Online Mock Test and Exam Management System

Online Examination System is a software solution, which allows a particular

company or institute to arrange, conduct and manage examinations via an online

environment. This can be done through the Internet, Intranet and/or Local Area

Network environments.

Some of the problems faced by manual examination systems are delays in result

processing, filing poses a problem, filtering of records is not easy, The chance of

loss of records is high and also record searching is difficult. Maintenance of the

system is also very difficult and takes lot of time and effort.

I intend to use the systems development life cycle (SDLC) which is a conceptual

model used in project management that describes the stages involved in an

information system development project.

Microsoft Visual basic 2010 will be used to achieve the project because of its

flexibility and English-Like Syntax. Microsoft SQL Server will be used as the

database management system.

CHAPTER ONE

INTRODUCTION

Online Examination System is a software application which allows a particular

company or institute to arrange, conduct and manage any examination via online.

In this module a candidate can be given online exam of a particular subject and get

the results instantly through which the user can know his/her potentials and how

much more effort he/she needs to put in to get better marks.

Every other thing that should be included in Chapter

One is with you. Arrange them

Good Luck. You can call me anytime

CHAPTER TWO

LITERATURE REVIEW

Before proceeding with the design and implementation of this project, I have

studied many existing Online Examination management Systems. This study

helped me a lot to know the various features of online examination management

systems.

I have studied each system and noticed some special features of them which are

listed as follows:

**The online Examination System**

Features

· A test can be compiled with questions from different topics/libraries.

· A “serial number” is provided for each question according to topic, etc.

· The “serial number” can be used to search for and select questions.

· Tests can be created on a random basis per student.

· Specific questions can be flagged to be included/excluded in a test.

· The online examination system is suitable for surveys.

· The online examination system can automatically add the marks allocated in

each question to determine the total mark for the test.

· Export question papers and memoranda to .txt or .doc file or upload using the TextArea as Question and options using radio button or checkbox.

· A time limit can be set for the test.

· The sequence of questions can be randomized.

· Students can navigate within a test (i.e. backwards and forwards). Can be

set.

Navigation tools/buttons can be selected for a test, and these buttons can be

switched on/off per question/test, e.g. backward/forward buttons.

· Students can be forced to go through all the questions at least once, before

exiting the test.

· Students can be allowed to exit the test before completing all the questions.

· After exiting a test, students can continue the test from the last question they

answered.

· A specific date for a test to be active can be set.

Comments

· The System does not limit the number of times a student can write a

test/exam.

· After exiting a test, students cannot continue the test/exam from the last

question they answered.

**Course-webs online exam**

· Questions can be multiple choice, true/false, short answer (fill in the blank),

multiple answer (checkboxes), and essay.

· Exams can be timed or untimed.

· The system can automatically create exams by randomly choosing questions

from your exam question database.

· The system will randomly order the questions for each student.

· Exams can be turned on or off and have a date range for each exam.

· Multiple choice, true/false, and short answer questions are automatically

graded.

· Detailed score report breaks down student responses by category.

· Students get instant results on automatically graded exams.

· Students and instructors get instant results via e-mail.

· For each question you can enter feedback that the student will get when

reviewing the exam.

· Control review options: review correct, incorrect, both, or neither.

· Allow students to retake exams, limit total attempts and cap retake scores.

· Automatically generates a numbered certificate of completion on

successfully passing an exam. You customize the certificate.

· The Certificate is a PDF file that can be customized in any way.

**Some Common Features of Online Examination**

1. Questions can be multiple choices, true/false, short answer (fill in the blank),

multiple answers (checkboxes).

2. Online examination system can automatically add the marks allocated in

each question to determine the total mark for the test.

3. A time limit can be set for the test.

4. The sequence of questions can be randomized.

5. Students can be allowed to exit the test before completing all the questions.

6. Result is displayed instantly

Analysis of the Existing System

**Drawbacks in the Existing Examination System**

Examination and problems associated with it is the main centre of focus in the field

of education in our country today. Publication of results also takes a very long time

owing to which students remain idle for months together. Some of the drawbacks

in the existing examination system are as follows:

• Students from different areas have to visit university for every query regarding

filling up of application forms, examination date, results and syllabus etc are

collected by the student personally, thus wasting his/her precious time and money.

• Students have to wait in long queues to take examination forms, deposit

examination fee and to get know the status of their results. Even sometimes, they

cannot take admission in higher studies outside the state.

• The manual examination system leads to errors, more time consumption,

inefficient and wastage of valuable resources.

• There is repetition of work in the existing system, the same data is written again

and again by different branches.

• In existing system, managing of student’s record is very tedious. Searching of

students’ records in manual registers, maintaining of records and reconciliation etc.

are very time consuming.

• In manual examination system, there is no check on the secrecy and tempering of

students records. Sometime fake degrees are prepared thus degrading the image of

university.

• In existing system whole data of students are stored in papers, registers, as record

is increasing yearly, the registers are piling up and sometimes we may see the staff

sitting on these registers.

Advantages of the existing system

· Manual Exams are invigilated, thus minimizing malpractices to an extent.

· All types of questions can be asked in a manual examination. E.g.

Multichoice, essays, questions and answers with diagrammatic illustrations

e.t.c.

System Methodology

**Spiral Methodology**

The spiral methodology extends the waterfall model by introducing prototyping. It is generally

chosen over the waterfall approach for large, expensive, and complicated projects.

At a high-level, the steps in the spiral model are as follows:

1. The new system requirements are defined in as much detail as possible. This usually

involves interviewing a number of users representing all the external or internal users and

other aspects of the existing system.

2. A preliminary design is created for the new system.

3. A first prototype of the new system is constructed from the preliminary design. This is

usually a scaled-down system, and represents an approximation of the characteristics of

the final product.

4. A second prototype is evolved using four steps:

1. Evaluate the first prototype and identify its strengths, weaknesses, and risks.

2. Define the requirements of the second prototype.

3. Plan and design the second prototype.

4. Construct and test the second prototype.

5. At the project sponsor's option, the entire project can be aborted if the risk is deemed too

great. Risk factors might involve development cost overruns, operating-cost

miscalculation, or any other factor that could result in a less-than-satisfactory final

product.

6. The existing prototype is evaluated in the same manner as was the previous prototype,

and, if necessary, another prototype is developed from it according to the fourfold

procedure outlined above.

7. The preceding steps are iterated until the customer is satisfied that the refined prototype

represents the final product desired.

8. The final system is constructed, based on the refined prototype.

9. The final system is thoroughly evaluated and tested. Routine maintenance is carried out

on a continuing basis to prevent large-scale failures and to minimize downtime.

**Reasons for using spiral methodology**

· Estimates (i.e. budget, schedule, etc.) get more realistic as work progresses, because

important issues are discovered earlier.

· It is more able to cope with the (nearly inevitable) changes that software development

generally entails.

· Software engineers (who can get restless with protracted design processes) can get their

hands in and start working on a project earlier.

The Proposed System

To solve the problems faced with manual examination writing, there is need for a

computerized system to handle all the works. I propose a web based application

that will provide a working environment that will be flexible and will provide ease

of work and will reduce the time for report generation and other paper works.

These examinations are conducted as open-book or open table type examinations.

Candidate is given a limited time to answer the questions and after the time expiry

the answer paper is disabled automatically and answers is sent to the examiner.

The examiner will evaluate answers, either through automated process or manually

and the results will be sent to the candidate through email or made available in the

web site. Today many organizations are conducting online examinations

worldwide successfully and issue results online.

The main advantage is that it can be conducted for remote candidates and

evaluation of answers can be fully automated for all questions and other essay type

questions can be evaluated manually or through automated system, depending on

the nature of the question’s and the requirements. Also online examinations can be

conducted at any time and does not incur higher cost as traditional exam scenario

as there is no paper work involved (e.g. printing exam papers, prepare paper

admissions etc.) , there is no invigilators, also no need of arrangement of exam

centers. When comparing with traditional exam scenario the cost for an online

examination will be almost zero after the online exam system is establishment and

if maintenance cost is not considered.

The volume of examination work has necessitated the use of computer services.

Various jobs such as checking up of examination application forms, allotment of

roll numbers, preparation of roll lists, tabulation of marks and formulation of

marks sheets are preferred to be got done by computer. Looking into the ever

growing complex nature of examination process and also to cope with the

situation, it is deemed fit to apply modern management techniques and adopt a

system approach. In the era of Information Technology, there is hardly any

department which is not adopting this technology. To bring, efficiency,

transparency and reliability, universities should also adopt this new technology for

managing the examination system. Some of the benefits of integrated automated

examination system are defined as under.

**Advantages of the Proposed System**

· Total Computerization of system will facilitate an integration of all sections/

units/departments of the Examination Wing under single umbrella.

· It will improve the efficiency of the workforce who in turn carries out many

operations manually.

· The new system will streamline the procedure for collation of exam fees,

issuing receipts to large number of students and keeping a track of cash

flow.

· With the adoption of new system, there will centralized, secure and robust

database of the candidates appearing in the examination without duplication

of records.

· In a networked environment system different units of the examination wing

are connected so that all these are able to share up-to-date information

without redundancy of database at various stages.

· It will bring improvement in quality of services being provided to the

students/concerned departments/sections by introducing computerized

window system and online availability of information to the concerned

departments/sections of the University.

· There will be less human intervention (as much as possible) in result

processing by automating all the concerned activities.

· The complete Computerization of Examination System will lead to effective

monitoring of Examination Process by the concerned authorities (the

possibility of fraudulence will be minimized).

· The Computerized Statistical Analysis of Data will facilitate the

management to see trends in result at various levels. Management

Information System (MIS) reports will facilitates the Top

· Level Management to make strategic decision in favor of University and

students.

· The use of Relational Database Management System for storage of

students’ data will help in minimizing the redundancy in database in

addition to maintains consistency, integrity and security of data.

· Once the students’ data is in database form, lots of academic benefits can be

drawn in terms of the statistical analysis of the results belonging to different

faculties, courses, social groups, colleges (private/government) and different

area of the state and the country.

**Disadvantages of the Proposed System**

· Changing technology may create barriers to accessing examination

environments as with new examination methods, online

learning/examination has faced much criticism from many sources as they

claim it has devalued post secondary education and will reduce the

effectiveness of obtaining quality career positions by obtaining higher

education. These skeptics claim many existing barriers to effectively writing

complex exam in an online-only setting.

· There is need for stakeholders (i.e. both examiner and examinee) to be

computer literate and good users of the internet.

· Invigilators do not have control over candidates. This could lead to some

malpractices. Though, there are measures to limit the malpractices(Timing is

one of the means)

**Justification of the proposed Study**

In feasibility study phase I had undergone through various steps, which are

described as under:

How feasible is the system proposed? This was analyzed by comparing the

following factors with both the existing system and proposed system.

Cost

The cost required in the proposed system is comparatively less to the existing

system.

**Effort**

Compared to the existing system the proposed system will provide a better

working environment in which there will be ease of work and the effort required

will be comparatively less than the existing system.

Time

Also the time required generating a report or for doing any other work will be

comparatively very less than the existing system. Record finding and updating will

take less time than the existing system.

**Labor**

In the existing system the number of staff required for completing the work is more

while the new system will require quite less number of staff.