AN
INTERNSHIP REPORT
ON
SCHOOL MANAGEMENT SYSTEM PROJECT
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School Management System

Introduction:

Education system forms the backbone of every nation. And hence it is important to provide a strong educational foundation to the young generation to ensure the development of open-minded global citizens securing the future for everyone. Advanced technology available today can play a crucial role in streamlining education-related processes to promote solidarity among students, teachers and the school staff.

School Management System(SMS) consists of tasks such as registering students, attendance record keeping to control absentees, producing report cards, producing official transcript, preparing timetable and producing different reports for teachers, officials from Dr.Mohiuddin Education foundation and other stakeholders.

Automation is the utilization of technology to replace human with a machine that can perform more quickly and more continuously. By automating SMS documents that took up many large storage rooms can be stored on few disks. Transcript images can be annotate. It reduces the time to retrieve old transcripts from hours to seconds.

Company's Profile:

Future heaven school is the renowned school. The school is enlightening the futures of students in Federal B.Area Karachi. It is under the management of Dr.Mohiuddain Education foundation. The school is educating the students of

Montessori, prep to matric. Currently the school is totally manual. They are not using any software. The want to automate their process by using the new world technology. For this we are designing the application. This will cover the key areas of the school. The details of the project are listed in remaining document.

User Requirements:

1. The system will deal with Student Information.
2. The system will manage the payroll and typical H.R process
3. The system will have the Attendance module which stores the teacher and student attendance.
4. The system will manage the class time table.
5. The system will manage the fesses from student.
6. The system should Manage the exams results and save according to academic year

Reports:

- Results
- Salary Sheet.
- Attendance Sheet.
- Time Table.

Software Objective:

The objective of the system is to provide the user friendly application which mange the whole school. The software helps the user to record the student and employees data. Give a path for better reporting

Software Scope:

The scope of the system is to manage the

- Students information and there fees.
- To manage Employees and their salaries
- To develop registration system
- To facilitate School by controlling the timetable and examinations
- To facilitate attendance record keeping
- To facilitate various report generation

The scope of the system is to manage the student information, human resource and fees module

Features:

- The system is easy to use, have good looks and secure.
- Get easy access to student particulars, their schedules, address, parents, disciplinary records, extra-curricular activities, and any reports, anytime
- Track your teacher's particulars, residential addresses and other important data
- Report cards are fully customizable - you get to have your own grading criteria, grading flow, report card format. You can print beautiful report cards and transcripts.
- Teachers will be treated to the simplest interface around for them to enter grades. Grades are also automatically consolidated.
- Track daily attendance. Easy to use interface to check off students Attendance.
- Fees management. Track the fees of the students. Automatic generation of the fee bills.
- Automatic generation of timetable in the system. Teacher and room availability is tracked automatically.
- Manage the employees' data. There information is stored with their types and branches.
- Employee attendance is marked in the system.
- Employee salaries are calculated in the system automatically. Theses salaries are calculated on the daily attendance.
- The system will give the edge for better reporting.

Feasibility Report:

PROPOSED SOLUTION

Owing to the captioned evaluation, the best solution is to design and develop the information system on RDBMS coupled with front-end support on the latest visual tools and efficient utilization of reporting tools.

FEASIBILITY AREAS

Keeping in view the earlier discussion pertaining to terms of reference that is Project Scope, Problem and Opportunity Identification, and Option Evaluation; the key areas of feasibility can be analyzed as follows:

Technical Feasibility

The proposed system is feasible on technical grounds because of its implementation via available resource utilization of hardware and software. In addition, the proposed system will be

- Capable of processing volumes of transactions with speed and accuracy.
- Capacious enough to fulfill the data storage needs for a long period of tie.
- Efficient in responding to complex queries.
- Utilized by multiple users at a given instance of time.

Operational Feasibility

The proposed system is feasible on operational grounds sine it imposes no conflicts with the way the academy undertake its operations. In addition there would be no training costs for the new system in consideration.

Social Feasibility

In social ground there would be no conflicts among the system functionalities and personal policies, job specification, skill requirements and motivational factors.

Economic Feasibility

On grounds the project deemed to be no or very little cost project to the academy owing to the availability of very low priced software. Furthermore the existing hardware ca easily be utilized for the system implementation.

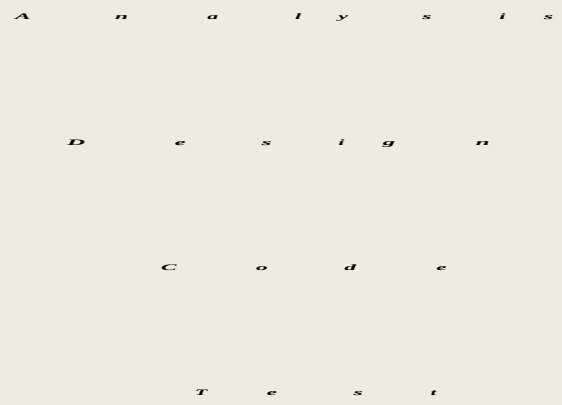
Process

In the project "school management system" we are using the incremental model. The model is based on the different increments and each increment has some tasks.

Incremental model:

When an incremental model is used, the first increment is often a core product. The core product is used by the customer or undergoes a detailed review. As a result of use and/or evaluation a plan is developed for the next increment. The plan addresses the modification to the core product to better meet the needs of the customer and delivery of additional features and functionality. Software is constructed in a step-by-step manner. While a software product is being developed, each step adds to what has already been completed.

Steps	
Incremental -1 –core product	Student information System
Incremental -2	School administration Module
Incremental -3	H.R module



Fiq: step in process

Advantages of Incremental Model

- System is developed and delivered in increments after establishing an overall architecture.
- Requirements and specifications for each increment may be developed.
- Users may experiment with delivered increments while others are being developed.
- Intended to combine some of the advantages of prototyping but with a more manageable process and better system structure.

- Incremental development is especially useful when staffing us unavailable for a complete implementation by the business deadline.
- Early increments can be implemented with fewer people

Process Decomposition:

Processes	Sub-Processes
Gathering User Requirements	
Analysis the requirements	
Make UML'S Diagrams	➢ Activity ➢ Sequence Diagrams ➢ Class Diagrams ➢ Entity relationship Diagrams
Dividing the system in modules	
Make Prototypes	
Start Coding the Student Information Module.	➢ Make Store Procedures ➢ Make Classes in C # ➢ Connect the Classes with forms. ➢ Start Unit Testing. ➢ Make correction of error find in Testing
Start Coding the School Administrative Module	
Start Coding the Human Resource Module.	
Start Coding the Fee Module.	
Start Integration Testing	
Correct Errors found in integration Testing	
Do Black Box Testing	
Do Validation Testing	
Implementation of Software by beta version	
List errors or improvement areas Do improvement on key areas	
Release Alpha Version &Give Support	

Cost estimation:

COST	
Practitioner cost	5000 * 2 = 10,000
Utility Bills	5000
Computer Cost	10,000
Total	***15,000***

Time Estimation

MODULES	TIME PER MODULE
Student Information Module	30 days
School Administration Module	30 days
H.R module	40 days
Fee Module	40 days
TOTAL TIME	4.6 months

THE W5HH PRINCIPLE

Q) Why is the system being developed?

The system is being developed to give the user to manage the school efficiently. Track the income by the business. Give timely information to the higher management and staff so necessary action will be taken.

Q) What will be done, by when?

Project Plan				
NO.	***Phases***	***Start date***	***End Date***	***Dependencies***
1	Gather requirements	10 Oct 2011	17th Oct 2011	
2	Analysis of the system	18th Oct 2011	30th Oct 2011	1
3	Make diagrams	1st Nov 2011	20 Nov 2011	2
4	Make prototypes	21st Nov 2011	27th Nov 2011	3
5	Approve the prototypes from the customer	28th Nov 2011	29th Nov 2011	4
6	Coding of Student module	30th Nov 2011	10th Dec 2011	5
7	Approve Student module	11th Dec 2011	11th Dec 2011	6
8	Coding of School management module	11th Dec 2011	19th Dec 2011	3,6
9	Approve of School management module	20th Dec 2011	20th Dec 2011	7
10	Coding of HR module	1st Jan 2012	10th Jan 2012	3,7,8
11	Approve of HR module	11th Jan 2012	11th Jan 2012	10
12	Coding of Fee module	12th Jan 2012	30th Jan 2012	3,7,8,11
13	Approve of	1st Feb	1st Feb	12

	Fee module	2012	2012	
14	Testing and Implementation	2nd Feb 2012	20th Feb 2012	13
15	Support	21th Feb 2012	20th March 2012	14

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Q) Who is responsible for a function?

All the technical jobs will be done by *Hassam Ahmed* and all the managerial job is done by *Hifza Nisar*

Q) Where they are organizationally located?

- Customer must provide the required information

Users must Give response and feedback on the work delivered by the company

Q) How will the job be done technically and managerially?

Role	Responsibilities
Hifza Nisar	Analysis phase UML diagrams Front End ERD Q.A
Hassam Ahmed	Technical job Store procedures Coding Implementation Testing Support

Q) How much of each resource is needed?

Resources	
Hardware Resources	Intel Core 2 Duo, 2.6 GHz Processors, 120gb H.D.D, 2gb Ram.

Operating System	Windows XP (Service Pack 3 or Service Pack 2) Windows Vista Windows 7
Software Resources	Ms. Visual studio Ms. Visio Ms. SQL Server Ms. Word

Resources:

There are three types of resources that we will use in our project:

Human Resource:

Role	**Responsibilities**
Hifza Nisar	Analysis phase UML diagrams Front End ERD Q.A
Hassam Ahmed	Technical job Store procedures Coding Implementation Testing Support

Reusable Software Resources

Off-the-shelf components will be used in the project .the two software will be used that are as fallow

Dev Express: this software will help in making the forms .the tools are up to date and make the work more efficient.

Enterprise library 3.1: The Microsoft Enterprise Library is a collection of reusable software components (application blocks) designed to assist software developers with common enterprise development cross-cutting concerns (such as logging, validation, data access, exception handling, and many others).

Application blocks are a type of guidance; they are provided as source code, test cases, and documentation that can be used "as is," extended, or modified by developers to use on complex, enterprise-level line-of-business development projects

Environmental Resources:

In our project we need different software's and hardware's to make better and efficient product.

Hardware Resources: Intel Core 2 Duo, 2.6 GHz Processors, 120gb H.D.D, 2gb Ram.

Software Resources: we need, Ms. Visio for mapping the analysis phase, Ms. SQL Server for generating Database, Ms. Visual studio for Coding, , Ms. Word for writing the report.

DESCRIPTION OF THE SYSTEM

The project is titled "SCHOOL Data Management System". This package once developed will help the school/institute to manage various details pertaining to its students. This will help accounts department in maintaining the details related to the fees & basic details like their security deposits, conveyance and etc, it will also help management or we can say administration department in maintaining students basic details as well as keeping a check on fees details. This package is basically developed for the authorities of the school/institute to make their task easier or we can say this package automate their tasks like maintaining students personal details, marinating cash details, printing of receipts. This package helps the administrative & accounts department in maintaining the students personal & fees related details.

The details of the system are as follows:

It is basically a Database management package for the authorities of the school/institute like management, accounts & administrative department. All the details of the students & the daily work of various departments are managed by the package i.e. Personal details, Cash details, Fees status, printing of receipts etc. The package is by the name of School/institute Data Management Package. Package helps the various departments in maintaining & manipulating the data. School/institute data are divided into Personal information, Cash details, fee status & etc it helps in manipulating the divided parts of the data.

Modules of the system:

- Personal Information / Student details
- Fees Details
- Fees Status
- Report Generation

Personal Information / Student details:

This module helps in managing the personal information of the students like their Name, Address, Phone no., Roll no & etc. The package helps in adding the personal records, editing the records, retrieval of records, report generation & etc.

Fees Details:

This module helps in managing the fees details of the student like their tuition fees, security, late fees & etc. The basic purpose behind the development of this module is printing of receipts of the fees paid by the students.

Fee Status:

This module helps in managing the fees records of the students like how many have paid their fees & how many are yet to pay their fees & what is the receipt no. of the student who have paid their fees. Basically this module generates the list of all the students who have paid their fees & it also generates a list for those students who haven't paid their fees.

Report Generation:

This module is basically all about report generation; in this package quite a few reports are generated which are embedded in the form like student details, cash details & etc.

Functions performed by the package:

This package helps in managing the student information like their Name, Roll no. annual charges or we can say personal details, it also manages their fees details, receipt generation & etc. The package helps in adding the official records, editing the records, retrieval of records, report generation & etc.

- Security:
  The package provides security by the help of Username & Password, the package has been designed to be used on a stand-alone system & by specific user hence there was no need for multi-user approach.

- Maintenance & Manipulation:
  The package helps in maintaining & manipulating information pertaining to students & daily activities of the school/institute authorities for e.g. maintaining students personal details, fee structures, maintaining cash details, fees status & etc.

- Search:
  This facility help in searching the required record from the database, package has the provision of searching of the record through admission no. which is Primary Key & through the name & class of the student.

- Help:
  This facility provides for help for the usage of the system. It provides help to the novice regarding the usage of the package.

The School/institute Data management Package provides the user of the System with a window like interface. The Front end of the package is developed in VB i.e. Visual Basics, Back end is made in MS Access.

NEED OF THE SYSTEM

The Package is developed to help the department maintaining the student details, earlier the records where maintained manually, with the help of this package the concerned departments will be able to improve the productivity, reduce the time, cost factors associated with the system. The automation of the system will help the organization in proper maintenance of the record, less manpower, less man- days, less cost, proper & accurate functioning.

The basic need for the package was to automate the whole procedure of maintaining of student details, earlier it was all done manually. By developing this package lot of burden was removed from the department, which was maintaining students details. It improved the efficiency, reduced the cost, and reduced the time need to do the work manually. With the help of this package the past details of the students can assessed and reports can be generated on this details.

In brief we can say this system was required to automate the processing of students details, which was done manually before the development of the package. Earlier all the information / data pertaining to the students was maintained manually or we can say it was on paper, hence it created a problem for the organization/ school, how to manage it properly. With the help of this system the organization/school is able to maintain the data properly & accurately.

Why System was build…?

- Earlier, data pertaining to students was maintained manually.
- Manual system was not efficient.
- Cost of maintaining data manually was bigger or huge.
- Large manpower was required.
- The procedure was error prone, it was not accurate.
- Manual system was not suited for electronic exchange of data.

Solution…?

The solution for all this problem was to automate the system, automation of the students data maintenance would reduce the manpower, man days will result in accurate data & above all increase the efficiency of the concerned department.

FEASIBILITY STUDY

Feasibility is the test of the system it helps in deciding whether it is viable to go through the project or not. Feasibility study studies the system & tells whether to develop the system or not. In lay mans terms it can be described as the test of the system & if the system passes in the test then it is viable to develop the project otherwise not or we can say feasibility study check's whether project is feasible or not.

Feasibility has four solid dimensions:

1. Technology
2. Finance
3. Time
4. Resources

The feasibility of the system " SCHOOL Data Management System " is viewed with the help of these four dimensions.

Technology:
This system uses one of the simplest technologies in use, for the development purpose it uses simple to use & easily available technology. This system is based on windows like interface, which is very easy to use. The package is been developed for the department, which is not very familiar with software hence technology used, must be easily understandable, because of which windows like interface has been chosen. The technology used in this project is VB i.e. Visual Basics 6.0, M S Access & DAO controls. Visual Basic helps in providing windows like environment. This system uses menu-based approach in which every thing is given with the help of menus.

Finance:
This dimension measures the system in respect to money or we can say funds. This dimension checks whether its viable to spend the required amount on the system or it will be a waste. There is no problem of finance in this project because it uses simple technology, which is very easy to install. This system is been developed for a standalone computer hence for this system hardware requirement is very low. For this system to be developed & installed properly we require very easily available technologies & very basic hardware and all these requirements doesn't cost much.

Time:
This particular dimension measures the systems worth in respect to time, which is one of the most important factors to be considered. In this project time factor is very important this system is

scheduled to be installed in one months time. This system is not very big & hence can be completed within the time period it requires approx. 30 man-days of work. Time is a crucial factor to be considered & we can say this system can be developed within the required time period.

Resources:
This dimension takes into count the recourses required to develop the system. For this particular system the resources required are quite nominal which can be fulfilled, the resources required for this system are basic hardware, an operating which is compatible with VB.

With the help of all these dimension we can measure the feasibility of the system & can decide whether to go forward with the project or not. By take in count the dimension & their role in this particular system we can say this system is feasible from all these dimension point of view & it is viable to go through the project.

SCOPE OF THE SYSTEM

Scope of the system measures the scope of the project, which is going to be developed. Answering following aspects can answer the project scope:

1. Context
2. Information objective
3. Function & Performance
4. Interfaces

The system "SCHOOL data management system" is a data management of students. All the details of the students are managed with the help of this package i.e. their Personal information, fees information & their report generation, with the help of this package the organization can maintain & manipulate students data. This package has the provision for adding new records, editing old records, viewing the database, searching facility, report generation, help i.e. how to use the package & etc. Scope of the system can be measured with the help of the dimensions.

Context:
This project is related to management of students data and the daily activities of the authorities with the help of this package the user of this package, which is the department i.e. administrative will be able to maintain the data through the computer which will help in increasing he efficiency, accuracy of the department as well as help in electronic inter change of the data. Administrative department can use this package to check for the details of the students, whether they have paid their fees amount or whether it is due to them, through which receipt no. it was paid they can study the past records analyze the trends.

Information objective:
Basically this is related to the Inputs & Outputs to the system. In other way we can say it is related to the inputs required by the system & outputs generated by the system.

This package is basically data management package, in which the inputs given by the user is itself the output of system it performs few calculation like the total cash received from the students. We can say it is data management package, it provides the user with front end which is very easy to use.

1. Inputs:
   The input to the system is username & password for the system security, their Personal details like Name, Address, Phone number, admission details, roll no for data management, their fees details like admission fees, tuition, computer fee & etc .

2. Outputs:
   The output for this system is the maintained records, personal details, fees details, fee status & report generated. The outputs of the system are the records that were added in the database as well as the reports that are generated with the help of he data in the database.

Function & Performance:
This dimension measures the scope of the system with the help of functions & performance of the system. The basic function performed by the system is of data management & report generation.

The system performs various functions like:

1. Security:
   The first function of the system is to provide security from unauthorized access to the data, which is provided with the help of user name & password at the beginning of the package. This system is been developed for a single user hence no rights are employed or we can say administrator is only the user.

2. Data maintenance:
   The most important function of the system is to maintain student data, the data is maintained with the help of different menus like adding, editing, viewing, searching & etc. There are different kinds of data in the system like personal information, fees information & cash details with the help of the front end data is managed.

3. Report generation:
   The last function of the system is to generate reports of the data like student details report, cash report, fee status report & etc. With the help of this report the data can be electronically exchanged as well as the reviewing of policies can be done with the help of reports.

   These are some of the basic function performed by the system “Student Data Management”.

Interfaces:
Interfaces are the link between the user and the system, basically we can say interfaces are the objects through which user of the system interacts with the system. This system has different interfaces through which user interacts with the system they are:

1. Login interface:
   This is the first interface in which user is required to enter the username & password if the password is correct then access is granted otherwise not. User has got three attempts to enter the correct password; if he is not able to enter the correct password in three attempts then the system is exited.

2. Data maintenance:

This is the most important interface in the system in which the user interacts with the system to store the data or to retrieve the data from the database, this interface has got many sub parts like addition of records, editing of records, searching of records & etc.

3. Reports:
   This interface is the output for the system in which the user receives the results or output, which is required in the form of reports like cash details, student details & fee status.

OBJECTIVE

The following are the main objectives of the project titled "Student data management ":

The package provides the means of security, which makes sure that only the concerned modules and screens are accessible to the particular department after verifying one's validity and all other modules and screens remains disable. The package is meant to maintain and provide complete details about students such as personal details, their fees details and cash details.

The basic objective of the system is to manage the student's data efficiently & accurately. It provides the user of the system with personal details of the students their name, address, phone & etc, it provides the user with fees as well as cash details of the students, how much they have paid, what is the status of the fees i.e. how many have paid fees & how many are yet to pay the fees. It also provides the user with details of cash like conveyance details.

" Student data management " package is a Management & Information project, which has these objectives:

Student data management will be highly user friendly, management information system that will not help only Accounts, Management & Administrative system to gather, communicate, computerize but also help to act on critical information much faster and in a better manner. The solution envisages linking of different departments to streamline the flow of data and timely availability of information at both the ends. Further, it also aids in generating, maintaining user definable Queries, Reports. Salient Features of the application will be as defines below:

1. Owner of data to be the owner of the database

2. Capture of information at the source of generation

3. Sharing of data
4. Minimizing duplicate work
5. Reducing inconsistency by eliminating multiple databases of the same data
6. Consolidation of data at all levels

Outlined objectives of the system:

User friendliness:
The package developed is easy to learn and understand. Even a new user can use the system effectively, without any difficulty. The help and user manuals are provided to solve the further queries of the users. With the help of the user manuals the user can get the full details of the functionality of the system.

User satisfaction:
The package is such that it stands up to the users expectations. The system is successful in generating the reports of the task status and details of the student. The package is currently being successfully run in the organization.

Response time:
The response time for all the operations is less. All the report generations and the listing tasks are performed in significant time. The queries used are so as to reduce the execution time of query processing.

Error handling:
Responses to users errors and undesired situation have been taken care of to ensure that the system operates without halting. Proper error handling codes are put with the codes.

Security and robustness:
The package is able to avoid or tackle disastrous action. It allows only the authentic user to access the software as it is protected by the user name and the password. All the administrative tasks are allowed to the project leader only so the illegal intervention is not possible.

Modularity:
The package has relatively independent and single function parts that are put together to make complete system. Thus as a result of this modular approach the system, in spite of being robust is not cumbersome. It also contributes for the fast execution of the system.

Maintainability:
The system is able to decrease the time and effort for program maintenance. The full details of the projects being undertaken, and the task status corresponding to each student is stored carefully and the reports are generated as per the requirement.

Timeliness:
The package is able to operate well under normal peak and recovery conditions.

OPERATING ENVIORNMENT

The system is developed in Visual Basics 6.0 / M S Access and run under windows 95/98 & upper versions.

Visual Basics: Visual basics is event driven programming language, which is used to develop front end for the application. This is called event driven because every action of the user is an event & the application is driven with the help of these events, which are programmed with the help of Visual basics. In Visual basics there are forms, Controls, reports & many more things to provide the user with overwhelming experience of user friendliness. Visual basics is a programming language for windows environment & provides the user with windows like interface.

M.S. Access:
Access is a Relational Database Management System (RDBMS) that you can use to store and manipulate large amounts of information. Because its tools are user-friendly and because it is a powerful development environment, Access is equally appropriate for novices and MIS professionals.

Beginners can use Access to:

1. Store and manage various types of inventories.
2. Log information such as auto repairs for cars, doctor visits, etc.
3. Create contact management databases that can track contacts, but phone calls, meetings, and any other interactions with contacts.

Developers can use Access to:

1. Create applications that manage survey results.
2. Manage front ends for enterprise-wide database such as SQL server.
3. Establish help-desk applications.

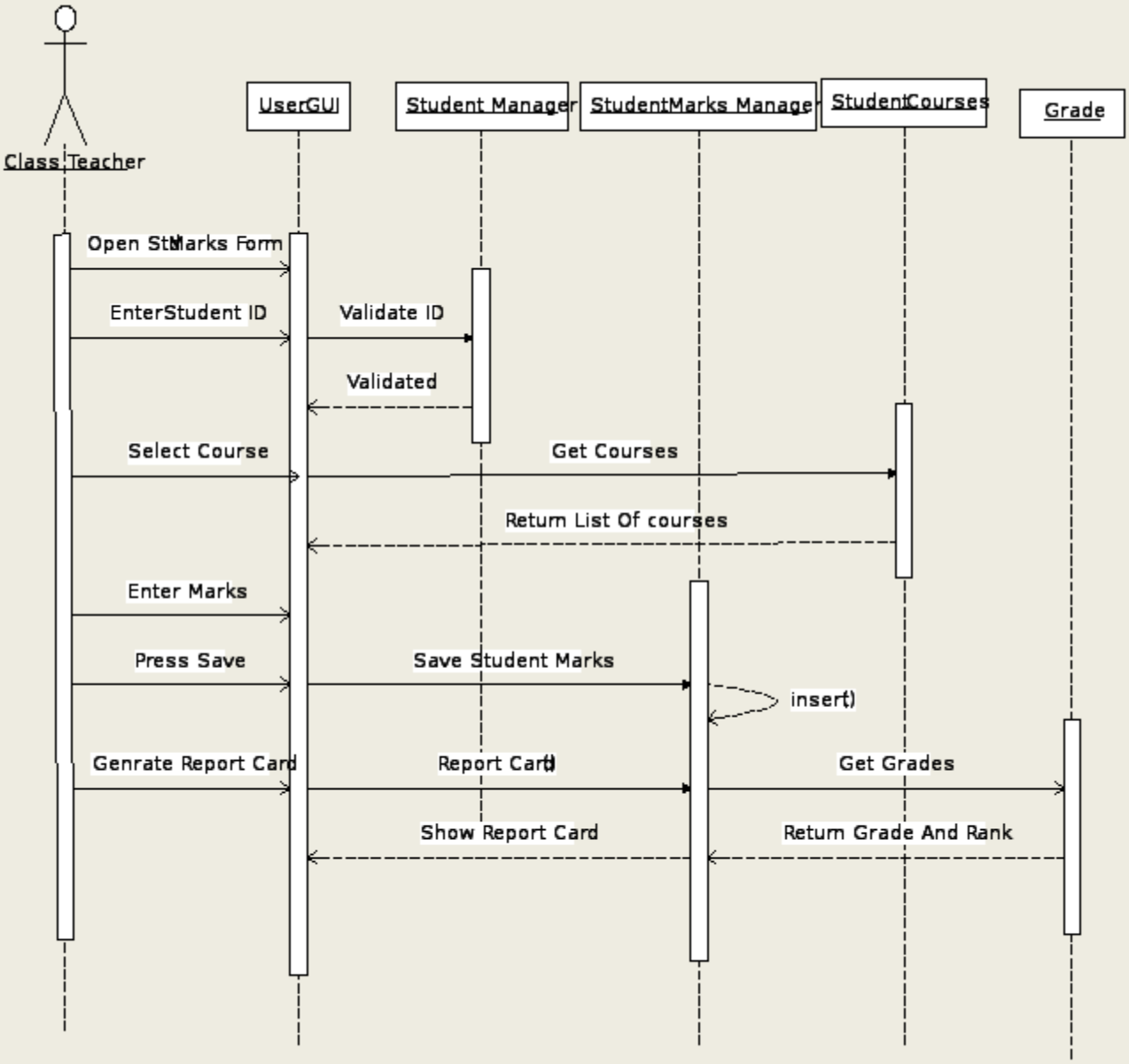
Access is an object-oriented program; that is, everything in Access is an object, including the application itself. Each object has properties that define how it looks and performs.
The uses of Access are limited only by the needs of an organization and the imagination of the user or developer.

Diagrams

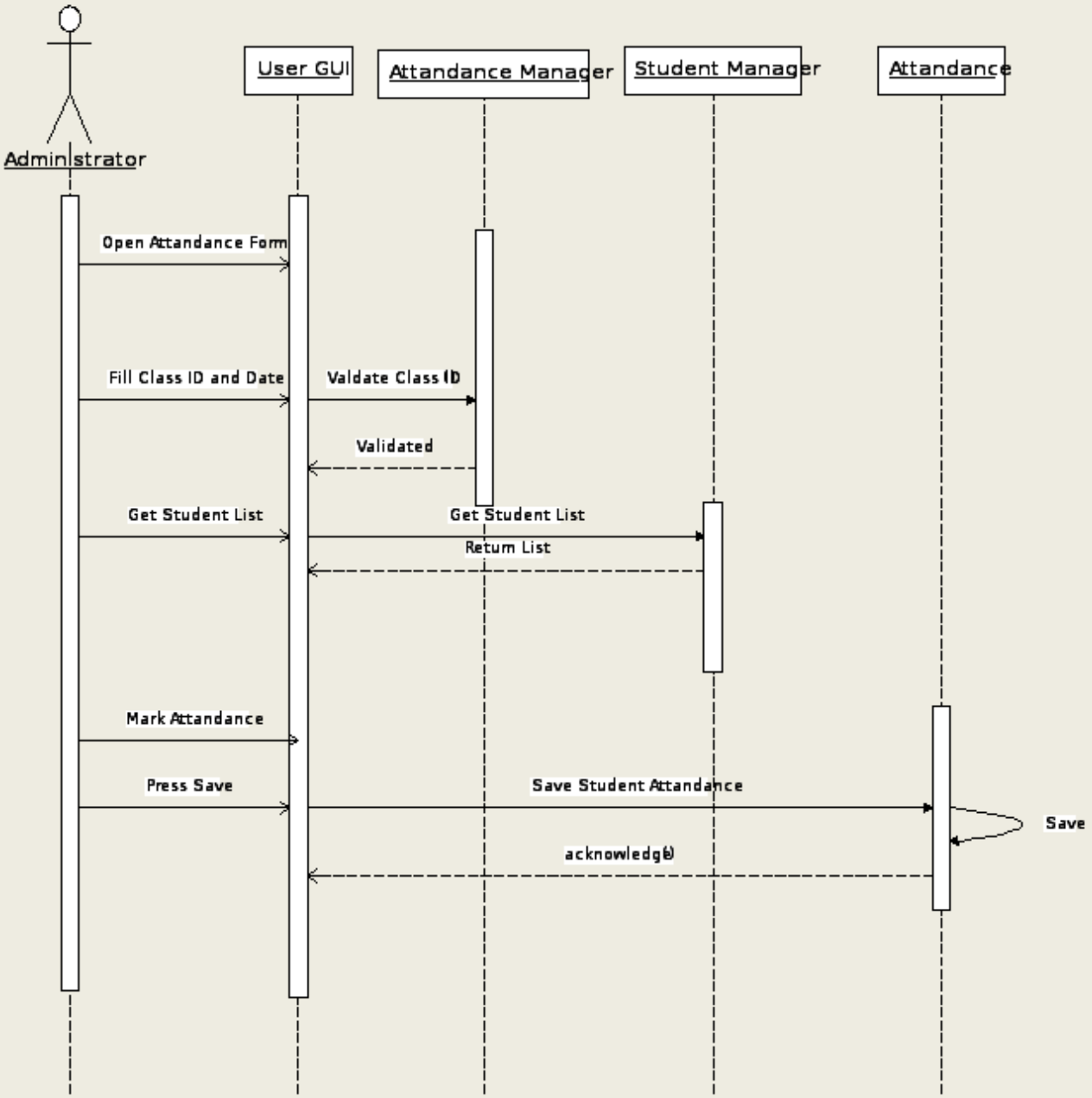
Use Case Diagram

Sequence Diagram

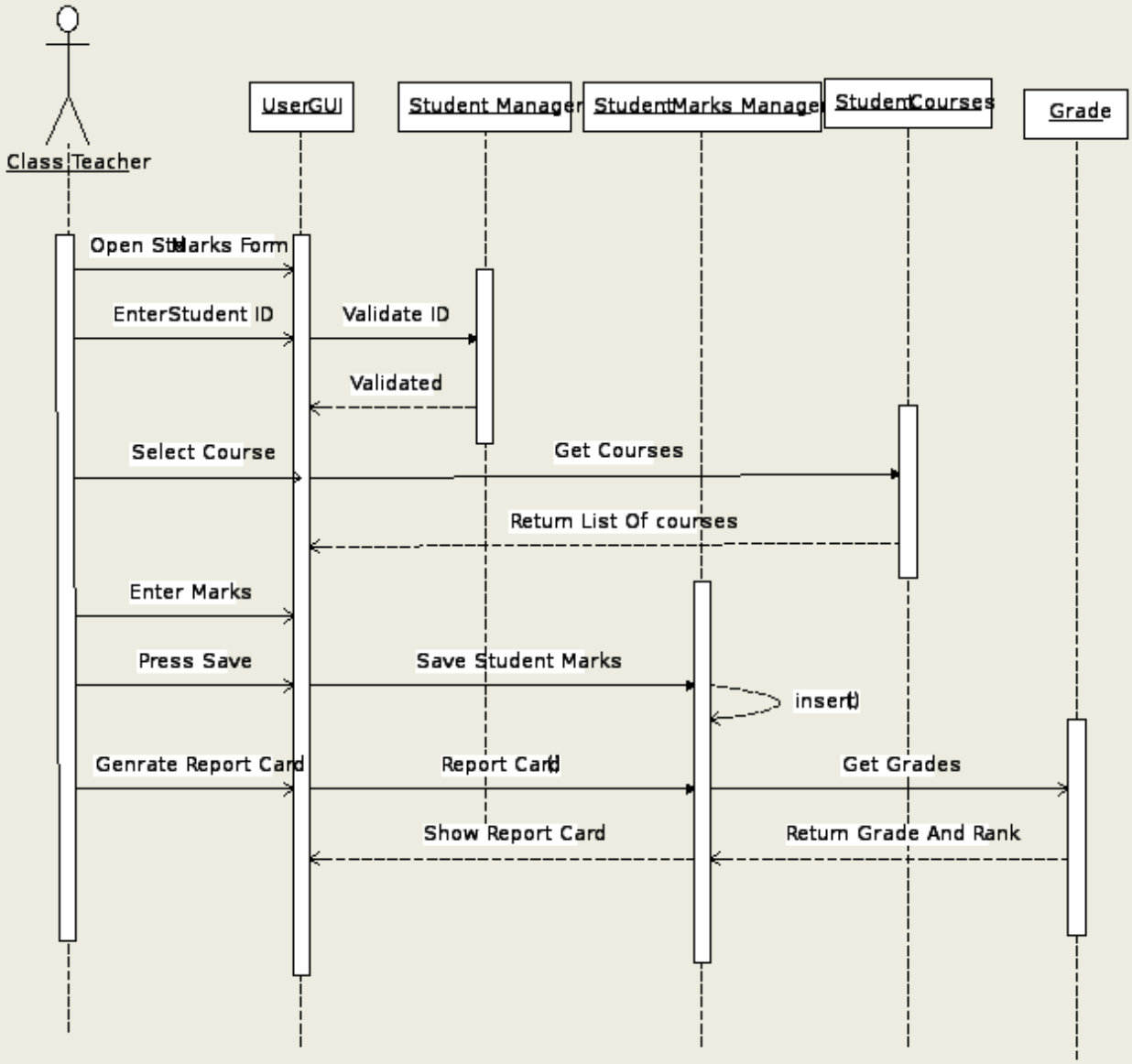
Registration Sequence Diagram



Attendance Sequence Diagram

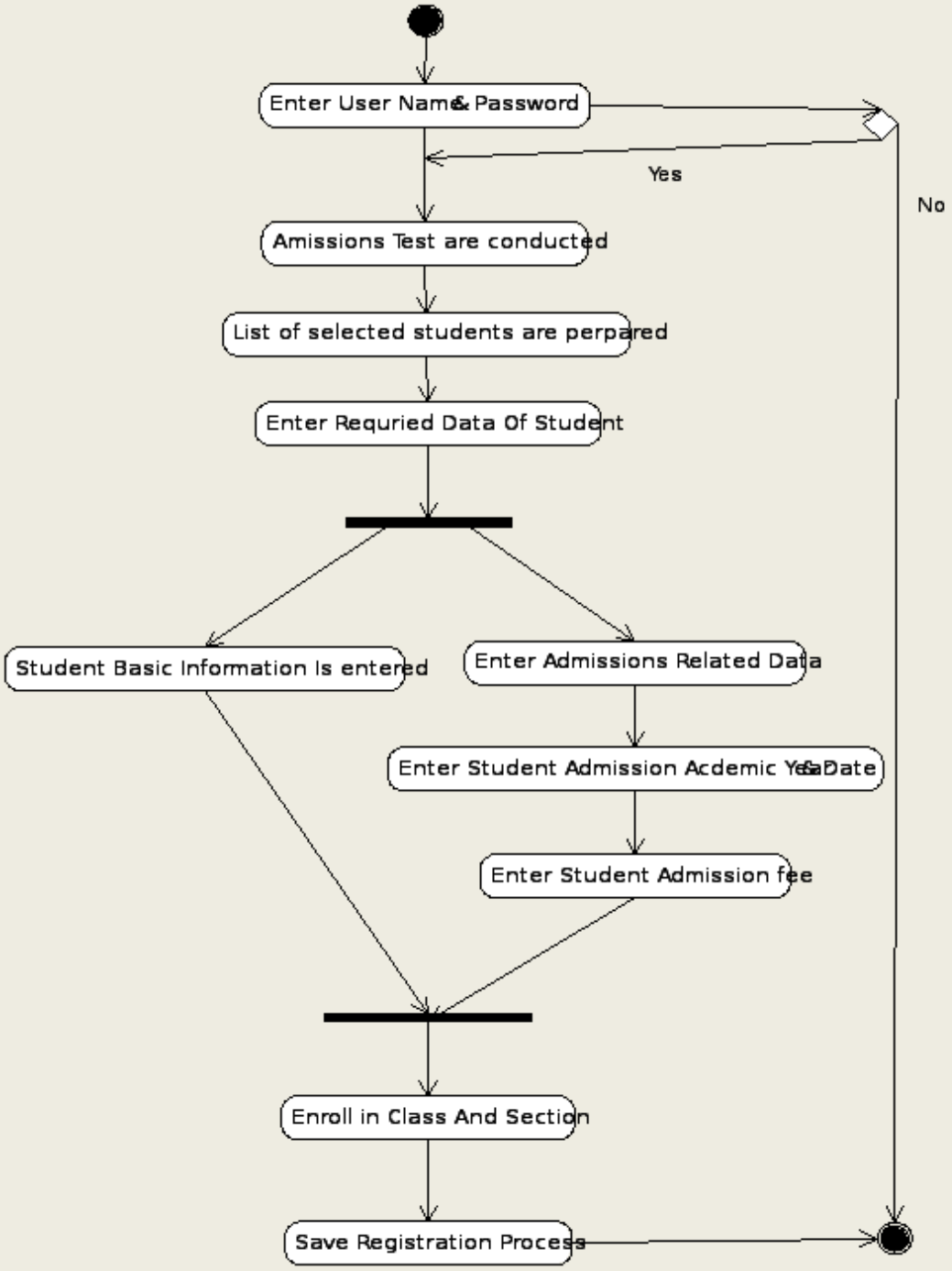

Administrator
User GUI
Attandance Manager
Student Manager
Attandance
Open Attandance Form
Fill Class ID and Date
Validate Class ID
Validated
Get Student List
Get Student List
Return List
Mark Attandance
Press Save
Save Student Attandance
Save
acknowledge

Examination Sequence diagram:

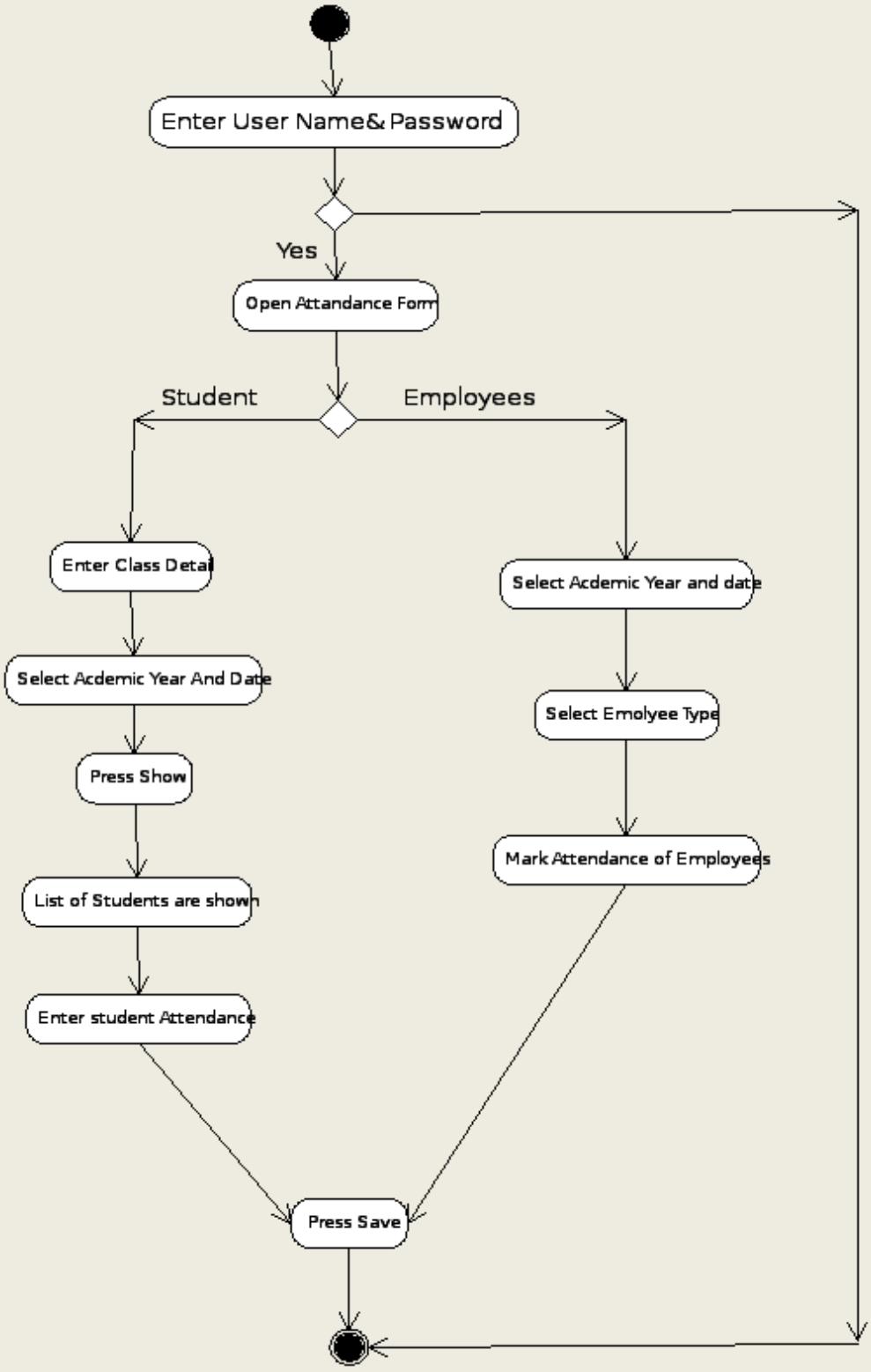


Activity Diagram

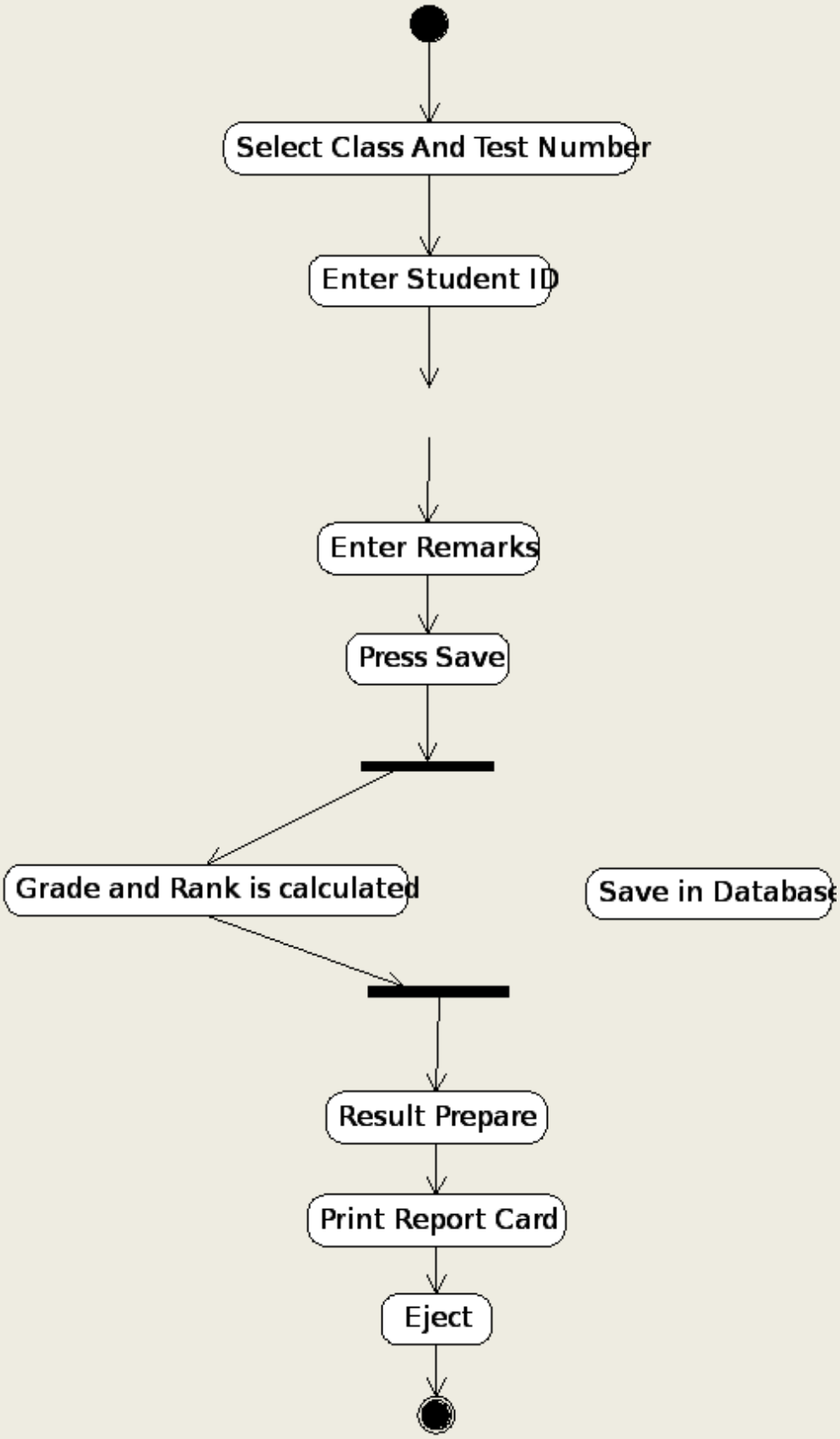
Registration Activity Diagram


Enter User Name& Password
Yes
No
Amissions Test are conducted
List of selected students are perpared
Enter Requried Data Of Student
Student Basic Information Is entered
Enter Admissions Related Data
Enter Student Admission Acdemic Yea&Date
Enter Student Admission fee
Enroll in Class And Section
Save Registration Process

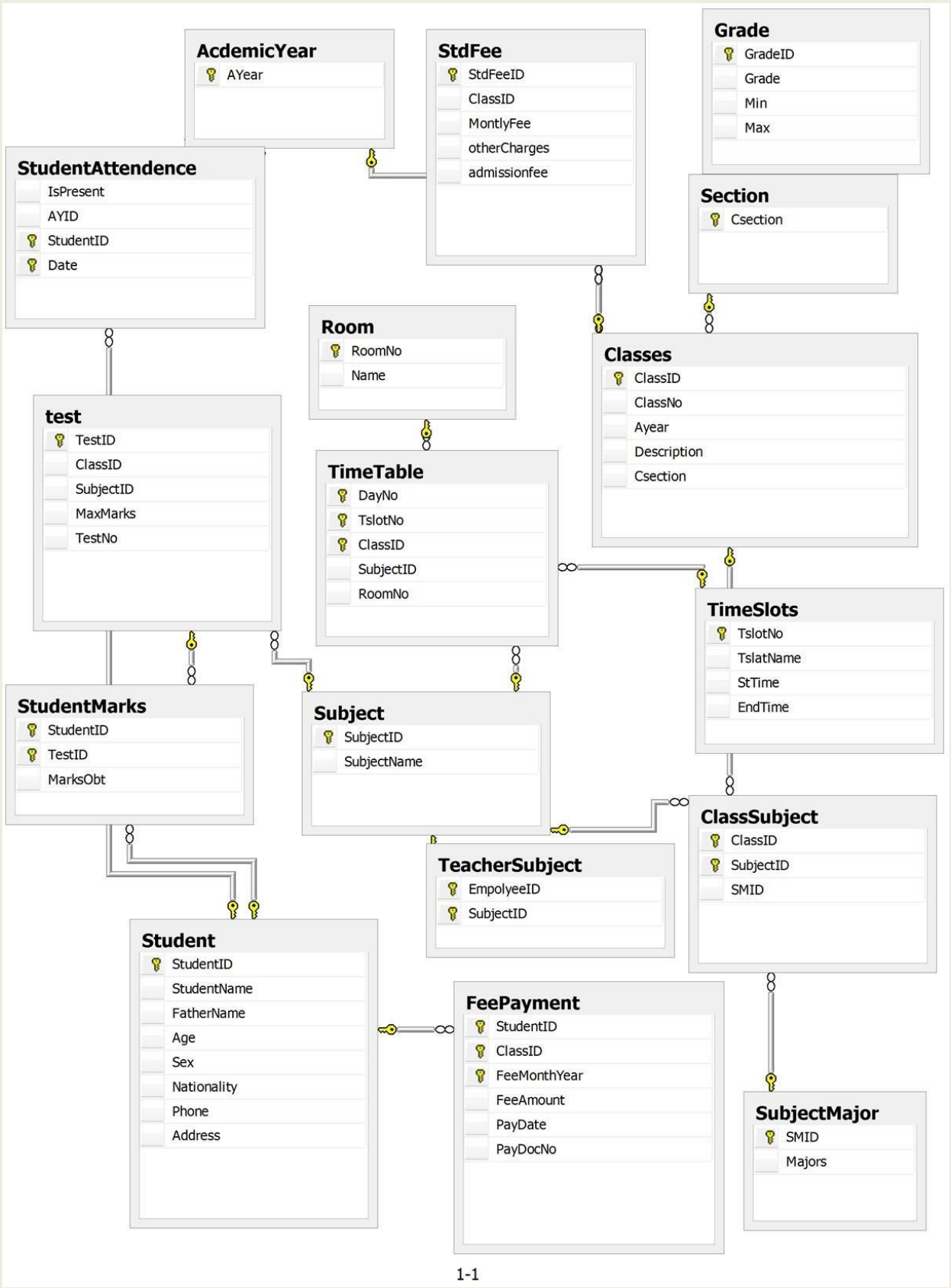
Attendance Activity Diagram:

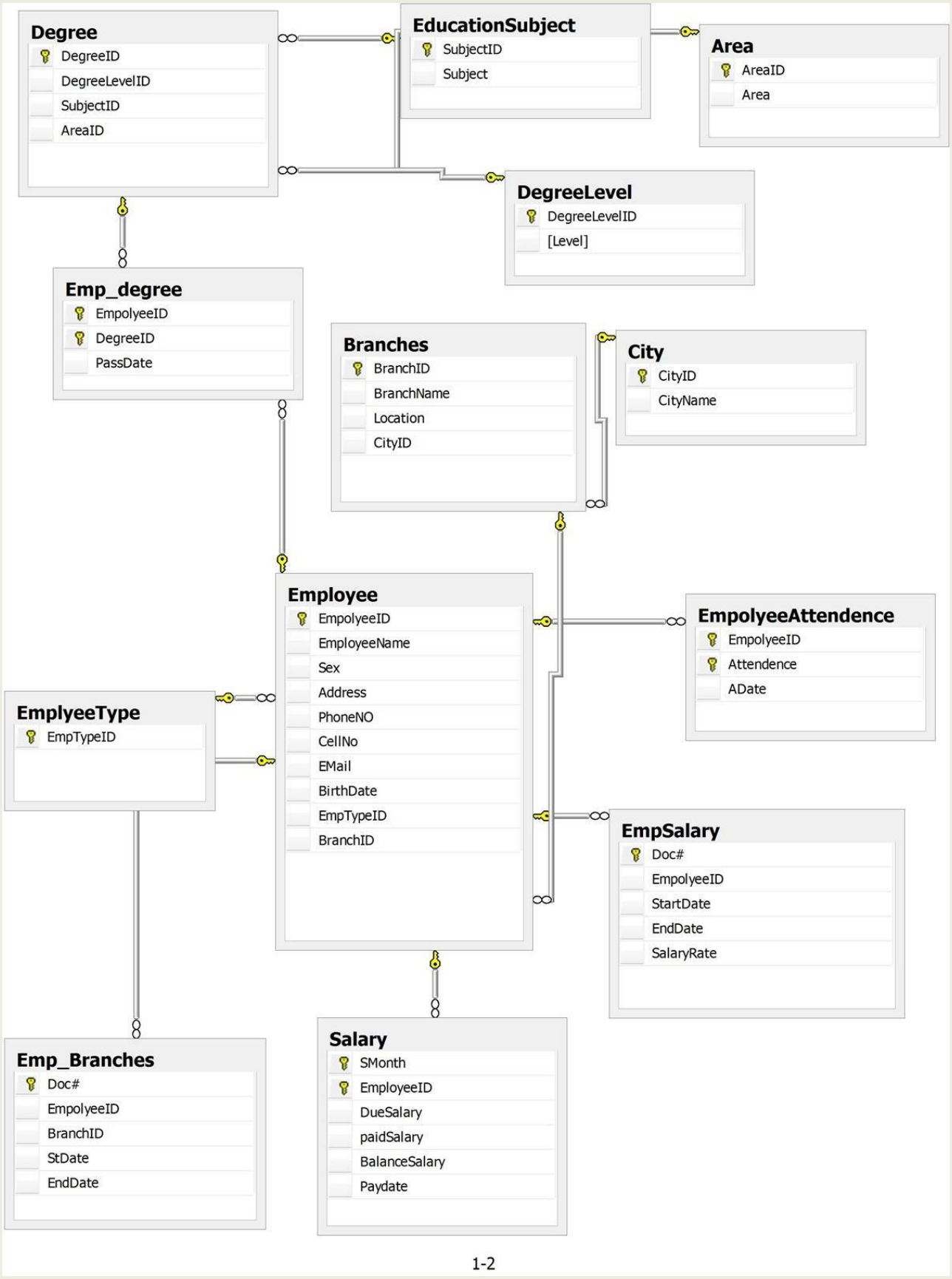

Enter User Name& Password
Yes
Open Attandance Form
Student
Employees
Enter Class Detail
Select Academic Year And Date
Press Show
List of Students are shown
Enter student Attendance
Select Academic Year and date
Select Emolyee Type
Mark Attendance of Employees
Press Save

Examination Activity diagrams:



Entity Relationship Diagram




Degree
DegreeID
DegreeLevelID
SubjectID
AreaID
EducationSubject
SubjectID
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Area
AreaID
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DegreeLevel
DegreeLevelID
[Level]
Emp_degree
EmpolyeeID
DegreeID
PassDate
Branches
BranchID
BranchName
Location
CityID
City
CityID
CityName
Employee
EmpolyeeID
EmployeeName
Sex
Address
PhoneNO
CellNo
EMail
BirthDate
EmpTypeID
BranchID
EmpolyeeAttendence
EmpolyeeID
Attendence
ADate
EmplyeeType
EmpTypeID
EmpSalary
Doc#
EmpolyeeID
StartDate
EndDate
SalaryRate
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SMonth
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DueSalary
paidSalary
BalanceSalary
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Emp_Branches
Doc#
EmpolyeeID
BranchID
StDate
EndDate

1-2

software quality plan

The software quality plan we will use the following SQA Strategy:

1) In the first step, we will select the test factors and rank them. The selected test factors such as reliability, maintainability, portability or etc, will be placed in the matrix according to their ranks.

2) The second step is for identifying the phases of the development process. The phase should be recorded in the matrix.

3) The third step is that identifying the business risks of the software deliverables. The risks will be ranked into three ranks such as high, medium and low.

4) The last step is that deciding the test phase of addressing the risks. In this step, we will decide that which risks will be placed each development phase.

Test phase Test factors	Requirements	Design	Build	Dynamic test	Integrate	Maintain
Correctness						
Performance						
Availability						
Continuity of Processin g						
Compliance						
Ease of use						
Coupling						

Ease of Operation s						
Access Control						
File Integrity						

Formal Reviews:

The SQA will ensure that the necessary revisions to the document have been made and that the document would be released by the stated date. In case there are any shortcomings then the same would be pointed to the software project management

Project testing technique

White Box Technique:

UNIT TESTING:

The primary goal of unit testing is to take the smallest piece of testable software in the application, isolate it from the remainder of the code, and determine whether it behaves exactly as you expect. Each unit is tested separately before integrating them into modules to test the interfaces between modules. Unit testing has proven its value in that a large percentage of defects are identified during its use.

Advantages:

It allows for automation of the testing process, reduces difficulties of discovering errors contained in more complex pieces of the application, and test coverage is often enhanced because attention is given to each unit.

Integration Testing:

Integration testing will execute on several modules together and need for the untested modules. However it should be avoided "big bang" integrations when we are going directly from unit tests to whole program tests. It is likely to have many big issues. In this test, it is hard to identify which component causes each. This test interaction between modules ultimately leads to end-to-end system test.

Black Box Testing:

Black box testing is a software testing techniques in which functionality of the software under test (SUT) is tested without looking at the internal code structure, implementation details and knowledge of internal paths of the software. This type of testing is based entirely on the software requirements and specifications.

In black box testing we will test the forms of the system. In this our scope is to test the following Forms:

Modules	***Forms***
Student Information Module	Student Information Form-Registration & admissions
Human Resource Module :	Employees Info- Registration
School Administration Module	Attendance Forms-Examination Forms
Reporting	Result card

VALIDATION TESTING:

Alpha and Beta Testing: In software development, your alpha test will be a test among yourselves (the teams) to confirm that your product works. Originally, the term alpha test meant the first phase of testing in a software development process. During this time you will compress files, edit for misspelled words and unclear directions

In software development, a beta test is the second phase of software testing in which a sampling of the intended audience tries the product out. Beta testing can be considered "pre-release testing. The Beat version of software is given to

users .they use the software and not the errors and areas where changes and improvements are needed. We have given the software to the employees of school and also to the teacher

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