



PROJECT REPORT

Research Title

Online Examination System

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Declaration

This project proposal is submitted to the Information & Communication Engineering, Noakhali Science & Technology University, Sonapur, Noakhali partial fulfillment of the requirements for having the B.Sc degree in ICE. This is also needed to certify that the project work is under the B.Sc course of ICE, NSTU titled "ICE-4110. So, I, here by, declare that this project proposal has not been submitted elsewhere for the requirement of any kind of degree, diploma or publication.

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Session : 2013-2014

ACCEPTANCE

This Project proposal is submitted to the Information & Communication Engineering, Noakhali Science & Technology University, Sonapur, Noakhali partial fulfillment of the requirements for having the B.Sc degree in ICE.

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Abstract

Today online examination system has become a fast growing examination method because of its speed and accuracy. Online Examination is an Internet based questionnaire .online examination system consists of facilities to examine the skills of candidate those who are coming to join in the institution/company. It is also needed less manpower to execute the examination. Almost all organizations now-a-days, are conducting their objective exams by online examination system

It also helps the environment by saving paper. It saves students time in examinations. Online examination helps students and its mission is to offer a quick and easy way to appear for the exam. Organizations can also easily check the performance of the student that they give in an examination. The online examination is designed to improve examination process among educational institutions. The system can be used to conduct varying examination questions including theory based and multiple choice formats. There are no limitations on number of options and it can be randomized. This provides time limit. The user can see their results after completing the exam. My Structured Query Language and Cascading Style Sheet, PHP, MYSQL. Data Flow Diagrams (DFDs) and E-R diagram have been developed to represent the whole system. This also makes checking the answer easy and error proof as computers are more accurate than man and provide fast results too. This project have registration system and user registration option in which name, user name, password, email id must be given. Online Examination has multiple features such as Add, Delete, Update Topics and Question. The user will automatically get the updated version by logging using the user ID and Password provided at the time of registration.

Keywords : ICT, Data Flow Diagram (DFD),PHP,MYSQL ,Online examination system.

1 INTRODUCTION

This document will propose all features and procedures to develop “Online Examination System” With the development of the Internet technology , online examination has become more and more popular since it helps people save much energy and time. With the proliferation of the internet technology, online examination system has become an effective component to traditional test in many developed countries.

Online Exam is being launched because a need for a destination that is beneficial for both institutes and students. With this site, institutes can register and host online exams. Students can give exams and view their results. This site is an attempt to remove the existing flaws in the manual system of conducting exams.

It is web based, efficient, flexible and adaptable. The answers are evaluated and the marks obtained are stored in the database while the examiner can get the results immediately from the system in various forms such as general mark list, and ranking of participants. The main features of an examination system include instructions for the participants, accessibility of examination content, valid time allocation, submission ways and result release. Online exam can improve the standards of student’s examination whereas the traditional examination system using the pen and paper requires more effort on the part of students and invigilators. In the traditional paper related examination, however, the question papers are too bulky and create a greater burden for both lecturers and students [2, 3]. [4] highlighted the challenges of Paper and Pencil Test (PPT) and Paper Based Test (PBT). The bottlenecks are the risks during transportation of the examination officials and the candidates to the examination venues, missing, delayed and manipulations of results as well as huge investment in logistics and examination materials. Moreover, the paper related examinations caused different types of errors, consumption time and other resources. Paper based transactions in the banking industries lead to fraudulent and very stressful.

In Bangladesh application of communication technology increased enormously in the recent years. The number of internet users has increased greatly in the past few years in the country, and most of the universities have good internet facilities [3]. In spite of several limitations there is evidence that eLearning component has been integrated by a university in Dhaka city with their face to face mode to give

students an environment for interaction [2]. It indicates that higher education institutes moving towards using modern technologies to meet the demand of the students and familiar them with the new technologies. These activities aligned with the revised ICT policy of Bangladesh-2009 that all universities provide international standard ICT education [1]. Online examination is a new technology which can be implemented in the context of Bangladesh to avoid risk of leakage of question papers and ensure transparency of the results. The main intention of this paper is to develop an online examination system with suitable features and lack of ambiguities.

1.1 Literature review:

Many different researches have focused on the subject of an online examination system these work can be represented as following:

1.1.1: Primitive Stage Of On Line Examination:

- The first experiment was performed in 1997 when students sat a formal supervised examination in which the examination paper and the students' answers were transmitted between the Open University and there mote examination sites using electronic means. The work on examinations and testing has focused on free-text entry style answers (Du Ploov 1992).
- The second experiment, conducted early in 1999, enabled students to take a 'mock exam' accessed via a web page as part of their revision. The experiment was designed to test out the technical feasibility of offering an unsupervised home examination. Students accessed the paper via a web site and submitted their answers in a similar way. The students keyed their answers into an ordinary word processor, the results of which were encrypted and returned via a secure web page by the invigilator at the end of the examination period (Breithaupt et al 2005, Carswell et al 1999).

1.1.2 Recent work of on online examination:

SIETTE: Guzman and Conejo (2005) proposed an online examination system called System of Intelligent Evaluation using Tests for Tele education (SIETTE). SIETTE is a Web based environment to generate and construct adaptive tests. It can be used for instructional objectives, via combining adaptive student self -assessment test questions with hints and feedback. SIETTE supports secure login and portability features. On the other hand, the other features: resumption capability, multi-instructor, random question selection, random questions distribution and random choices distribution are missing[3].

EMS : Rashad Et. Al. (2010) proposed a web-based online examination system called Exam Management System (EMS). EMS manages the examination and auto-gradingfor students exams and supports conducting exams, collects the answers, auto mark the submissions, and produce the reports for the test. EMS supports secure login,multi-instructor, and portability features. However, the other features: resumption capability, random question selection, random questions distribution, and random choices distribution are missing[4].

ArvindSingh, NirajShirke, KiranShette 2011:The project evaluates the examiners by using the online examination system concept. The exams will be totally customizable. This system will check results automatically basing on students answers.

CBTS :Fagbola et. al. (2013) developed a Computer Based Test System (CBTS). CBTS is a web-based online examination system developed to address issues such as lack of timing flexibility for automation candidates log-off upon expiration of allowed time, result integrity, guaranty, stand-alone deployment, need for flexibility, robustness, designed to support the examination processes and overcome challenges framing the conduct of examination, auto-marking, auto-submission , and generation report of examination result[3].

1.2 PROBLEM STATEMENT

Since the traditional have many drawbacks such as time consuming, Difficulty of analyzing the test manually, More observers are required to take exam of many students, Results are not accurate since calculations is done manually, The chance of losing exam's result is higher in current systems, Checking of result is time consuming since it done manually, Limitation of no of student can give examination at a time. with the development of information technology and use it in an orderly and properly helps to overcome the existing error in the manual system . Online examination system saves the exams information in a database, and this make it an easier way to give exam teachers can add theirs exams rules , and student can give exam in a totally automated system[5].

1.3 Objective of the project

Online examination is becoming more popular in this digital century. But what are the objectives of online examination system?

The objectives of this project can be expressed in two different ways:

1.3.1 General Objective:

General objectives of my project is to change the current manual system into computerized one. This project would be very useful for educational institute where regular evaluaton of students is required.

1.1.2 Specific Objective:

- Online examination project accesses student conducting online objective tests
- Responses by the candidates will be checked automatically. It reduces time consuming.
- Being an integrated online examination system reduce paper work.
- Question have multipile options, multipile answer or can be text answer.
- To allow department to create tests and answers.

1.4 Scope and limitations:

- On-line Exam system is designed for Educational Institutes (like schools, universities, training centers).
- The system handles all the operations, and generates reports as soon as the test is finish, that includes name, mark, time spent to solve the exam.
- Allow students to see or display his answers after the exam is finish.
- The type of questions is only multiple choice or true and false.
- Support multiple choices questions.
- Allow the student to prochoice the answer and to see his mark.
- Verify a security, authority and safety.

2 Research Methodology

2.1 System Requirement Specification:

(2.1.1) Functional System Requirement:

The functionality of each module is as follows:

Candidate module: The candidate will logon to the software and take his examination. He can also check his previous examinations marks and his details. The candidate will get result immediately after the completion of the examination.

Examiner module: The database is prepared & loaded into the software. Selection for examination can be done language wise by the examiner. The results will be displayed immediately after completion of the examination.

Administrator module: The administrator collects all the results after successful completion of the examination and sends to the head quarters as and when required.

The features that are available to the Administrator are:

- The administrator has the full fledged rights over the OES(online examination system).
- Can create/delete an account.
- Can view the accounts.
- Can change the password.
- Can hide any kind of features from the both of users.

- Insert/delete/edit the information of available on OES.
- Can access all the accounts of the faculty members/students.

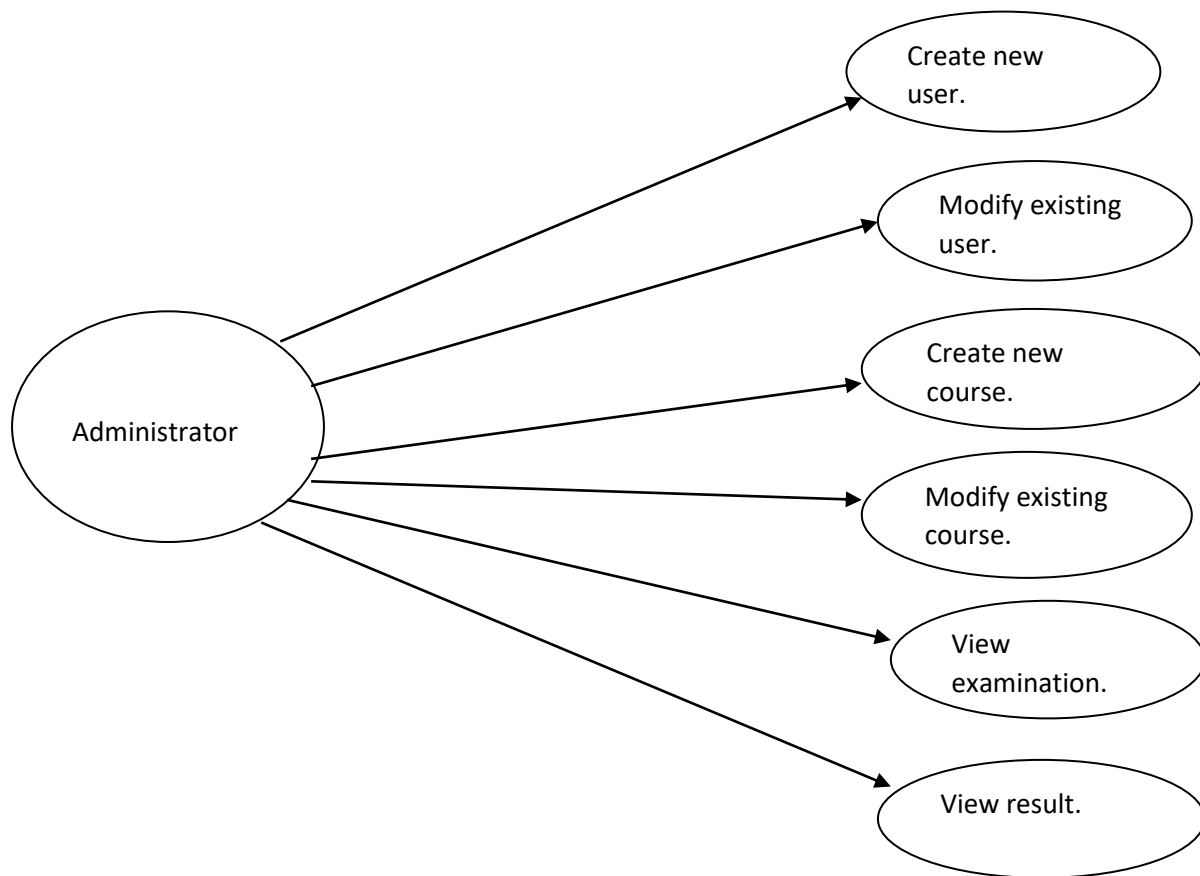


Figure: Administrator use case diagram.

The features available to the Students are:

- Can view the different categories of Test available in their account.
- Can view their marks.
- Can view the various reading material.
- Can view and modify its profile but can modify it to some limited range.

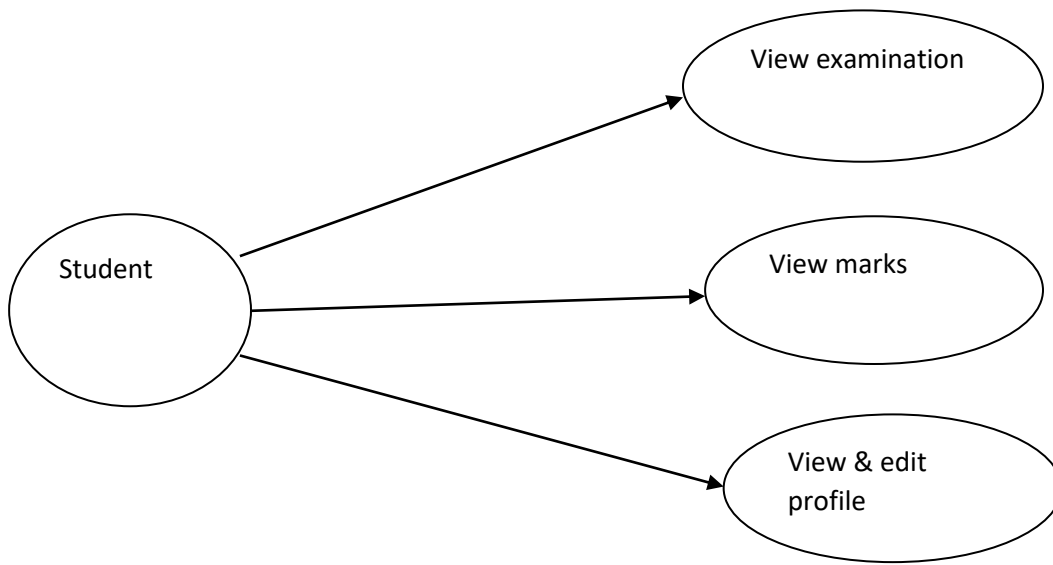


Figure: Student use case diagram.

The features available to the Examiner are:

- Can view the different categories of Test conducted by users.
- Can view their marks.
- Can view and modify Results.

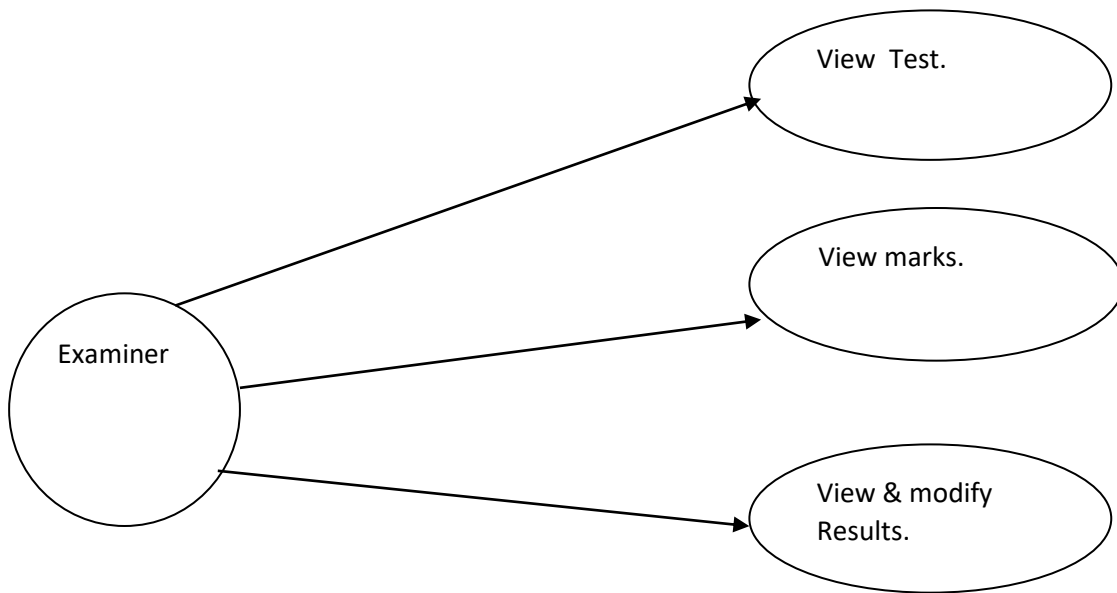


Figure: Examiner use case Diagram.

(2.1.2) Non-Functional System Requirements:

Performance Requirements

Some Performance requirements identified is listed below:

- The database shall be able to accommodate a minimum of 1,000 records of students.
- The software shall support use of multiple users at a time.
- There are no other specific performance requirements that will affect development.

Safety Requirements

The database may get crashed at any certain time due to virus or operating system failure. Therefore, it is required to take the database backup.

Software Quality Attributes

The Quality of the System is maintained in such a way so that it can be very user friendly to all the users.

The software quality attributes are assumed as under:

- Accurate and hence reliable.
- Fast speed.
- Compatibility.

System Interfaces:

This section describes how the software interfaces with other software products or users for input or output.

User Interface

Application will be accessed through a Browser Interface. The interface would be viewed best using 1024 x 768 and 800 x 600 pixels resolution setting. The software would be fully compatible with Microsoft Internet Explorer for version 6 and above. No user would be able to access any part of the application without logging on to the system

Communications Interfaces

The Customer must connect to the Internet to access the Website:

- Dialup Modem of 52 kbps
- Broadband Internet

- Dialup or Broadband Connection with a Internet Provider.

3 Project Background

3.1.1 Brief overview of the technology:

Front end: HTML, CSS, JavaScript

HTML: HTML is the standard markup language for creating Web pages. HTML stands for Hyper Text Markup Language. HTML describes the structure of Web pages using markup. HTML elements are the building blocks and tags of HTML pages. HTML elements are represented by tags. Hypertext Markup Language is the standard markup language for creating web pages and web applications. With Cascading Style Sheets and JavaScript it forms a triad of cornerstone technologies

for the World Wide Web. HTML is used to create and save web document. E.g. Notepad/Notepad++

CSS: CSS is a language that describes the style of an HTML document. CSS describes how HTML elements should be displayed. (Cascading Style Sheets) Create attractive Layout, Cascading Style Sheets (CSS) is a stylesheet language used to describe the presentation of a document written in HTML or XML (including XML dialects such as SVG or XHTML). CSS describes how elements should be rendered on screen, on paper, in speech, or on other media.

JavaScript: The JavaScript is executed by the browser's JavaScript engine, after the HTML and CSS have been assembled and put together into a web page. it is a programming language, commonly use with web browsers.

Back end: PHP, MySQL

1. **PHP:** Hypertext Preprocessor (PHP) is a technology that allows software developers to create dynamically generated web pages, in HTML, XML, or other document types, as per client request. PHP is open source software**PHP.**Hypertext Preprocessor is a widely-used open source general-purpose scripting language that is especially suited for web development and can be embedded into HTML.
2. **MySQL:** MySql is a database, widely used for accessing querying, updating, and managing data in databases. MySQL is a database system used on the web; MySQL is a database system that runs on a server; MySQL is ideal for both small and large applications.

3.1.2 Software Requirement

WAMP Server: WampServer is a Windows web development environment. It allows you to create web applications with Apache2, PHP and a MySQL database. It also comes with PHPMyAdmin and SQLiteManager to easily manage your

databases. WampServer installs automatically (installer), and its usage is very intuitive.

Sublime Text: Sublime Text is a proprietary cross-platform source code editor with a Python application programming interface (API). It natively supports many programming languages and markup languages, and functions can be added by users with plugins, typically community-built and maintained under free-software licenses.

4 SYSTEM DESIGN

Design is the abstraction of a solution; it is a general description of the solution to a problem without the details.

we are introduce context diagram, models, system architecture, principal system object, design model and object interface.

4.1Context Diagram:

This diagram represents what are the bounders and scope of Online Exam System project. It describes the main objective of the system and its entities involved.

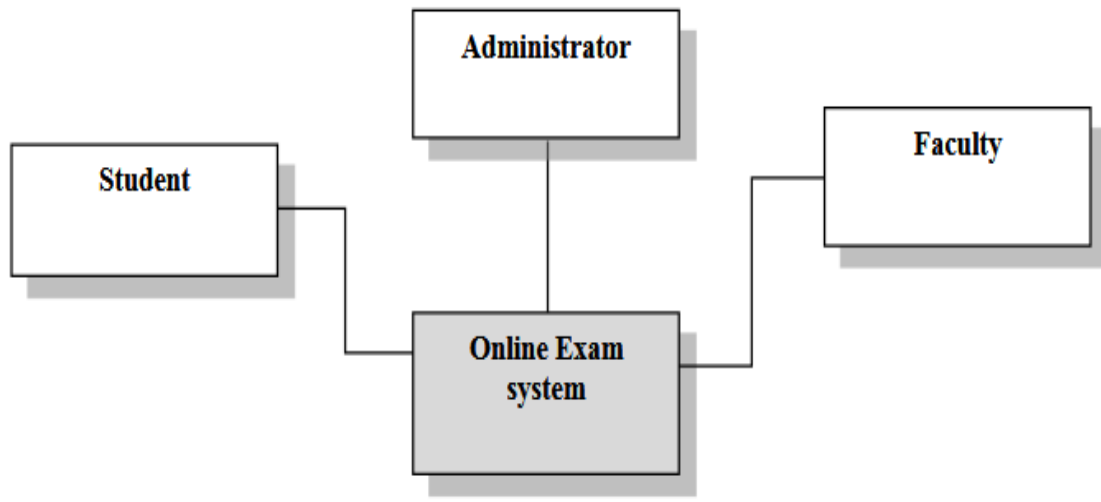


Figure :the context diagram of Online Exam System

4.2 E-R Diagram

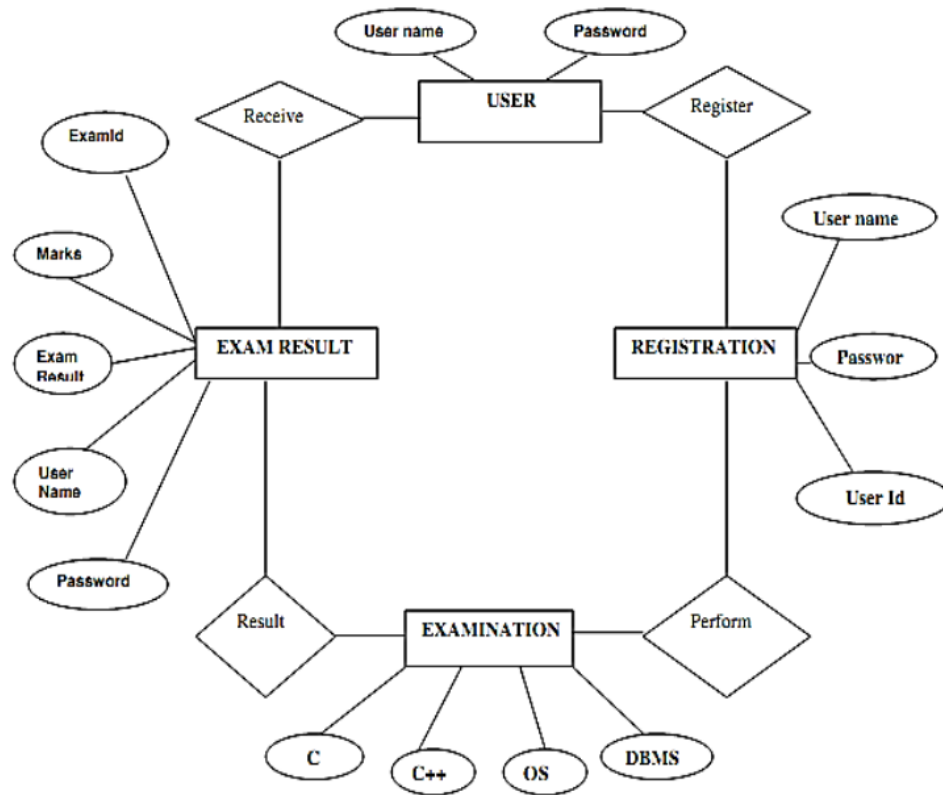


Figure: E-R diagram of online Examination.

4.3 Data flow diagram

The data flow diagram of super admin is given in Figure 1. The diagram indicates that the system attached lot of responsibilities for super admin. These include making examination test, editing tests, setting timer for examinations and time reminder, release of results, making grade list or participants' ranking list.

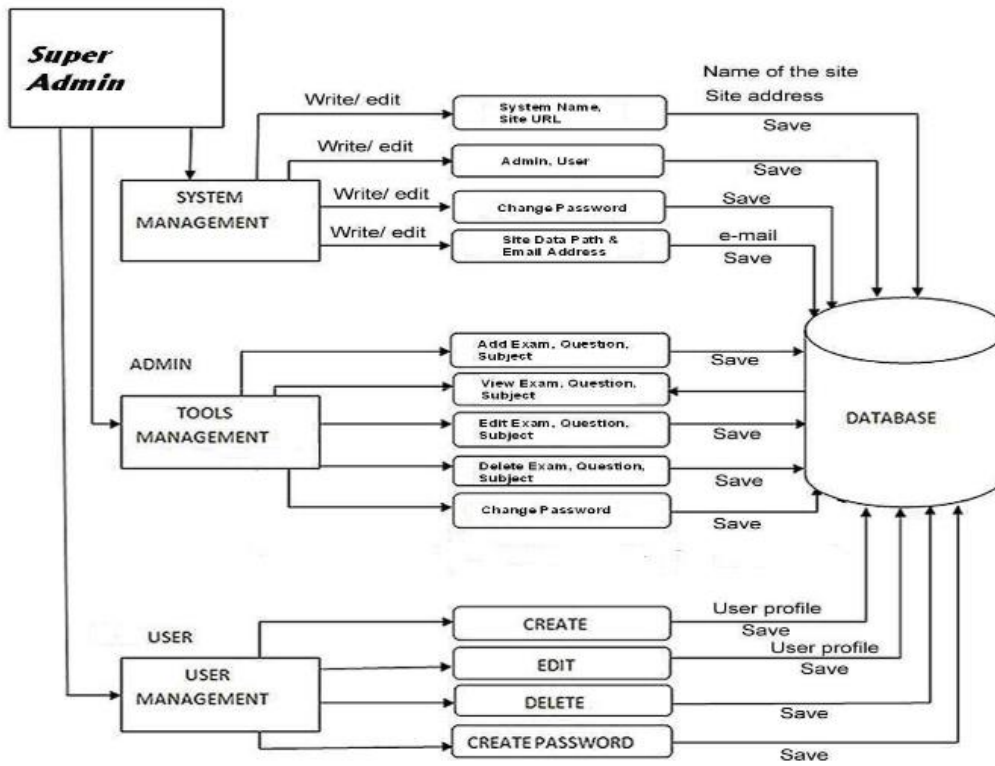
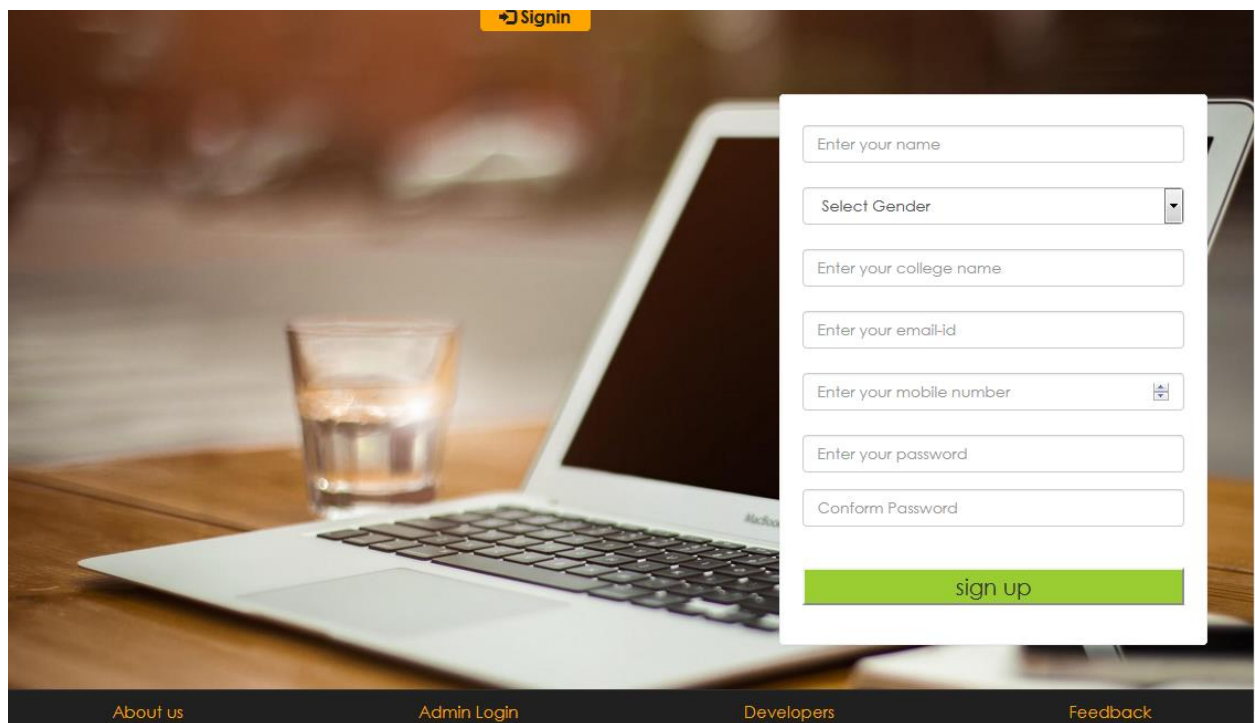


Figure:Data Flow Diagram of Super Admin

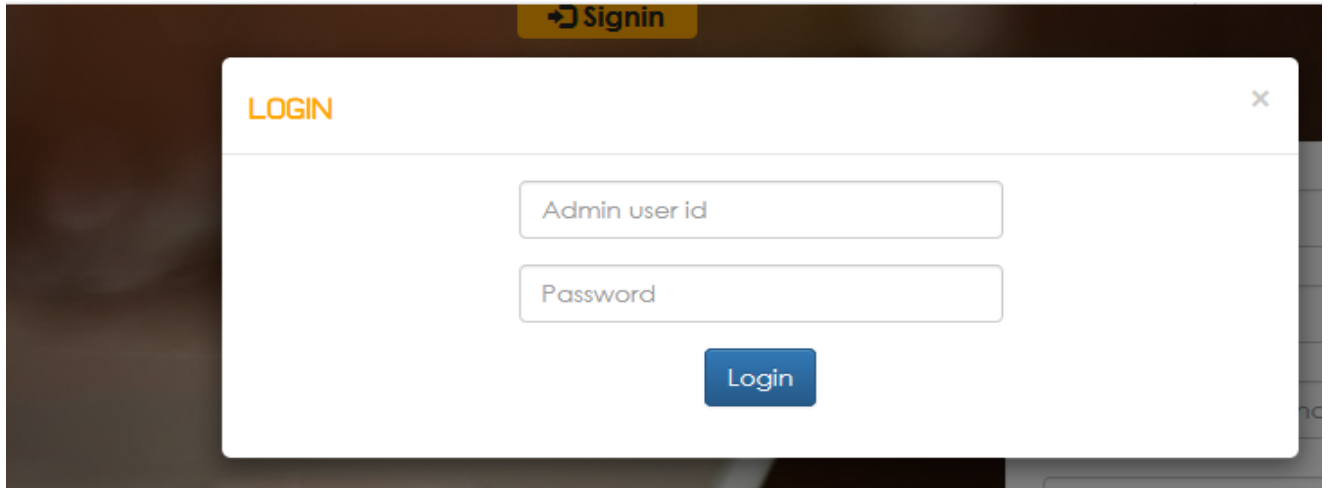
The online answer script of each participant will be stored in the system database which can be retrieved by the super admin if necessary.

5 snapshot

5.1:Home page



5.2 Admin login



6 Project Timetable

This project takes at least 4 month for creating. Because for creating this project ,we must need to know how can it created, what kind of technologies needed, and also know about this technologies.

Task Name	Duration	Start	Finish
Submit Proposal			
Research Phase			
Development Phase			
System Analysis			
Project Report			

7 Conclusion:

The Online Examination System is an innovation in the context of Bangladesh.

The application was devised with the use of PHP, HTML, CSS, MySQL and Javascript as the backend database. The system ensures uniform accessibility to the web browser and makes the system to run on varied operating models. It saves time as it allows number of students to give the exam at a time and displays the results as the test gets over, so no need to wait for the result. It is automatically generated by the server. Administrator has privilege to create, modify and delete the test papers and its particular questions. User can register, login and give the test with his specific id, and can see the results as well

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