 2. Form of Teachers' personnel details
- 3). The system shall maintain registers for students, and teachers of the school.
- 4). The system shall generate unique reference number for each student and teachers of the staff.
- 5). Users of the system shall be able to input marks and other data of the students.
- 6). The system shall produce the following reports to its users;
 1. Result sheets
 2. Student information
 3. Teachers information
 4. Attendance details
- 7). The system shall provide backup procedure to backup data and recovery .

These are the nonfunctional requirements identified. These nonfunctional requirements describe the restrictions on the system that limits the choices for a solution.

2.2 Non-Functional Requirements -

- 1). The system should deny unauthorized access.
- 2). Allocate security levels for each users to do different responsible functions.
- 3). Unauthorized people should not allowed to change data in the system.



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Appendix J

PROJECT CHARTER

Name of the Candidate	Dammika Hewavitharana		
Registration No.	MScIT 06/10010	Index No	
E-mail Address	Dammikah2006@yahoo.com		
Title of Project	School Administration System		
Executive Summary	<ul style="list-style-type: none"> • Capturing data in a School Administration System. • Attendance Maintenance System for school. 		
Supervisor	Name	Dr. Gamini Wijayarathna	
	Organization:	Department of Industrial Management, Faculty of Science, University of Kelaniya.	
	Designation:	Senior Lecturer	
	Address	University of Kelaniya, Dalugama, Kelaniya	
	Telephone	Fax	eMail
011-291 4482		gamini@kln.ac.lk	
077-368 7533			

1. Introduction to the Project:

Name of the institution - Sirimavo Bandaranaike Vidyalaya.

Sirimavo Bandaranaike Vidyalaya is a leading girls' school in Colombo. It was established in 1973 with 149 students and 5 teachers in order to cater the growing demand for a girls' school. At present the student population is about 3,700 and 167 teachers. In each year a considerable number of students are selected to universities. Though it has achieved a very good performance level within a short period of time, its manual school administration system is not properly organized to meet the modern expectations and needs.

2. Problem Domain and Motivation:

- Human Resources Management is the main problem area in the school. The traditional record keeping techniques are slow, voluminous and a tedious retrieval system.
- Time table preparation is done manually and it's very difficult to arrange a class to suit teacher skill. Period clashing in the time table is a major area needs professional attention.
- Not maintaining a proper information system to obtain information as and when required is an area needing immediate attention. For an example, birth certificate of students is the only immediate information available at a short notice. Still this too needs time to search the files.
- No proper system to identify the variety of talents of students and their extra-curricular activities.
- In the present office management system, file maintenance is not an easy task. It is both time and space consuming, difficult to attend and also it doesn't have proper information. It is not easy to call information when required.
- It is not maintaining performance levels according to subject areas in Primary, Secondary, Senior or Advanced Level which will facilitate proper decision

making. Being a large amount of students and teachers there aren't a proper communication between these sections.

- The school has traditional daily attendance registers for attendance. No one can get information regarding the attendance of student or a staff member immediately.

2. Project Goals and Objectives :

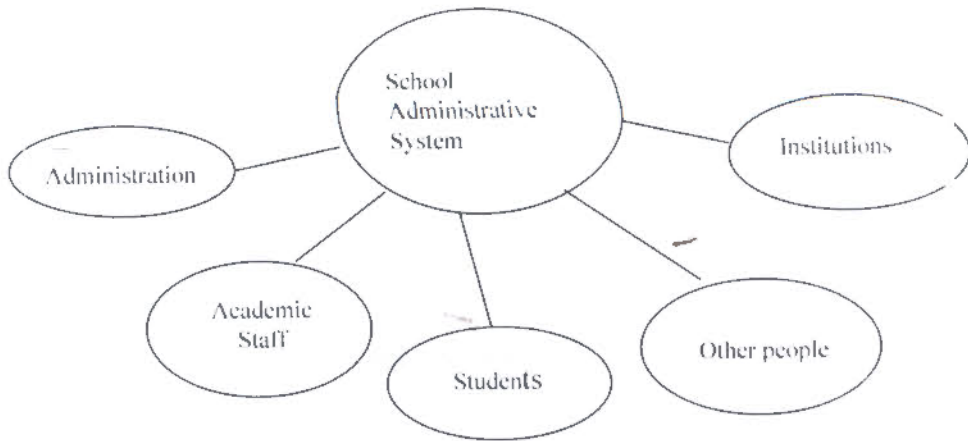
- Generate automated system.
- Substantial time saving for school administration in collecting the data required, record keeping and data retrieval.
- Increase in effectiveness and efficiency of school management.
- Improve the school data collection methods and updating all the information.
- Produce result sheets, student or staff information and attendance details as soon as required.
- Store all the information regarding students and staff in a reliable and safe mode.
- Save time and man hours for working.

3. Similar Work and Relationship to the Project:

Though we have seen the similar projects in internet and foreign schools, we need an automated system specially designed for our school.

4. Scope of the Project:

Overview of the proposed system



- The scope of the project is covering all the activities and functionalities in School Administration System. Refer the Activity Diagram attached.
- Prepare an automated Management Information System for Human Resource Management. Database will comprise of both academic and non academic personnel information and special talents, other qualifications and knowledge which can use for the betterment for the education system of the school. And also can be use for the betterment of them regarding selection for trainings, seminars and other programmes.
- By using this system it is easy to manage time table, leave charts and relief work and also appoint for extra activities. Assisting in the staff career reviews process the system will integrate the data currently available within the school and will ensure the data is always available when required.
- Creating Student Information Database and use of it for collecting personal information, academic performance, extra curricular activities, talents and weaknesses and also travel arrangements as it is a currently needed. The exact school attendance information for students and staff is always at your finger tip.

- Creation of an Office Management System in order to provide electronically managed efficient service for file handling, indexing, searching updating and report generating.
- Minimize time consuming data entry and record keeping and Information can be made available as and when needed and can update additional details as necessary.
- Create academic information system for primary, secondary senior and A/L sections according to subject areas, preparing time schedules for additional subjects and extra curricular activities.
- The principal could monitor every aspect through this system. Eg. Teachers on leave and the alternative arrangement in place.

5. Deliverables:

- System requirement Specification
- Source Code
- Working Model
- UML Designing Diagrams

6. Parameters for the measurement of success:

- Quality and quantity of students' results.
- Effective school management.
- Punctuality.
- Efficiency in documenting and file handling regarding office work.

7. Resource Requirements for the Project:

- Operating System - Windows XP and above.
- Development tool - C#
- Database - SQL Server
- Reporting Tool - Crystal Report
- Design Methodology - UML

8. Risks and Risk mitigation Plan:

9. The client or the Sponsor :

Principal.

Sirimavo Bandaranaike Vidyalaya.

Stanmore Crescent, Colombo7.

Tel. 011 2582110

Attachment 1 - Project Schedule (with a Gantt Chart)



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.....

Student's signature

Date.

.....

Supervisor's signature

Date

