1. Introduction

Online Test System Purpose :-

The purpose of on-line test simulator is to take online test in an efficient manner and no time wasting for checking the paper. The main objective of on-line test simulator is to efficiently evaluate the candidate thoroughly through a fully automated system that not only saves lot of time but also gives fast results. For students they give papers according to their convenience and time and there is no need of using extra thing like paper, pen etc.

Scope :-

Scope of this project is very broad in terms of other manually taking exams. Few of them are :-

- This can be used in educational institutions as well as in corporate world.
- Can be used anywhere any time as it is a web based application (user Location doesn't matter).
- No restriction that examiner has to be present when the candidate takes the test.

Features :-

- Secure
- Easy to use
- Reliable and accurate
- No need of examiner

Oveview :-

The online test created for taking online test has following stages

- Login
- Test
- Result

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- **Login :-**

There is a quality login window because this is more secure than other login forms as in a normal login window there are multiple logins available so that more than one person can access to test with there individual login. But in this project there is only one login id i.e. Administrator id and password by which a person enter the site. Hence it is more secure and reliable than previously used on-line test simulators.

- **Test :-**

Test page is the most creative and important page in this project. It consists of 2 modules namely:

- Subject selection
- Utilities
  - **Subject selection :-**

    From the given choices the candidate can select his field (like C, C++ and JAVA etc.) for taking on with the test.

  - **Utilities :-**

    It includes :-

    - Skip and come back to the question afterwards if needed.
    - Gives the list of attempted and unattempted questions and can go to any question directly and can either attempt or change the answer of the already attempted question.

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2. Feasibility Study

a. Economic Feasibility :-

Economic analysis is most frequently used for evaluation of the effectiveness of the system. More commonly knows as cost/benefit analysis the procedure is to determine the benefit and saving that are expected from a system and compare them with costs, decisions is made to design and implement the system.

This part of feasibility study gives the top management the economic justification for the new system. This is an important input to the management the management, because very often the top management does not like to get confounded by the various technicalities that bound to be associated with a project of this kind. A simple economic analysis that gives the actual comparison of costs and benefits is much more meaningful in such cases.

In the system, the organization is most satisfied by economic feasibility. Because, if the organization implements this system, it need not require any additional hardware resources as well as it will be saving lot of time.

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b. **Technical Feasibility :-**

Technical feasibility centers on the existing manual system of the test management process and to what extent it can support the system. According to feasibility analysis procedure the technical feasibility of the system is analyzed and the technical requirements such as software facilities, procedure, inputs are identified. It is also one of the important phases of the system development activities.

The system offers greater levels of user friendliness combined with greater processing speed. Therefore, the cost of maintenance can be reduced. Since, processing speed is very high and the work is reduced in the maintenance point of view management convince that the project is operationally feasible.

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c. Behavioral Feasibility :-

People are inherently resistant to change and computer has been known to facilitate changes. An estimate should be made of how strong the user is likely to move towards the development of computerized system. These are various levels of users in order to ensure proper authentication and authorization and security of sensitive data of the organization.

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3. System Study

- **Existing System :-**

  The whole process of assigning test and evaluating their scores after the test, was done manually till date. Processing the test paper i.e. checking and distributing respective scores used to take time when the software was not installed

- **Disadvantages Of Current System :-**

  - The current system is very time consuming.
  - It is very difficult to analyze the exam manually.
  - To take exam of more candidates more invigilators are required but no need of invigilator in case of on line exam.
  - Results are not precise as calculation and evaluations are done manually.
  - The chances of paper leakage are more in current system as compared to proposed system. Result processing takes more time as it is done manually.

- **Characteristic Of The Proposed System :-**

  - The online test created for taking online test has following features.
  - In comparison to the present system the proposed system will be less time consuming and is more efficient.
  - Analysis will be very easy in proposed system as it is automated.
  - Result will be very precise and accurate and will be declared in very short span of time because calculation and evaluations are done by the simulator itself.

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- The proposed system is very secure as no chances of leakage of question paper as it is dependent on the administrator only.
- The logs of appeared candidates and their marks are stored and can be backup for future use.

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4. System Requirement

- **Hardware Requirements :-**

This phase of software development process deals with a brief study of differenthardware used in the computerized system. There is a list of hardware used in the computerized system.

There is list of hardware materials used during the making also during the use ofthe proposed system. As the new system to be made into a computerized functional system, requirement of computer is must.

All Hardware needed here are generally the basic configuration of a typical office computer. A list of hardware requirement used in the system given below:

Operating System: - Intel i3 2.5GHZ Processor: - Intel Pentium 4 and onwards Hard disk: - 80GB and onwards.

RAM :- 2GB

Monitor :- CGA

- **Software Requirements :-**

The Configuration of the system which are used for the developmentsuch as code and testing are given as be as follows:

Operating System: - Windows 10 and aboveFront End : - Visual Studio 2012

Languages Used :- C#

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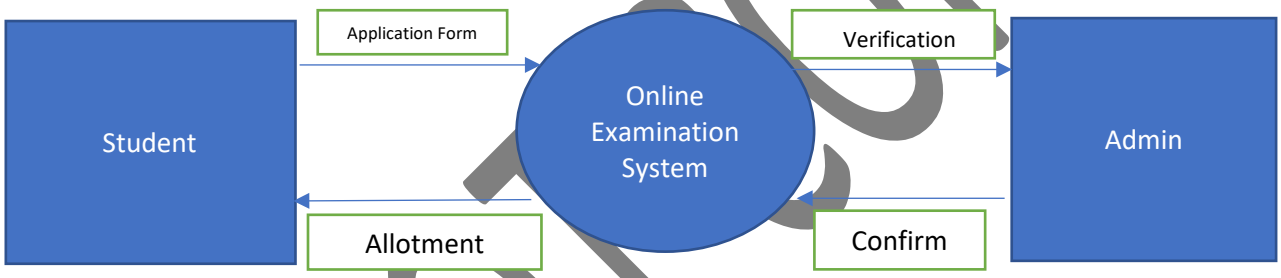
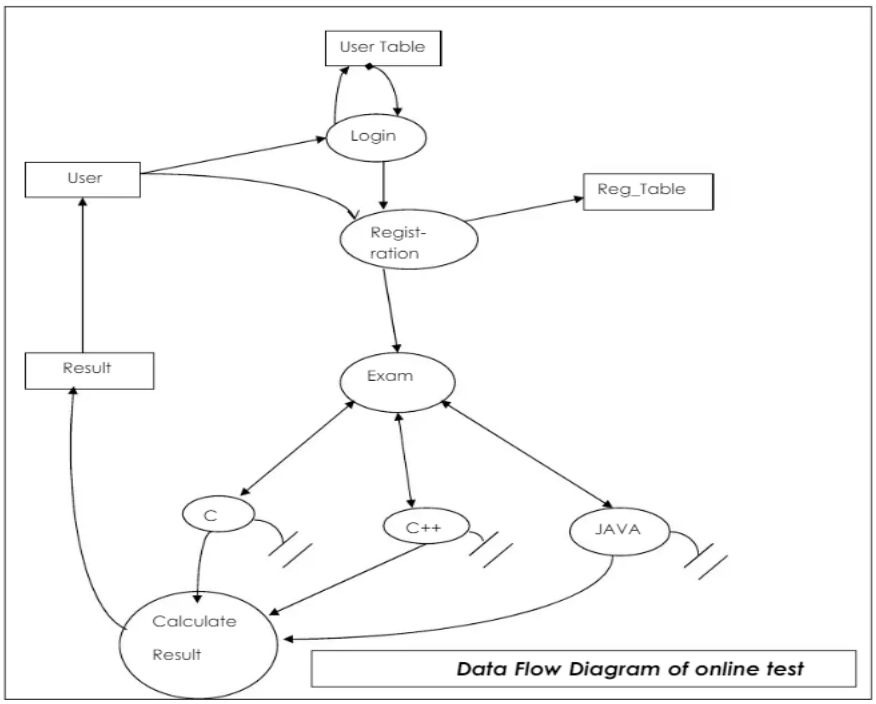
5. Data Flow Diagram - (DFD)

This is a second phase of software development life cycle which is done after the analysis of the system, that's why it plays very important role. The developer who will go for the further coding process can understand the actual output of the system. It shows the how the system flow or we can say that actual flow of particular objects or entities.

It is necessary to study investigate the way in which data is flowing through various process within the scope of a system. The data flow diagrams are the one of the popular graphical tools used to detect the flow of data through a system. Generally, we should go as far as necessary to understand details of system and the way its function.

Data Flow Diagram





Dig. Data Flow Diagram (DFD)

6. Entity Relationship Diagram - (ERD)

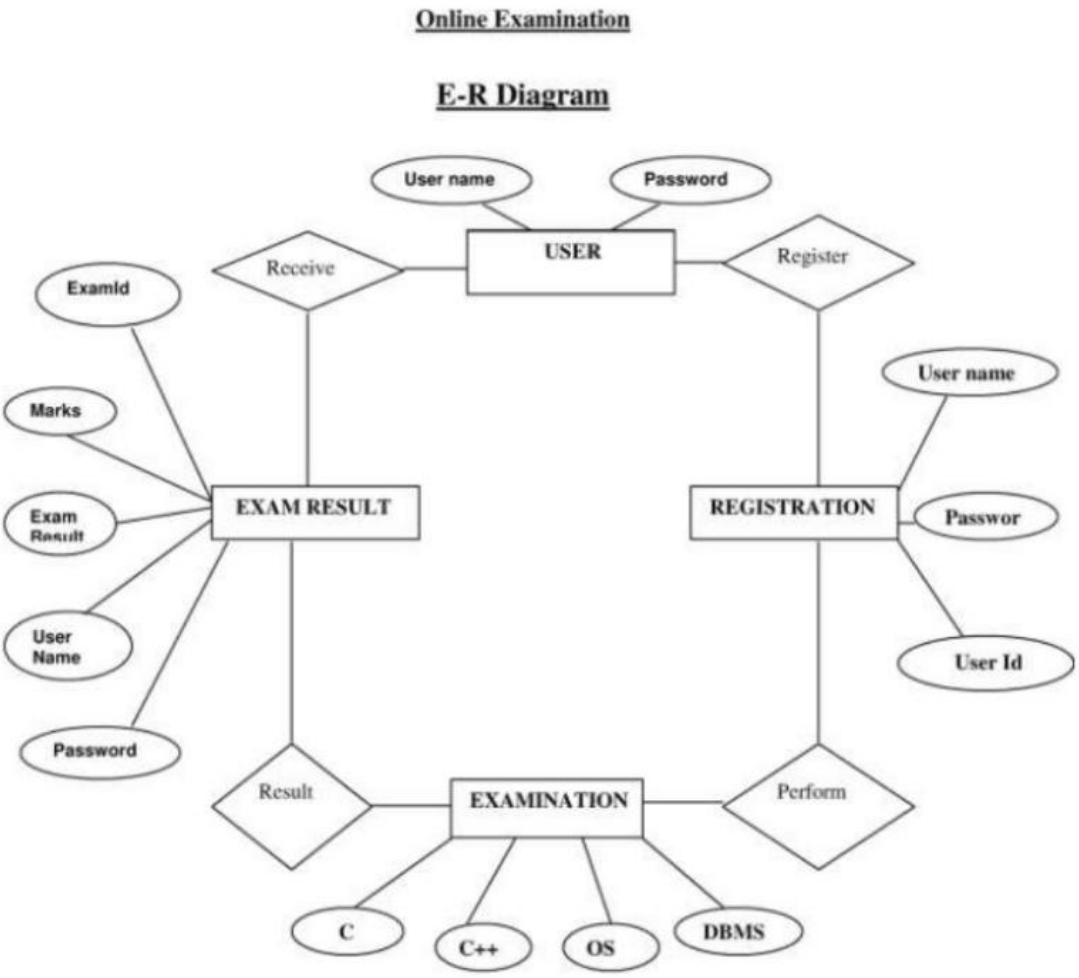


Figure: E-R Diagram

Dig. Entity Relationship Diagram - (ERD)

7. Table Design

1. Student_Master :-

Name	Data Type	Allow Nulls	Default
Student_PRNNO	varchar(16)	☐	
Student_Fullname	varchar(50)	☑	
Student_Password	varchar(50)	☑	
Student_Address	varchar(150)	☑	
Country_Name	varchar(50)	☑	
State_Name	varchar(50)	☑	
District_Name	varchar(50)	☑	
Taluka_Name	varchar(50)	☑	
City_Name	varchar(50)	☑	
Pincode	varchar(50)	☑	
Student_Email	varchar(50)	☐	
Student_Photo	varchar(250)	☑	
Student_Class	varchar(50)	☑	
Student_Year	varchar(50)	☑	
Student_Semister	varchar(50)	☑	
Academic_Year	varchar(50)	☑	
Student_Status	bit	☑	
Student_Mobile	varchar(10)	☑	
Student_Birthdate	smalldatetime	☑	
Student_Gender	varchar(50)	☑	

2. Admin_Master :-

Name	Data Type	Allow Nulls	Default
Payment_id	int	☐	
Card_Type	varchar(50)	☑	
Card_No	varchar(50)	☑	
Name_Oncard	varchar(50)	☑	
Expire_Date	varchar(50)	☑	
Cvv_No	varchar(250)	☑	
Issuing_Bank	varchar(250)	☑	
Amount	numeric(18,0)	☑	

3. Faculty_Master :-

Name	Data Type	Allow Nulls	Default
Faculty_id	int	☐	
Faculty_Name	varchar(50)	☑	
Faculty_Email	varchar(250)	☑	
Faculty_Mobile	varchar(10)	☑	
Faculty_Password	varchar(50)	☑	
Subject_id	int	☑	
Faculty_Status	bit	☑	
		☐	

4. Notice_Master :-

Name	Data Type	Allow Nulls	Default
Notice_Id	int	☐	
Notice_Title	varchar(50)	☑	
Notice_Message	varchar(250)	☑	
Notice_Date	smalldatetime	☑	
Notice_Expiry	smalldatetime	☑	
		☐	

5. Practice_Master :-

Name	Data Type	Allow Nulls	Default
Id	int	☐	
Student_PRN	varchar(50)	☑	
Subject_Id	int	☑	
Right_Ans	int	☑	
Wrong_Ans	int	☑	
Skip_Ans	int	☑	
Total_Marks	int	☑	
Exam_Date	smalldatetime	☑	
Result	varchar(50)	☑	
		☐	

6. Question_Master :-

	Name	Data Type	Allow Nulls	Default
🔑	Question_id	int	☐	
	Question	varchar(50)	☑	
	Option_1	varchar(50)	☑	
	Option_2	varchar(50)	☑	
	Option_3	varchar(50)	☑	
	Option_4	varchar(50)	☑	
	Answer	varchar(50)	☑	
	Subject_id	int	☑	
	Faculty_id	int	☑	
	Semester_id	int	☑	
	Academic_Year	varchar(50)	☑	
			☐	

7. Result_Master :-

	Name	Data Type	Allow Nulls	Default
🔑	Id	int	☐	
	Student_PRN	varchar(50)	☑	
	Subject_Id	int	☑	
	Right_Ans	int	☑	
	Wrong_Ans	int	☑	
	Skip_Ans	int	☑	
	Total_Marks	int	☑	
	Exam_Date	smalldatetime	☑	
	Result	varchar(50)	☑	
			☐	

8. Subject :-

	Name	Data Type	Allow Nulls	Default
🔑	Subject_Id	int	☐	
	Subject_Name	varchar(150)	☑	
	Subject_Type	varchar(150)	☑	
	Subject_Title	varchar(150)	☑	
	Subject_Image	varchar(150)	☑	
	Subject_Marks	int	☑	
	Course_Id	int	☑	
	Semister_Id	int	☑	
			☐	

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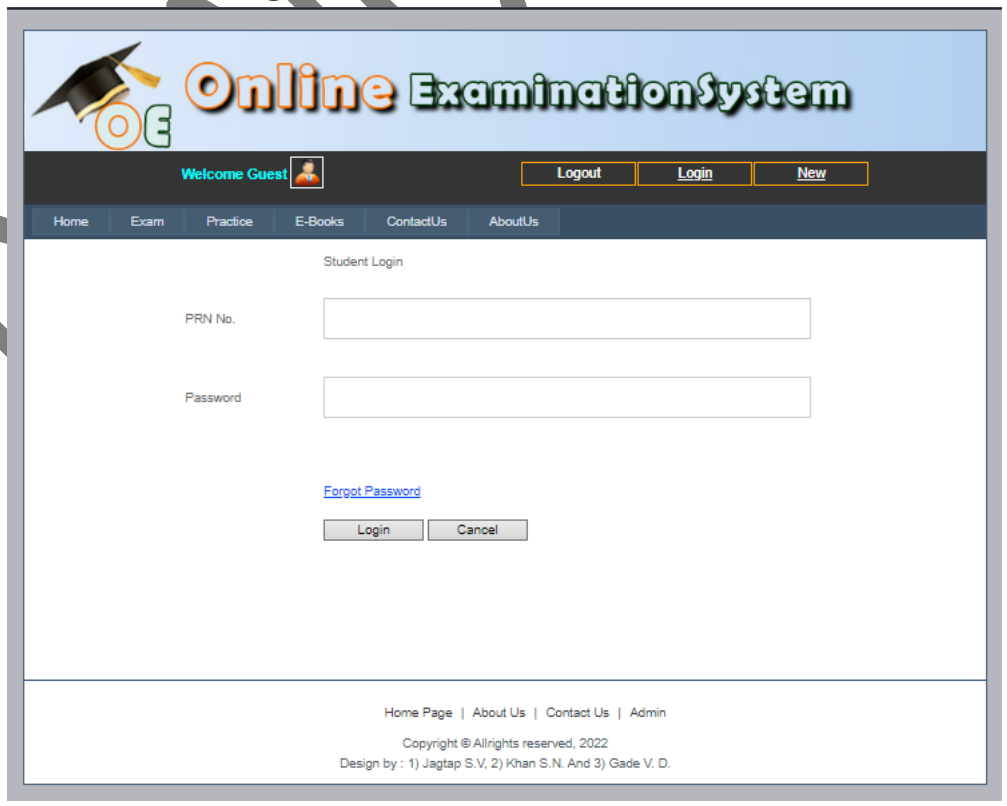
8. Output Screens

▪Home Page :-

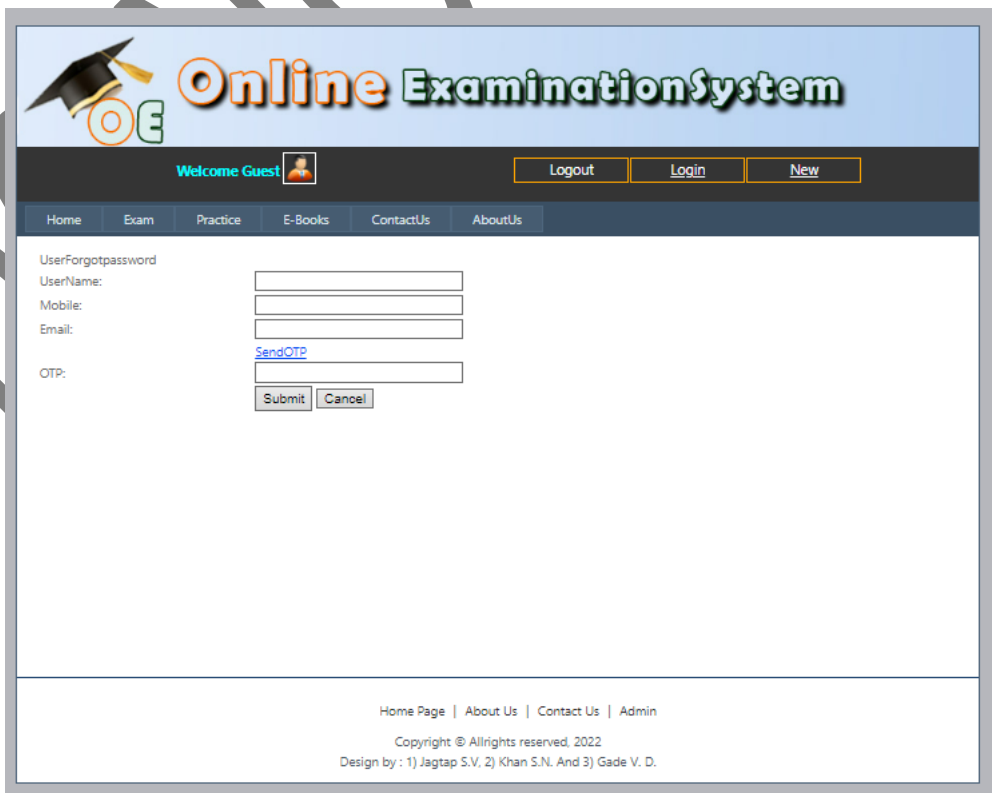
- **Student Registration :-**

- **Student Login :-**

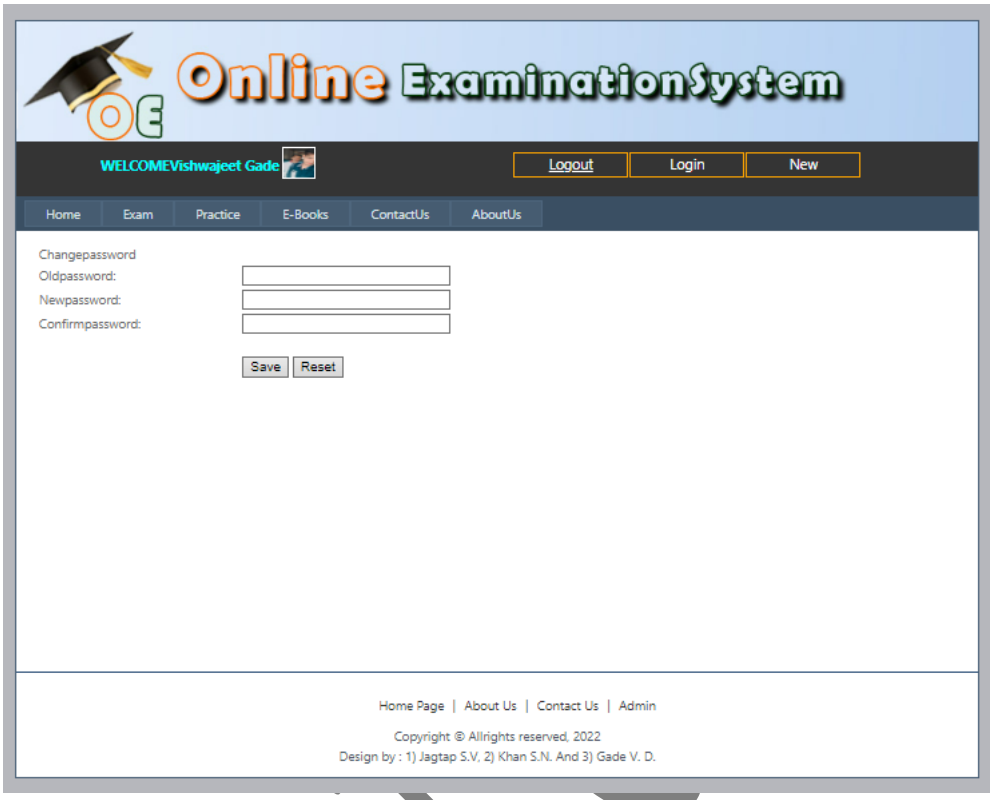


- **Student Profile :-**

- **Forgot Password :-**

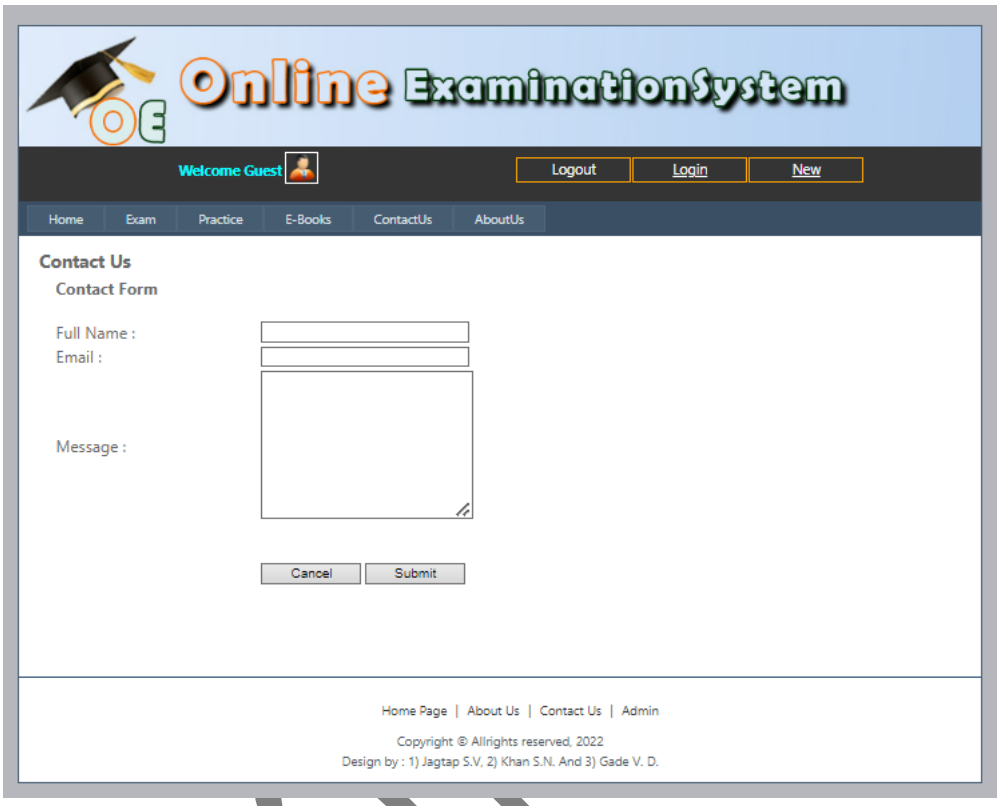


- **Change Password :-**

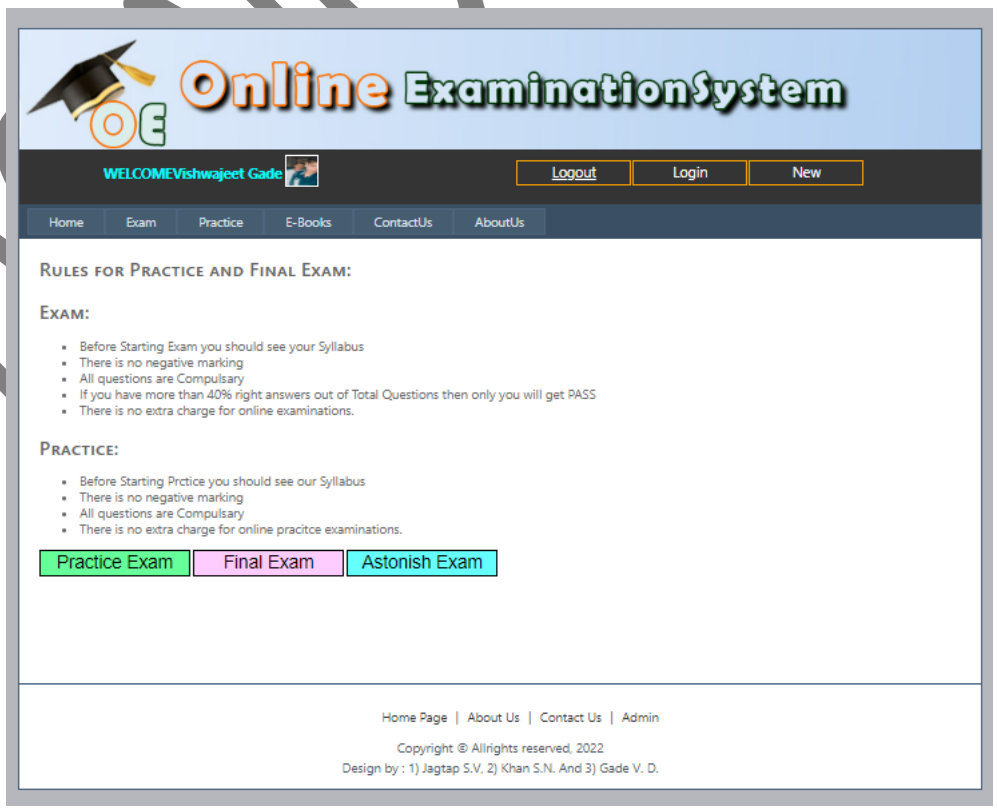


- **About Us :-**

▪Contact Us :-

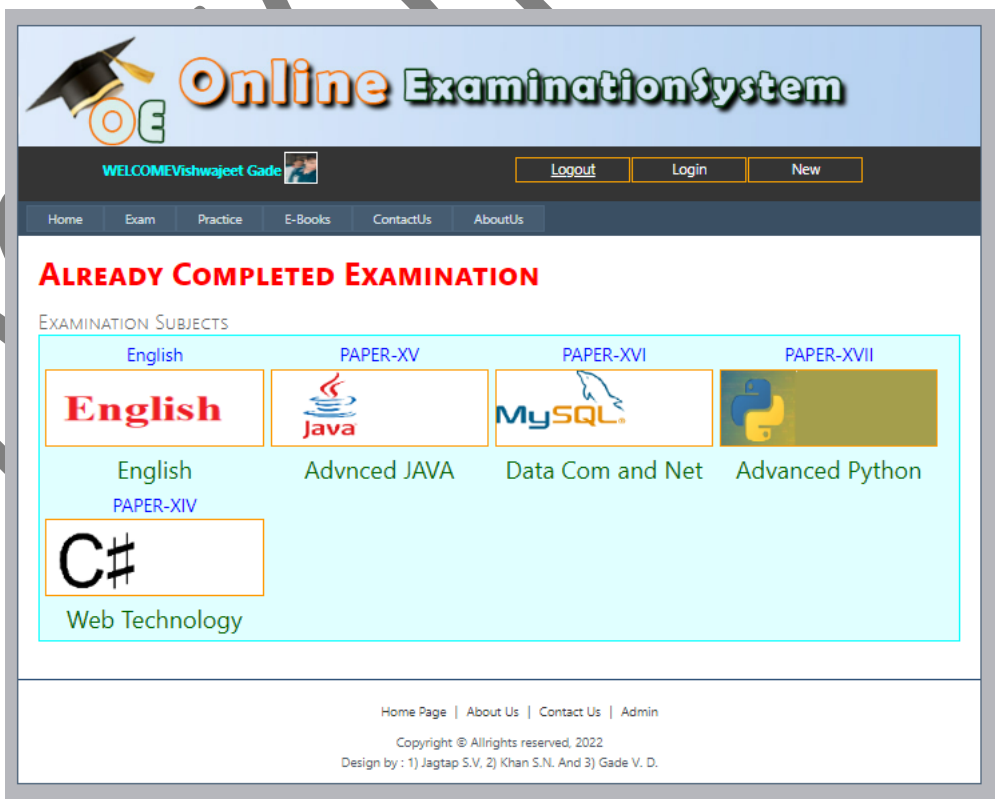


▪Exam :-



- **Practice Exam :-**

- **Final Exam :-**

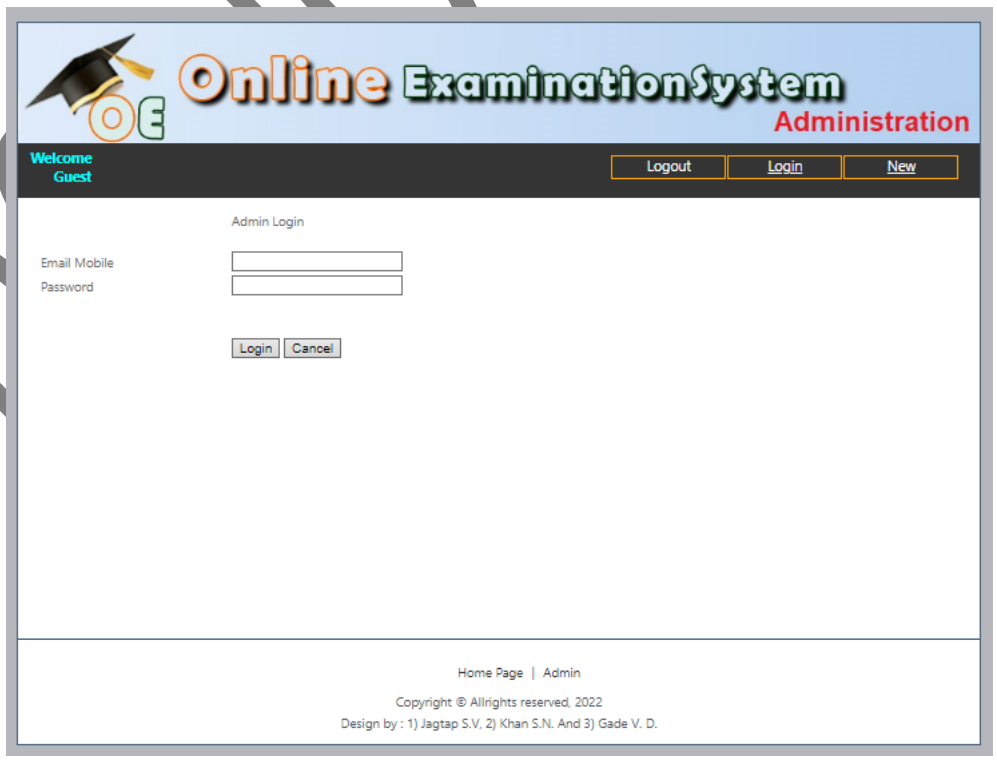


▪Astonish Exam :-

▪Exam Question :-

▪Result :-

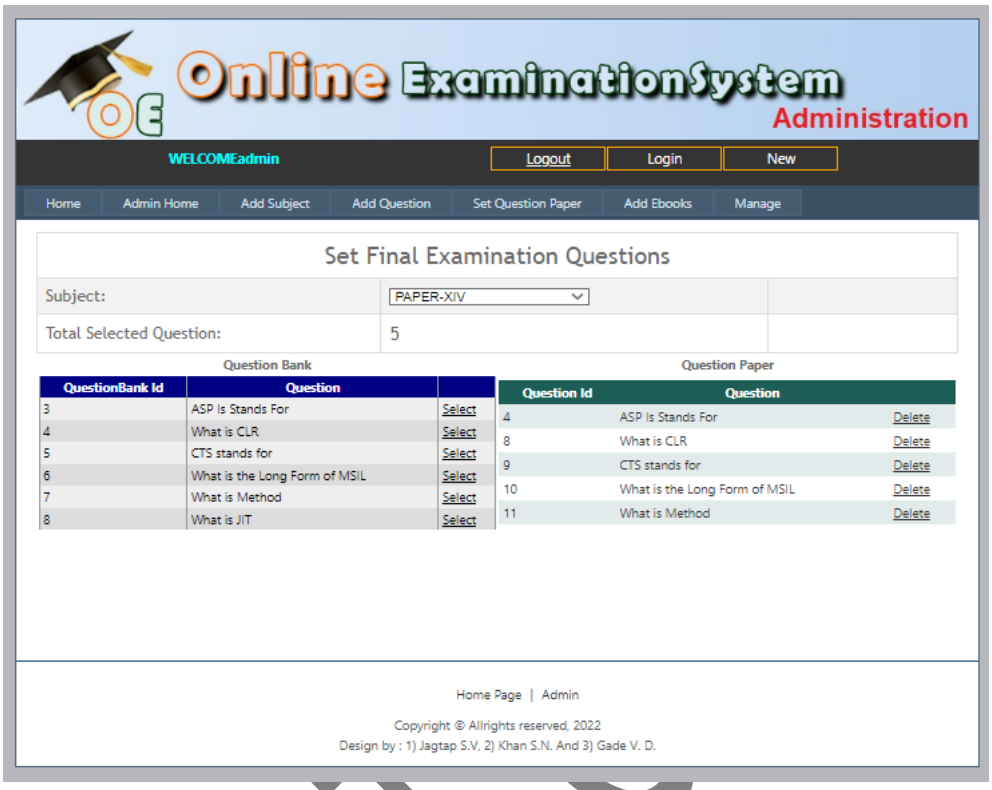
▪Admin Login :-



▪Add Subject :-

▪Add Question :-

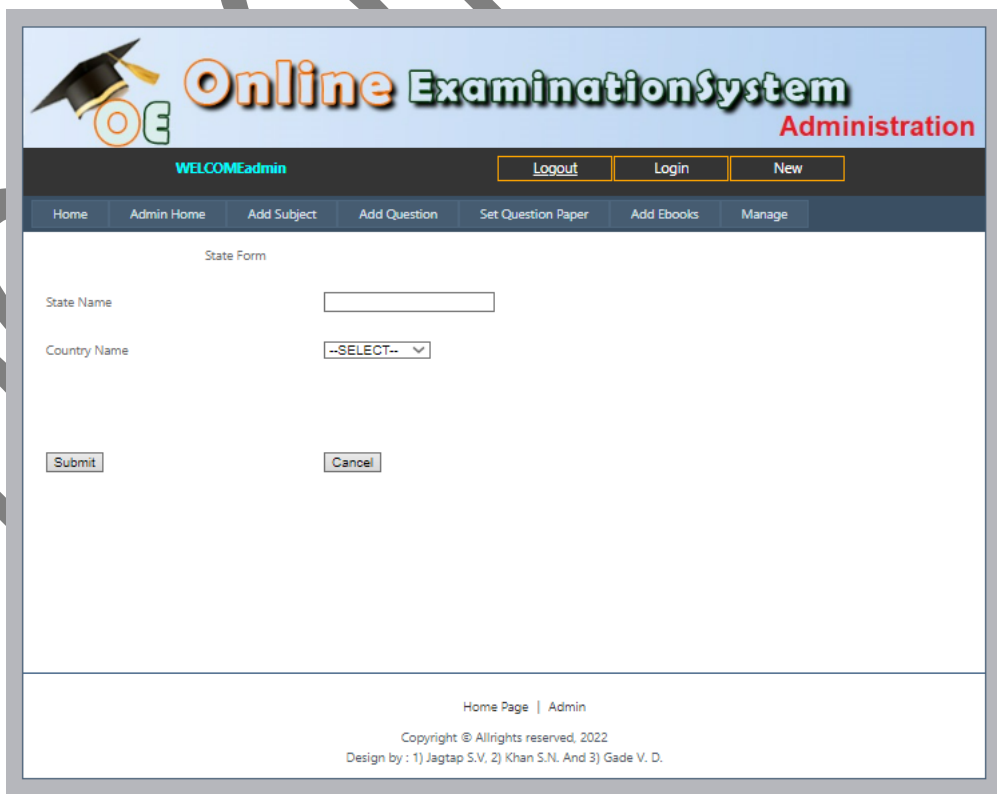
- **Set Question Paper :-**



- **Add Books :-**

- **Add Country :-**

- **Add State :-**



9. Conclusion

To conclude the description about the project, the project, developed using asp.net with Sql server is based on the requirement specification of the user and the analysis of the existing system, with flexibility for future enhancement.

The On line test System is developed using Java and sql fully meets the objectives of the system for which it has been developed. The system has reached a steady state where all bugs have been eliminated. The system is operated at ahigh level of efficiency and all the teachers and user associated with the system understands its advantage. The system solves the problem. It was intended to solve as requirement specification.

This particular project deals with the problem on managing a Online Examination and avoids the problems which occur when carried manually. Identification ofthe drawbacks of the existing system leads to the designing of computerized system that will be compatible to the existing system with the system which is more user friendly and more GUI oriented.

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10. Limitations

- Challenges in technology adaptation. Executing another framework may make a minor interruption and require time of acclimation by the clients.
- Infrastructural barriers.
- Difficulty in grading long-type answers.
- Suspectable to cheating.
- Transitioning to open-book exams.

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11. Future Scope

- **Scope of this project is very broad in terms of other manually taking exams. Few of them are:-**
- **This can be used in educational institutions as well as in corporate world.**
- **Can be used anywhere any time as it is a web based application (user location doesn't matter).**
- **No restriction that examiner has to be present when the candidate takes the test.**

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12. Technology And Tools

- **Technology Studied :-**
  - **C# :-**

    The language is intended to be simple, modern, general-purpose, object- oriented programming language. The language intended for use in developing software components suitable for deployment in distributed environments. Portability is very important for source code and programmers, especially those already familiar with c and C++ support for internationalization is very important.

    C# is intended to be suitable for writing applications for both hosted and embedded systems, ranging from the very large that use sophisticated operating systems, down to the very small having dedicated functions. Although C# applications are intended to be economical with regard to memory and processing power requirements, the language was not intended to compete directly on performance and size with c or assembly language.

  - **Sql :-**

    Structured query language allows user to access data in the relational database management system. Such as oracle, Microsoft Sql server etc and allows user to describe the data the user wishes to see. Programming and designed for managing data, held in a relational database management system (rdbms), or for stream processing in a relational data stream management system (rdsms), in comparison to older read/write apis like isam or vsam, Sql offers two main advantages: first, it introduced the concept of accessing many records with one single command; and second, eliminates the need to specify how to reach a record, egg, with or without an index.

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The various Tools used in the project are as follows:

- **Visual Studio :-**

  Microsoft's Visual Studio is an Integrated Development Environment (IDE) from Microsoft. It is used to develop computer programs, as well as web sites, web apps, web services and mobile apps.

  Visual studio uses Microsoft software development platform such as Windows API, Windows forms, Windows Presentation Foundation etc. It can produce both native code and managed code.

- **SQL Server :-**

  Microsoft's SQL server is a relational database management system developed by Microsoft. As a database server, it is a software product with primary function of storing and retrieving data as requested by other software applications which may either on the same computer or on another computer across a network.

- **.NET Framework :-**

  The NET framework is a software development platform developed by Microsoft. The framework was meant to create applications, which would run on the windows platform.

  The NET framework can be used to create both Desktop application and Web based applications. Web services can also be developed using .NET Framework. The framework also supports various programming languages such as visual basic and C#. So, developer can choose and select the languages to develop the required application.

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