

Online Quiz Application

Submitted in partial fulfillment of the requirements for the
award of

Bachelor of Technology Degree in Information Technology

By

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DEPARTMENT OF INFORMATION TECHNOLOGY

SCHOOL OF COMPUTING

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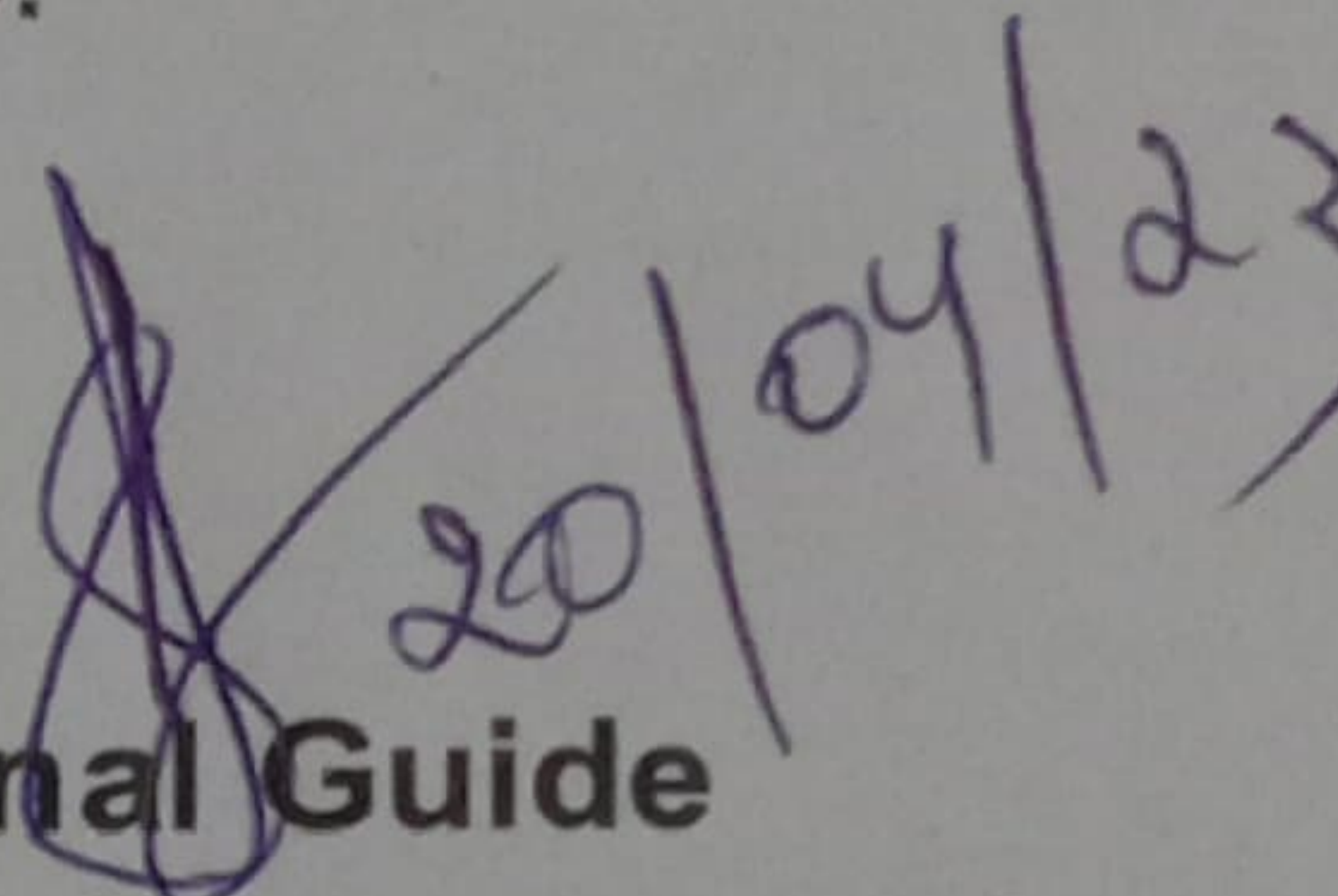
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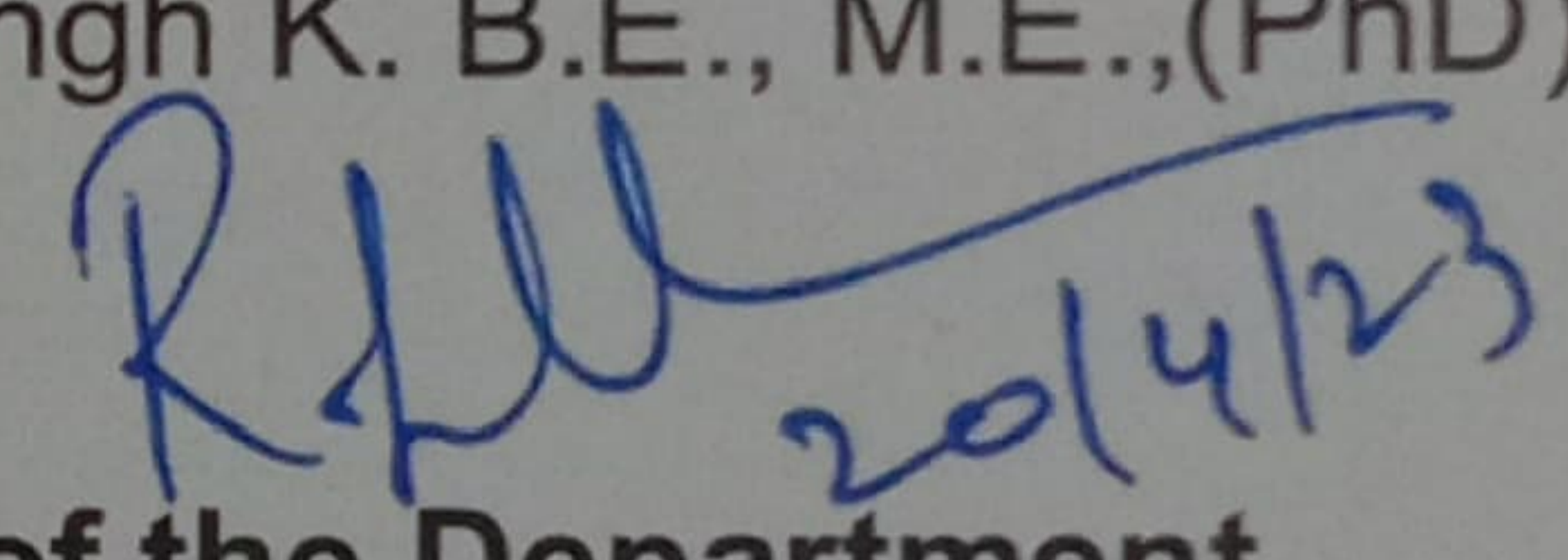
DEPARTMENT OF INFORMATION TECHNOLOGY

BONAFIDE CERTIFICATE

This is to certify that this Project Report is the Bonafide work of **Abhisheik.R (40120004)** who carried the project entitled "**Online Quiz Application**" under my supervision from January 2023 to April 2023.


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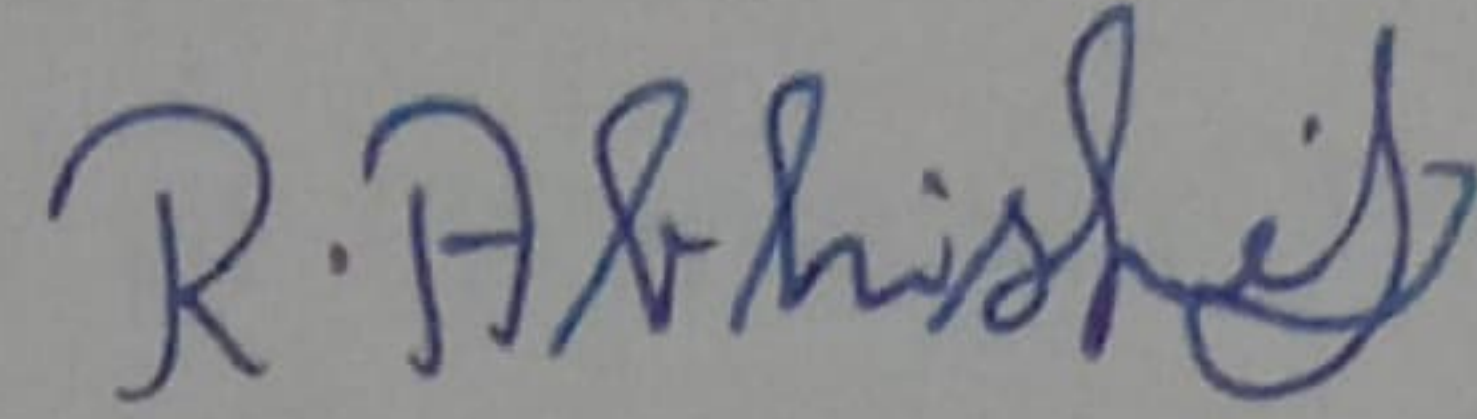
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DECLARATION

I, Abhisheik R hereby declare that the Project Report entitled "**Online Quiz Application**" done by me under the guidance of Mr. Amandeep Singh K. B.E., M.E.,(PhD) is submitted in partial fulfillment of the requirements for the award of Bachelor of Technology degree in Information Technology.

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ABSTRACT

The project “Online Quiz Application” is a web-based application for technical evolution. The user can attempt any one quiz at a time. A user can access all quiz and can attempt any of the one. Internet technology is growing rapidly, not only in the business world but also in the world of education. One of the features of e-learning in the teaching and learning process is that it can display material, practice questions, quiz, or exams electronically. The world of education is now widely using technological sophistication and internet-based, such as the process of teaching and learning electronically known as e-learning.

The required software and hardware are easily available and easy to work with. There will be limited number of questions and for each correct answer user will get a credit score. There are many quiz applications available currently on internet. By this application the user will come to know about his/her level and can learn additional knowledge. Students need to wait for lecturers finish grading to get their result. Therefore, this system will help lecturers save their time because of automated marking. Also by this application a user can expand his/her knowledge among the world.

The purpose of Online Quiz System is to automate the existing manual system by the help of computerized equipments and full-fledged computer software, fulfilling their requirements, so that their valuable data/information can be stored for a longer period with easy accessing and manipulation of the same.

Online Quiz System, as described above, can lead to error free, secure, reliable and fast management system. It can assist the user to concentrate on their other activities rather to concentrate on the record keeping. Thus it will help organization in better utilization of resources. The organization can maintain computerized records without redundant entries. That means that one need not be distracted by information that is not relevant, while being able to reach the information.

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LIST OF ABBREVIATION:

OQA	Online Quiz Application
HTML	Hypertext Markup Language
CSS	Cascading Style Sheet
SRS	Software Requirement Specification
RDBMS	Relational Database Management System

CHAPTER-1

INTRODUCTION

1.1 INTRODUCTION:

Online Quiz Application is a web-based quiz system. Online Quiz Application that can be used by lecturers to evaluate students effectively, efficiently and perfectly. The quiz application is an application that allows one in organizing the online quiz. This application will be useful in organizing the quiz events in a smooth way. The manual procedure means in every quiz, students must attend university to take the quiz at a specific time. After that, lecturers will collect quiz paper and evaluate them manually. This evaluation process takes some time so the results will be announced after few days of attending the quiz.

Sometimes, due to some reason some students might not able to attend the quiz so they will be marked as absent. The purpose of Online Quiz Application is to save lecturer's time since the answers are automatically marked. So to overcome all these problems this system has been designed so that all the student can attend quiz from any location.

The purpose of Online Quiz Application is to save lecturer's time since the answers are automatically marked. The users who use this application don't need high computing knowledge and the application will inform the user while entering invalid data. The "Online Quiz Application" has been developed to override the problems prevailing in the practicing manual system. This software is supported to eliminate and in some cases reduce the hardships faced by this existing system. Moreover this application is designed for the particular need of the company to carry out operations in a smooth and effective manner.

The application is reduced as much as possible to avoid errors while entering the data. It also provides error message while entering invalid data. No formal knowledge is needed for the user to use this application. Thus by this all it proves it is user-friendly. Online Quiz application, as described above, can lead to error free, secure, reliable and fast management system. It can assist the user to concentrate on their other activities rather to concentrate on the record keeping. Thus it will help organization in better utilization of resources.

1.2 PROBLEM STATEMENT:

The first problem is lecturers need spend more time on grading. This is because lecturer needs to check student paper one by one. The second problem is difficult for students to answer quiz from any location. Quiz gives an impact in coursework. Sometime some students have their own reason cannot take quiz on time. In reality, lecturers and students were really important and they play a big role in setup the quiz. Besides, lecturers can test their students' knowledge by grading. Here, the reasons to develop a web-based quiz application.

Online Quiz Application is software developed to conduct an online Quiz based on time constraints. Quiz Application is accessed by entering the username and e-mail id which is added to the database. Before start of the Quiz, the rules and regulations are displayed that includes description of time limit, number of questions to be answered and scoring methods. Quiz is started by displaying ten questions with four options each based on category chosen i.e. General Knowledge, Verbal Reasoning and Computer Science.

1.3 AIM AND SCOPE:

1.3.1 AIM:

The aim is to computerize the existing manual system which allows the user to take any number of quizzes of his/her choice. Our project aims at Business process automation, i.e. we have tried to computerize various processes of Online Quiz Application. The main aim of Online Quiz Application Project is to facilitate a user-friendly environment of bluebook implementation and reduces the manual effort. Providing an online comprehensive solution to manage quiz application where the individuals are participating in a team. It provides facility to take quiz at anytime and from anywhere. It is a good platform, where a student can test their knowledge and also at the same time they can gain knowledge.

1.3.2 SCOPE:

It may help collecting perfect management in details. In a very short time, the collection will be obvious, simple and sensible. It will help a person to know the management of passed year perfectly and vividly. It also helps in current all works relative to Online Quiz Application. It will be also reduced the cost of collecting the management & collection procedure will go on smoothly. The Scope of this project is very broad in terms of gaining knowledge and sharing knowledge among world.

Few points are:-

- This application will be used in educational institutions as well as in corporate world.
- Reduces exam anxiety among the test takers.
- Safe and secure data.
- Be easy to operate.
- Have a good interface.

1.4 OBJECTIVE:

The main objective of “Online Quiz Application” is to manage the details of topic, question, student, result. It facilitates a user friendly environment for all users and reduces the manual effort. In past days quiz is conducted manually but in further resolution of the technology we are able to generate the score and post the queries automatically. In this application, all the permissions lies with the administrator i.e., specifying the details of the quiz with checking result, addition of users, question and answers, marks for each question, allocating time for each quiz. It is a time saving process. User can login and take test from any place. It can be used in events for conducting test. It reduces paper work. The objectives of this project have been defined as we can know whether the goals of the system have been achieved. There are the following objectives that determine the success of this system:

- i. To develop a system that enables the student to answer a quiz online.
- ii. To implement a system that enables the student to answer a quiz from any location.

1.5 LIMITATION:

The system will focus on quiz such as multiple choice questions, true false and short answer only. The system can be used by the lecturer and student only. This system is developing on web based so that it only can be open using a web browser not in android or iOS application. Also, the study excludes the consideration of system security measures such as password expiration, use of CAPTCHA, idle window timeout, web caching, etc.,

1.6 ASSUMPTION AND HYPOTHESIS:

The researchers assume the following assumptions:

1. Internet connectivity is still a huge problem in rural and remote areas. In the case of a concurrent number of exams, internet connectivity can be a huge challenge for the smooth flow and execution of the online exam.
2. A major assumption of survey research is standardization, which relates to whether the nature of questions and responses has the same meaning across groups.

The researchers identify the following hypothesis:

1. Hypothesis is is a web annotation tool that allows for public or private annotations of all freely accessible digital content on the internet.

It is a tentative answer to your research question that has not yet been tested. For some research projects, you might have to write several hypotheses that address different aspects of your research question.

1.7 CONCLUSION:

This chapter basically delivers the early stages about this project development. It explains more about the initial project development process

CHAPTER-2

LITERATURE SURVEY

Online Quiz is the crucial parts among online education. It is efficient and fast enough and reduces the large amount of material resources. Online Quiz system is developed based on web. This paper describes the principle of the designed system that presents the main functions of the system, analyzes the algorithm of auto - generating test paper, and discusses the security of the system. Current technologies help instructors to store the questions banks in computer databases. The issue arise is how the current technologies would also help the instructors to auto generate the different sets of questions from time to time without concern about repetition.

2.1 INTRODUCTION:

The purpose of this chapter is to present selected literature review, which is very important for the research. This chapter also describes and explains of the literature review carried out on the system that will be used as references in developing this system. Previous research or existing system will also be discussed in this section. Literature review aim to review the critical points of the current knowledge on a particular topic. Therefore, the purpose of the literature review is to find, read and analyze the literature or any works or studies related to this system. It is important to well understand about all information to be considered and related before developing this system. For this project, some research has been done to understand about Quiz and technique that had been choosing to implement the system.

2.2 LITERATURE REVIEW:

“The internet has opened many possibilities for the classroom instruction but it can also be a barrier to teaching as well” (Bugeja, 2006). The new innovative technologies provide opportunities to improve learning and create a more exciting and motivating environment (Connors, 2007). According to a case study by Ralph, Buskirk, and Schmidt (2007) regarding the use of online projects, students in favor of online projects indicated that the accessibility to the professor for fast and easy feedback was a great asset. Furthermore, the study revealed that when implementing technology students were concerned with the expense of the technology, the

necessity for internet access, and the reliability of the technology. Research on student perceptions and satisfaction with online courses provide insights to student reactions and satisfaction with implementation of an online exam.

Hale (2007) found that student satisfaction surveys reveal that the most important reason for taking a distance education course is its convenience. In addition, Steinman (2007) indicated that “students’ perceptions of online courses can be negative if they experience large transactional distance with the instructor and with other students and can influence whether a student will stay in or drop out of a class.” Steinman (2007) also found that “many students choose to enroll in online courses and the demand for online courses is high. Taking an online course can provide educational experiences that would otherwise be unavailable, especially for students who live in rural areas and do not have convenient access to schools.” Rowh (2007) also found that “online courses offer convenient learning and those students who take online classes are working hard. They’re just doing it at their own pace, on a schedule and in a setting that works for them”.

Walker (2007) indicates that the “widespread availability of computers and the Internet provide considerable enrichment in terms of variety of material and formats for presentation over what was possible with the old correspondence courses”. The Chronicle for Higher Education (2007) reported that a university stated that they “use electronic education to add on to their curriculum, not as the main basis.” This lends to the implementation of an online exam into a traditional classroom where students still get the face-to-face interaction with the instructor and classmates but the control of time and location to take their exams.

Patterson (2006) conducted a post-examination survey of students completing an online exam. The study “found a large majority of students were able to easily access the online exam, found the testing tool easy to use, and were able to complete the comprehensive exam with little difficulty. The future use of online assessment for the comprehensive exam was supported by 87% of respondents.” Furthermore, Patterson found that the “Web-based comprehensive exam procedures employed made it possible for students to take the exam at the time and place of their choosing”. The

exam was able to reduce stress for students by giving them the ability to choose time and location of taking the exam according to Patterson. Patterson (2006) also acknowledged that the “challenges to test items security and the creation of procedures to minimize the possibility of collaboration and cheating on this type of “high-stakes” examination remains to be fully met.

A study of online exams by Luecht (2001) “identified six challenges of Web-based testing: (1) test-taker identity and testing materials security risks, (2) measurement of problem-solving and complex skills, (3) implementation of advanced item selection and test construction algorithms, (4) management and processing of test response data, (5) deployment of “high-bandwidth” multimedia tests and, (6) optimization of the “usability” of Webbased testing interfaces”. Luecht (2001) also identified several “strengths of Web-based testing including rapid test development and deployment, around-the-clock test access, prompt results reporting, and decreased need for test administration personnel.”

A study by Hay (2002) reports that an online exam is one in which questions are answered on and stored on and often marked by computers. Hay discovered the following keys to taking an online exam:

- Do not be tempted to access software other than that prescribed during the exam
- Sometimes attempting to use other packages interferes with the exam software, thereby jeopardising your answers
- Even if you have finished your exam and are waiting to leave it is unwise to use the computer in any ways other than those required for the exam.

2.3 CONCLUSION:

This chapter discusses literature review that had been reviewed during feasibility studies. The literature review helps developer to discover the problem of previous research or system which needs to be improves and overcome in this system development.

CHAPTER-3

METHODOLOGY AND TECHNOLOGIES

The project methodology is important because it helps to organize investigation in a scientific way to overcome problems, structure, plan, and control the process of developing an information system. The system will use Iterative Model development as a framework methodology. After system has been completely developed, it should be tested to make sure it achieves the objectives of the project.

3.1 DEVELOPMENT DESIGN:



Fig- 3.1 Iterative Model

3.2 METHODOLOGY PHRASE:

Figure above shows the methodology that will be used in this research. The iterative model is best thought of as a cyclical process. After an initial planning phase, a small handful of stages are repeated over and over, with each completion of the cycle incrementally improving and iterating on the software. Consider an iterative life cycle model which consists of repeating the following four phases in sequence. The seven stages involved in the iterative model are as follow:

- Initial Planning Phase
- Planning Phase
- Requirement Phase
- Analysis and Design Phase
- Implementation and Testing Phase
- Evaluation Phase
- Deployment Phase

3.2.1 INITIAL PLANNING PHRASE:

In this phase, all the activities are plan according to a given period to complete the system. This phase begins with the brainstorming session with the supervisor to come up with the idea and the title for the project. From the brainstorming session with the supervisor, the title for this project is decided which is Online Quiz Application (OQA) and will implement the rule-based algorithm. This system will develop as a web based system by using Python, HTML and SQLite. Next, the journals about quiz have been selected to be a guideline during development.

3.2.2 PLANNING PHRASE:

After the initial planning, the planning phase has taken place. In planning, the problem statements have been defined through several study and observation. The main discussion of a problem can be defined based on lecturer need spend more time on grading. Next, the scope also was defined for lecturer to setup quiz for student. Student can answer quiz in the system.

3.2.3 REQUIREMENT PHASE:

During this phase, existing systems are analyzed and all the requirements that are needed to develop the new system are identified. In this phase, the information regarding Online Quiz Application (OQA) either in the form of journal, articles or research papers are gathered and studied.

3.2.4 ANALYSIS AND DESIGN PHASE:

Firstly, we have to identify entities, relationships and attributes in Online Quiz Application. Then, we can model the data. The purpose of data modeling is to help us in understanding the data and to manage data as resource. We use SQLite as a database to store data and bootstrap to design interface of the system. Then, system is created and the development of the prototype based on the functionalities that will be built such as add quiz, update quiz and delete quiz.

3.2.5 IMPLEMENTATION AND TESTING PHASE:

This phase is important because all the coding is coded. Online Quiz Application was built by using Python, HTML and SQLite. Firstly, admin module was developed because admin module is very important where only admin can manage the data of the system. Then finally, developed lecturer module where lecturer can conduct quiz.

3.2.6 EVALUATION PHASE:

In the evaluation phase, Online Quiz Application will be evaluated to test whether the objective system is achieved. Firstly, will evaluate the system for admin to manage lecturer and student. Then evaluate whether the system is functionality and beneficially to student.

3.2.7 DEPLOYMENT PHASE:

Once the evaluation is done, the Online Quiz Application is deployed in the environment so that the targeted lecturer and student can use the system. The system will be released to end user to implement whether the application correct functioning or not.

3.3 SYSTEM REQUIREMENTS:

There some System Requirement for creating Online Quiz . Here are some System Requirements

3.3.1 WINDOWS:

- Microsoft Windows 8/10 64-bit.
- Memory (RAM): Minimum 1 GB; Recommended 4GB or above.
- Hard Drive: Minimum 32 GB; Recommended 64 GB or more.
- Processor: Minimum 1GHz; Recommended 2GHz or more...
- Ethernet connection (LAN) or a Wireless adapter (Wi-Fi).

3.3.2 VISUAL STUDIO:

- Requires 1 GB of RAM or more recommended.
- Requires 1 GB of available hard disk space.
- Requires 1024 by 728 or higher display resolution.

3.3.3 CROME OS:

- Requires 8 GB RAM or more recommended.
- Requires 4 GB of available disk space minimum.
- 1280 x 800 minimum screen resolutions.
- Intel i5 or higher U series or higher recommended.

3.3.4 SQLite STUDIO:

- Requires 1 GB of RAM or more recommended.
- Requires 1 GB of available hard disk space.

3.3.5 PYTHON 3.9.1:

- Requires 1 GB of RAM or more recommended.
- Requires 1 GB of available hard disk space.
- Intel i5 or higher U series or higher recommended.

3.4 APPLICATION TECHNOLOGIES:

An online quiz application is the complete agenda of an online-based test that has got multiple features and functionalities. The online quiz application uses online exam software through which the tests are created, conducted, and also evaluated. This type of examination system has got multiple benefits few of them is that it eliminates the dependency on paper for the question and answer sheets, and eliminates any sort of manual workload which is too much in the case of an offline test.

3.4.1 WEB SERVER:

Role of a web server is to communicate between the client side and server side by storing, processing and delivering web pages to the client side. Python standard library comes with in-built web-server which can be invoked for simple web client server communication. The port number can be assigned programmatically and the web server is accessed through this port.

3.5 SERVER-SIDE PROGRAMMING LANGUAGE:

Server-side programming allows us to instead store the information in a database and dynamically construct and return HTML and other types of files (e.g. PDFs, images, etc.).

3.5.1 PYTHON:

The server is a client-server model in the infrastructure of the internet. Whenever a client browser visits a web page, it generates an HTTP request to the server holding the files required to manage a website. The server attends to the client's request and processes it, responding with the necessary information to present the web page. Server-side programming is classified into static and dynamic web servers. The former returns files as they are while the latter introduces databases and application servers.

3.6 CLIENT-SIDE PROGRAMMING LANGUAGE

For the development and designing of web pages HTML, CSS and JavaScript were used. HTML for creating the webpage, CSS for styling and for adding further functionalities JavaScript was used. It is the program that runs on the client machine (browser) and deals with the user interface/display and any other processing that can happen on client machine like reading/writing cookies.

3.6.1 HTML:

Hypertext markup language (HTML) is used for creating web pages and web applications. It describes the structure of the web pages. Information from the HTML documents is sent to the web browser to render or display on the multimedia pages. Html used to describe the structure of a document by presenting a document in a heading, paragraph, image, list, links and other objects like that. Web browser presents the HTML document by using its tags. HTML, URLs play a role in these situations:

- Linking to another document or resource.
- Linking to an external style sheet for inclusion in a page.
- Images objects and applets for inclusion in a page.
- Image maps.
- Form submission
- Frames
- Citing an external reference.
- Referring to metadata conventions describing a document.

HTML has been developed with the vision that all manner of devices should be able to use information on the Web; PCs with graphics displays of varying resolution and color depths, cellular telephones, hand held devices, devices for speech for output and input, computers with high or low bandwidth, and so on. As the Web community grows and its members diversify in their abilities and skills, it is crucial that the underlying technologies be appropriate to their specific needs. HTML has been designed to make Web pages more accessible to those with physical limitations. HTML now offers greater support for diverse human languages within a document. This allows for more effective indexing of documents for search engines, higher-quality typography, better text-to-text-speech conversion, correct hyphenation etc.,

An HTML file can link to a cascading style sheet or JS file is usually at the top of the document with a specified file path which will contain information about which colors to use, which fonts to use and other HTML element rendering information. Instead of using plugins, multimedia can be placed within the HTML code.

3.6.2 CSS

It is important to make HTML pages attractive to the users and for this purposes, developers choose colors, nice fonts, and different layouts. All this work is done by CSS. CSS describes how HTML elements are to be displayed on screen, paper, or in other media. CSS saves a lot of work. CSS (Cascading Style Sheets) is used to style and layout web pages — for example, to alter the font, color, size, and spacing of your content, split it into multiple columns, or add animations and other decorative features. In short, CSS is used for styling of a HTML document. It is designed in such a way that enables separation of content and presentation so that it makes easier any change of content without interfering with a design.

CSS also enables multi web pages to share the single CSS file for styling to reduce repetition and complexity. Style Sheets simplify HTML markup and largely relieve HTML of the responsibilities of presentation. They give both authors and users control over the presentation of documents—font information, alignment, colors, etc. The mechanism for associating a style sheet with a document is independent of the style sheet language. These have been used to separate data from presentation.

By using these style sheets throughout the project, a uniform look and feel can be maintained for all the HTML elements and tags that have been used in the project. If there is any revamp the way the content has been presented in the website, the changes can be made to the appropriate style sheet, which will be reflected across the style sheets. With CSS, you can control the color, font, size of text, the spacing between elements, how elements are positioned and laid out, what background images or background colors are to be used, different displays for different devices and screen sizes, and much more! The web gets its name, in fact, from the interdependent network of server's worldwide. The World Wide Web consortium will eventually phase out many of HTML's presentation elements and attributes. The user's computer is a terminal, or end point, in this network.

3.7 BACKEND TECHNOLOGY

For this project work, SQLite was chosen as a database.

3.7.1 SQLite:

As SQLite is a file-based DBMS, it can cause performance issues with larger datasets because of file system limitations. It would be appropriate to choose client/server databases like MySQL in these instances, especially when dealing with large datasets like Big Data. SQLite is a data access language, like any other language, it is used for communication. SQLite communicates with database manager. It is an open source relational database management system which aims to offer multiple user access to several databases. In simple words, a database is a collection of data which can be a list of shopping items, number of items in a shopping centre or even a vast amount of numerous data in a corporate network.

To manage such kind of data, a database management system is required such as SQLite which aims to access data and perform functions like add, remove or edit data. Since SQLite is a relational database so it stores data in different tables instead of putting into a large storeroom. Storing or organizing data into tables increases the accessibility speed and flexibility. Applications which demand availability and scalability use SQLite, because it has the capability to recover and cope with failures on the host, SQLite, operating system or the hardware that may cause downtime. Scalability refers to the ability to spread the database as well as application queries. SQLite can accessibility, speed and flexibility.

Applications which demand availability and scalability use SQLite, because it has the capability to recover and cope with failures on the host, SQLite, operating system or the hardware that may cause downtime. Scalability refers to the ability to spread the database as well as application queries. It allows combination, extraction, manipulation and organization of data in the voter database. It is platform independent and therefore can be implemented and used across several such as Windows, Linux server and is compatible with various hardware mainframes. It is fast in performance, stable and it provides business values at a low cost.

3.7.1.1 Overview of SQL:

SQLite is an embedded, server-less relational database management system. It is an in-memory open-source library with zero configuration and does not require any installation. Also, it is very convenient as it's less than 500kb in size, which is significantly lesser than other database management systems.

3.7.1.2 Features of SQLite:

SQLite is an English-like language. It uses words such as select, insert, delete as part of its command set.

SQLITE is a non-procedural language: you specify what information you require, not how to get it. In other words, SQLITE does not require you to specify the access method to the data. All SQLITE statements use the query optimizer – a part of the RDBMS – to determine the fastest means of retrieving the specified data. This feature makes it easier for you to concentrate on obtaining the desired result. A complete database is stored in a single cross-platform disk file. Great for use as an application file format.

SQLite processes sets of records rather than a single record at a time. The most common form of a set of records is a table. Small code footprint: less than 750KiB fully configured or much less with optional features omitted. Available as a single ANSI-C source-code file that is easy to compile and hence is easy to add into a larger project.

A range of user including DBAs, application programmers, management personnel, and many other types of end users can use SQLite.

SQLite provides commands for a variety of tasks including:

- Querying data.
- Inserting, updating and deleting rows in a table.
- Creating, modifying and deleting database objects.
- Controlling access to the database and database objects.

3.7.1.3 SQLite Processing Capabilities:

SQLite is composed of a definition language a Data Manipulation Language and a Data Control Language. These three languages support the complete spectrum of Relational Data processing activity. In fact most SQLite based product all access to the data through SQLite.

1. Data Definition Language:

DDL allows creation, Deletion and Modification of data structure for bar system. These structures include tables, databases and indexes. There are four standard DDL statements. They are Create, Drop, Alter and Truncate.

2. Data Manipulation Language:

These commands are used to manipulate the data in tables directly or through views. There are four standard DML statements. They are Select, Delete, Insert and Update.

3. Data Control Language:

These commands are used to control usage and access of data. The most commonly found one's will include Grant, Revoke.

4. Data Control Language:

The Data Query Language consists of commands used to query or retrieve data from a database. One such SQLite command in Data Query Language is Select.

CHAPTER-4

FEASIBILITY STUDY AND SYSTEM ANALYSIS

4.1 FEASIBILITY STUDY:

After doing the project Online Quiz System, study and analyzing all the existing or required functionalities of the system, the next task is to do the feasibility study for the project. All projects are feasible given unlimited resources and infinite time. Feasibility study includes consideration of all the possible ways to provide a solution to the given problem. The proposed solution should satisfy all the user requirements and should be flexible enough so that future changes can be easily done based on the future upcoming requirements. There are aspects in the feasibility study portion of the preliminary investigation:

- Operation Feasibility
- Technical Feasibility
- Economical Feasibility

4.1.1 OPERATIONAL FEASIBILITY:

No doubt the proposed system is fully GUI based that is very user friendly and all inputs to be taken all self-explanatory even to a layman. Besides, a proper training has been conducted to let know the essence of the system to the users so that they feel comfortable with new system. As far our study is concerned the clients are comfortable and happy as the system has cut down their loads and doing. These are various levels of users in order to ensure proper authentication and authorization and security of sensitive data of the organization.

4.1.2 TECHNICAL FEASIBILITY:

This included the study of function, performance and constraints that may affect the ability to achieve an acceptable system. For this feasibility study, we studied complete functionality to be provided in the system, as described in the System Requirement Specification (SRS), and checked if everything was possible using different type of frontend and backend platforms.

All the required hardware and software are readily available in the market. Hence the system is technically feasible. The software and hardware requirements for the development of this project are not many and are already available in-house at NIC or are available as free as open source. The work for the project is done with the current equipment and existing software technology. Necessary bandwidth exists for providing a fast feedback to the users irrespective of the number of users using the system.

This website is very much technically feasible. This website is very much concerned with specifying equipment and the website will successfully satisfy almost all the user's requirements. The technical need for this system may vary considerably but might include:

- a. The facility to produce report instantly after finishing exam.
- b. Response time under certain conditions.
- c. Ability to process a file at a particular speed.

4.1.3 ECONOMICAL FEASIBILITY:

This is a very important aspect to be considered while developing a project. The system is economically feasible. It does not require any additional hardware or software. Since the interface for this system is developed using the existing resources and technologies available at NIC. Economic analysis is most frequently used for evaluation of the effectiveness of the system. More commonly known 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 are made to design and implement the system. There is nominal expenditure and economical feasibility for certain. We decided the technology based on minimum possible cost factor.

- All hardware and software cost has to be borne by the organization.
- Overall we have estimated that the benefits the organization is going to receive from the proposed system will surely overcome the initial costs and the later on running cost for system.

4.2 EXISTING SYSTEM:

This application is used to conduct online quiz. The students can sit at individual terminals and login to write the exam in the given duration. The questions have to be given to the students. This application will perform correction, display the result immediately and also store it in database. This application provides the administrator with a facility to add new exams. This application provides the Instructor add questions to the exam, modify questions in the exam in a particular exam. This application takes care of authentication of the administrator, Instructor as well as the student.

The objective of the Online Examination Tool is to provide better information for the users of this system for better results for their maintenance in student examination schedule details and grading details. There are various MCQ quiz applications exist in the internet with different criteria. Each of the existing applications has their own goodness and problems. In this MCQ quiz application which is designed and implemented in JSP based we try to overcome the existing problems with following features:

- Remove source confuse issue
- Connection to database for better storing of data
- Better frontend management
- Better backend management
- Try to decrease error issuer during runtime.

4.3 Proposed System:

Unlike the websites where you need to make account for every quiz you want to play, using this application based on android, you just have to login by user name and password and then you will get access to all quizzes from it. The proposed system is an application for the Android platform mobiles will help in improving the knowledge and accuracy. Android is a Linux-based operating system designed primarily for touch screen mobile devices such as smart phones and tablet computers, developed by Google in conjunction with the Open Handset Alliance.

The proposed system will be developed for Android mobiles only because the market share of Android is more than other operating systems. The current system developed is feasible. Thus it provides an easy access to the users. The database's purpose is to make, establish and maintain a workflow among various entities in order to facilitate all concerned users in their different capacities or roles. Permission to the users would be granted based on the roles specified.

Therefore, this provides the technical guarantee of correctness, speed and security. The software and hard requirements for the development of this project are not many and are already available in-house at NIC or are available as free as open source. The work for the project is done with the current equipment and existing software technology. Necessary bandwidth exists for providing a fast feedback to the users irrespective of the number of users using the system.

➤ **ADVANTAGES:**

- It is a time saving process.
- User can login and take test from any place.
- It can be used in events for conducting test.
- Reduces paper

➤ **DISADVANTAGES:**

- For many students, one of the biggest challenges of online testing is the struggle with focusing on the screen for long periods of time. As in online learning, there is also a greater chance for students to be distracted by social media or other sites.
- Susceptible to Malpractices like Cheating & Plagiarism
- Lack of Facilitating Time.
- Requires Technical Equipment

4.4 DATA DICTIONARY:

The efficiency of an application developed using RDBMS mainly depend upon the database tables, the fields in each table and the way the tables are opened using the contents in them to retrieve the necessary information. A Data Dictionary is a collection of names, definitions, and attributes about data elements that are being used or captured in a database, information system, or part of a research project. Hence a careful selection of tables and their fields are imperative. This is normally represented as the data about data. It is also termed as metadata some times which gives the data about the data stored in the database. It defines each data term encountered during the analysis and design of a new system. Data elements can describe files or the processes. Following are some rules, which define the construction of data dictionary entries:

- Words should be defined to understand for what they need and not the variable need by which they may be described in the program.
- Each word must be unique. We cannot have two definition of the same client.
- Aliases or synonyms are allowed when two or more enters shows the same meaning. For example a vendor number may also be called as customer numbers.
- A self-defining word should not be decomposed. It means that the reduction of any information in to subpart should be done only if it is really required that is it is not easy to understand directly.

Data dictionary includes information such as the number of records in file, the frequency a process will run, security factor like pass word which user must enter to get excess to the information.

The database tables used in this system are created keeping the above points in mind. The tables used are given below.

TABLE NAME: auth_group

Column Name	Data Type	Size
id	int	10
name	varchar	150

TABLE NAME: auth_group_permission

Column Name	Data Type	Size
id	int	10
group_id	Int	10
permission_id	int	10

TABLE NAME: auth_permission

Column Name	Data Type	Size
id	int	10
content_type_id	int	15
codename	varchar	100
name	varchar	255

TABLE NAME: auth_user

Column Name	Data Type	Size
id	int	10
password	varchar	128
last_login	datetime	
is_superuser	bool	
username	varchar	150
last_name	varchar	150
email	varchar	254
is_staff	bool	
is_active	bool	
date_joined	datetime	
first_name	varchar	150

TABLE NAME: auth_user_group

Column Name	Data Type	Size
id	int	10
user_id	int	15
group_id	int	10

TABLE NAME: auth_user_user_permission

Column Name	Data Type	Size
id	int	10
user_id	int	15
premission_id	int	10

TABLE NAME: quiz_course

Column Name	Data Type	Size
id	int	10
course_name	varchar	15
question_number	[int unsigned]	10
total_marks	[int unsigned]	10

TABLE NAME: quiz_question

Column Name	Data Type	Size
id	int	10
marks	[int unsigned]	15
question	varchar	600
option1	varchar	200
option2	varchar	200
option3	varchar	200
option4	varchar	200
answer	varchar	200
course_id	int	10

TABLE NAME: quiz_result

Column Name	Data Type	Size
id	int	10
marks	[int unsigned]	
exam_id	int	10
student_id	int	10
date	datetime	

TABLE NAME: student_student

Column Name	Data Type	Size
id	int	10
profile_pic	varchar	100
address	varchar	40
mobile	varchar	20
user_id	int	10

TABLE NAME: teacher_teacher

Column Name	Data Type	Size
id	int	10
profile_pic	varchar	100
address	varchar	40
mobile	varchar	20
status	bool	
user_id	int	10
salary	[int unsigned]	

CHAPTER-5

RESULT AND DISCUSSION

5.1 SAMPLE SCREENSHOTS:

Implementing and testing are the important parts in order to produce the good quality of system. It refers to the process of testing implementations of technology specifications. Technique adopted for the evaluation and testing of Online Quiz Application is test case testing which test the system functionalities modules by modules to ensure that the software confirms to its specification and meets the requirements. Below are the sample screenshots of the developed system.

HOME PAGE:

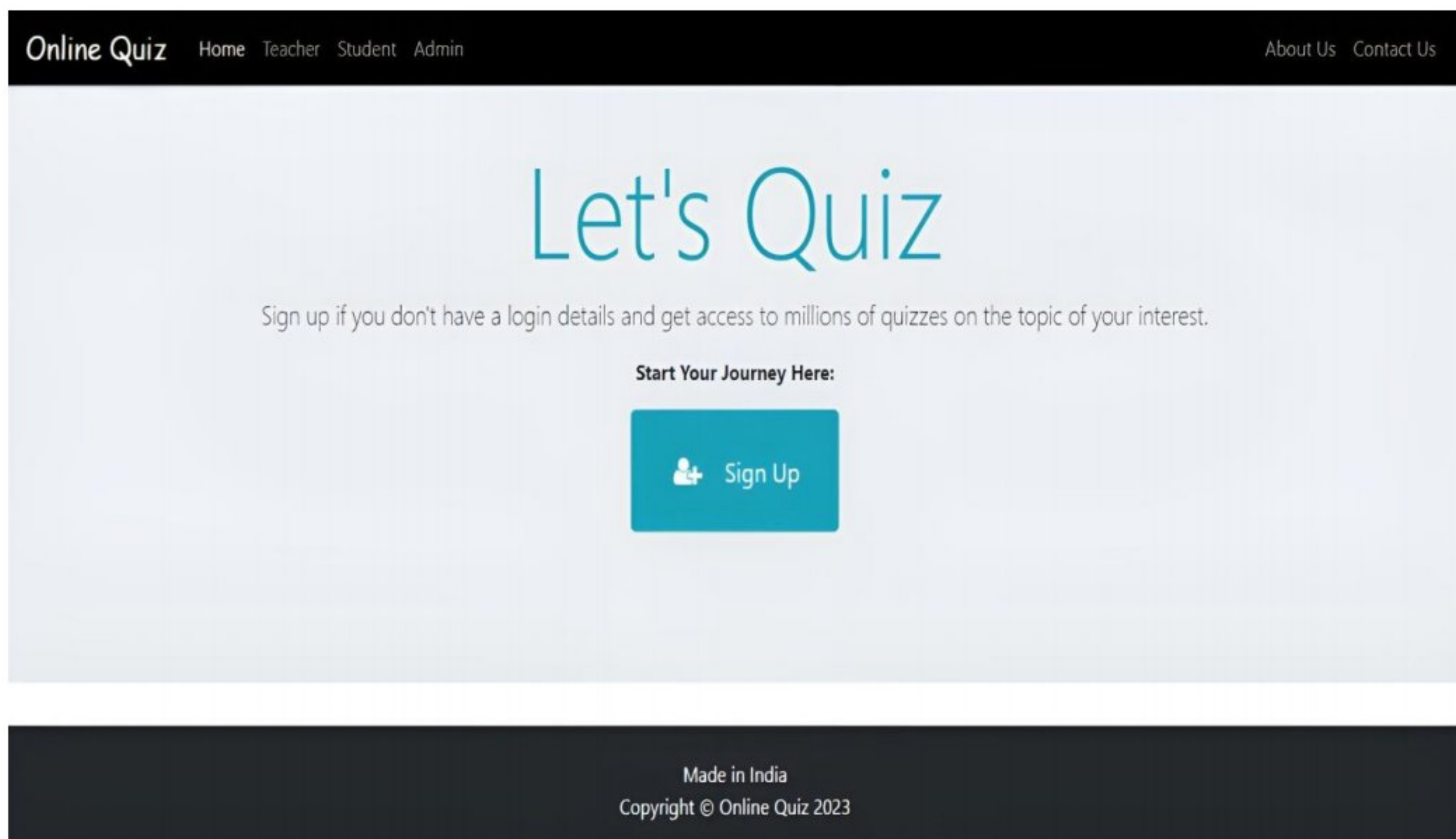


Fig 5.1 Home Page

ADMIN LOGIN PAGE

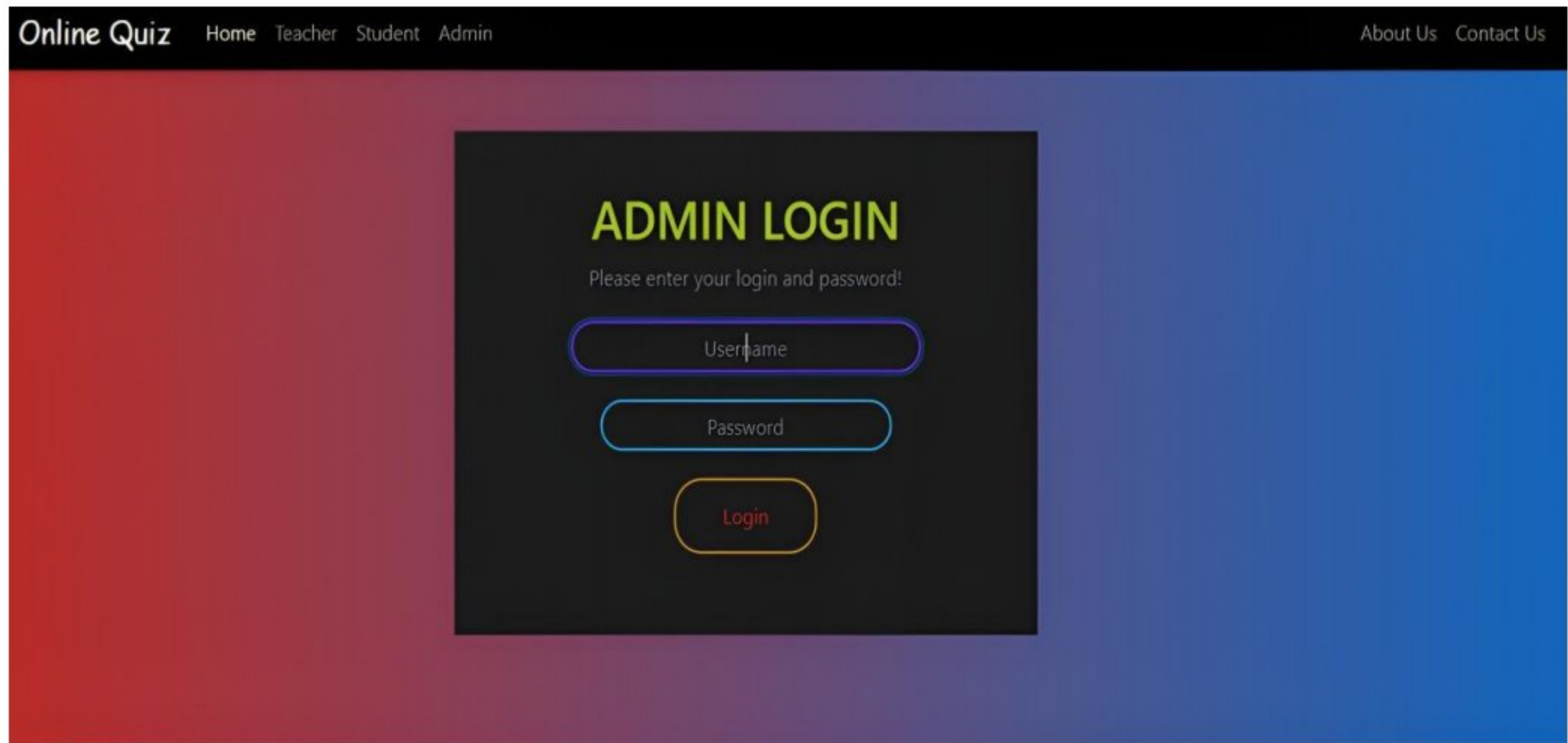


Fig 5.2 Admin Login Page

ADMIN DASHBOARD PAGE

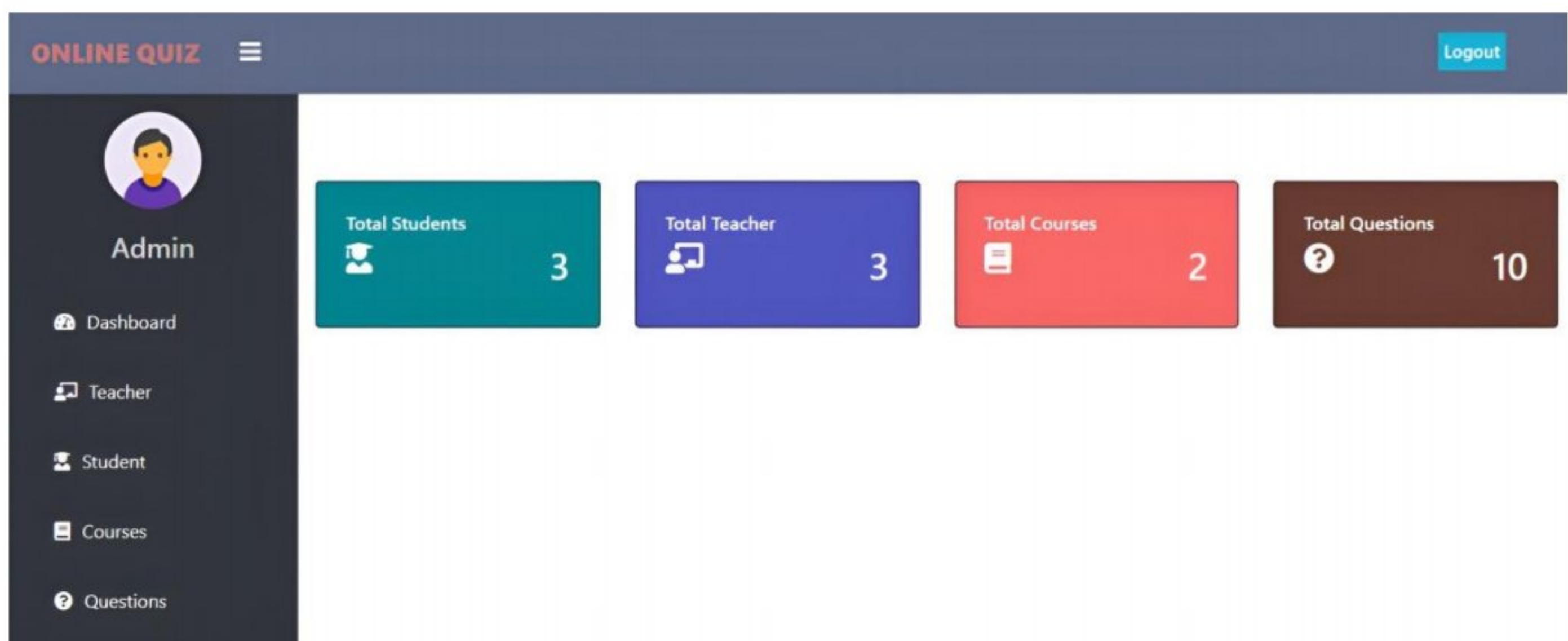


Fig 5.3 Admin Dashboard Page

SIGN UP PAGE

Online Quiz

HomeTeacherStudentAdmin

About UsContact Us

TEACHER SIGNUP

Username

username

Password

password

First Name

First Name

Last Name

Last Name

Mobile

Mobile

Address

Address

Profile Picture

Choose File

No file chosen

Sign Up

Fig 5.4 Sign up Page

LOGIN PAGE

Online Quiz

HomeTeacherStudentAdmin

About UsContact Us

TEACHER LOGIN

Please enter your login and password!

Username

Password

Login

Fig 5.5 Login Page

STUDENT DASHBOARD PAGE



Fig 5.6 Student Dashboard Page

TEACHER DASHBOARD PAGE



Fig 5.7 Teacher Dashboard Page

SQLite STUDIO

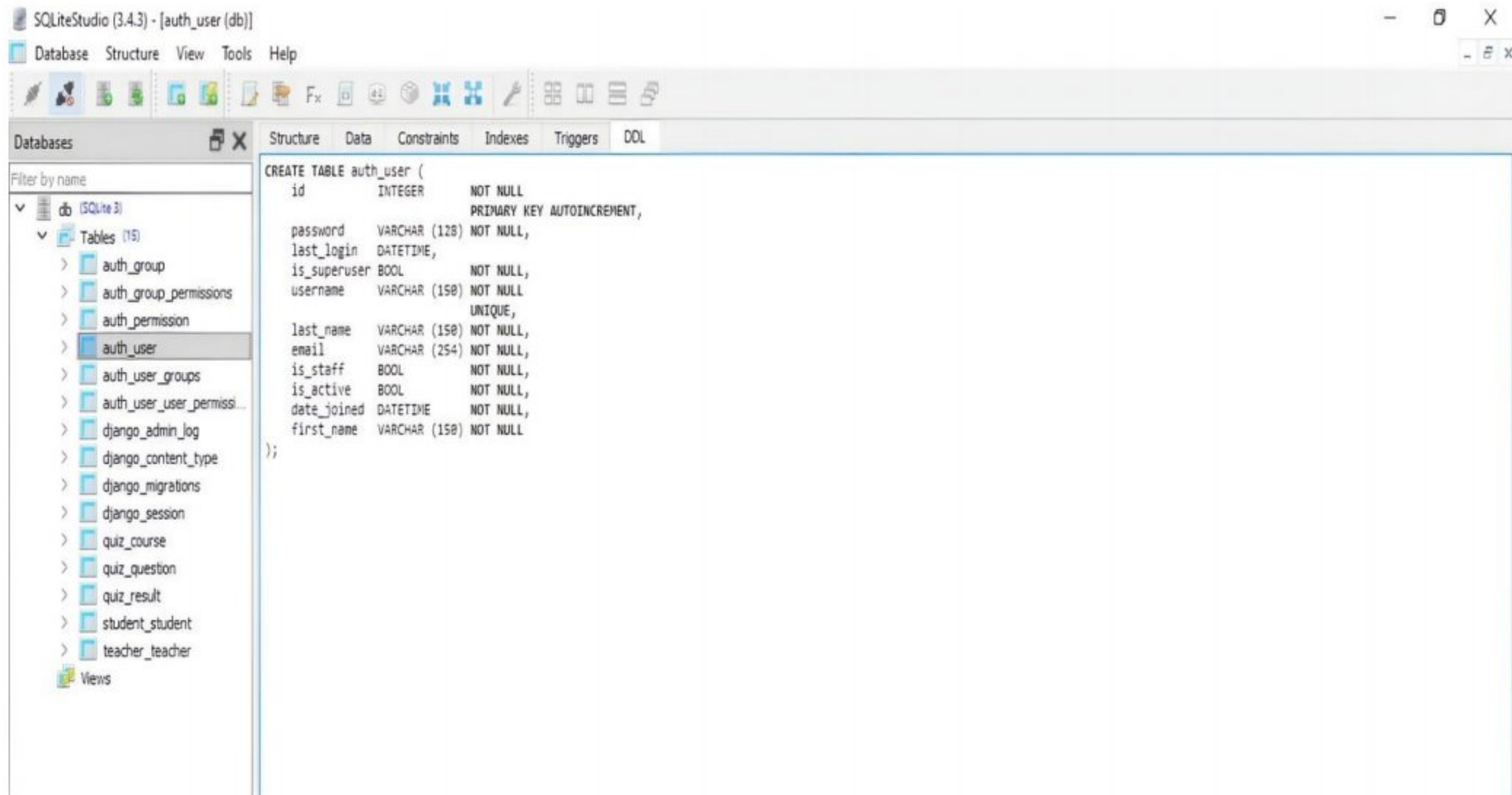


Fig 5.8 SQLite Studio

5.2 SAMPLE CODE

MANAGE.PY

```
manage.py > ...
1  #!/usr/bin/env python
2  """Django's command-line utility for administrative tasks."""
3  import os
4  import sys
5
6
7  def main():
8      os.environ.setdefault('DJANGO_SETTINGS_MODULE', 'onlinequiz.settings')
9      try:
10         from django.core.management import execute_from_command_line
11     except ImportError as exc:
12         raise ImportError(
13             "Couldn't import Django. Are you sure it's installed and "
14             "available on your PYTHONPATH environment variable? Did you "
15             "forget to activate a virtual environment?"
16         ) from exc
17     execute_from_command_line(sys.argv)
18
19
20 if __name__ == '__main__':
21     main()
22
```

LOGIN.HTML

```
1  <!DOCTYPE html>
2  {% load static %}
3  <html lang="en" dir="ltr">
4
5  <style>
6      .jumbotron{
7          margin-bottom: 0px;
8      }
9  </style>
10 </style>
11 <body>
12     {% include "quiz/navbar.html" %}
13     <br>
14     <section id="section-jumbotron" class="jumbotron jumbotron-fluid d-flex justify-content-center align-items-center">
15         <div class="container text-center">
16             <h1 class="display-1 text-info">Let's Quiz</h1>
17
18             <p class="lead">Sign up if you don't have a login details and get access to millions of quizzes on the topic of your interest.</p>
19             <p><strong> Start Your Journey Here:</strong></p>
20             <a href="/student/studentsignup" class="btn btn-lg btn-info" style="padding-right: 35px;"><i class="fa fa-user-plus" aria-hidden="true"></i>
21
22             <br><br><br>
23         </div>
24     </section>
25     {% include "quiz/footer.html" %}
26 </body>
27
28 </html>
29
```

STUDENTSIGNUP.HTML

```
1 <!DOCTYPE html>
2 {% load widget_tweaks %}
3 <html lang="en" dir="ltr">
4   <head>
5     <meta charset="utf-8">
6     <style>
7       form{
8         margin: 50px;
9       }
10    </style>
11  </head>
12  <body>
13    {% include "quiz/navbar.html" %}
14    <br><br><br>
15    <h3 style="text-align: center;color: rgb(192, 42, 129); ;">STUDENT SIGNUP</h3>
16    <form method="POST" autocomplete="off" enctype="multipart/form-data">
17      {% csrf_token %}
18      <div class="form-row">
19        <div class="form-group col-md-6">
20          <label for="username">Username</label>
21          {% render_field userForm.username|attr:'required:true' class="form-control" placeholder="username" %}
22        </div>
23        <div class="form-group col-md-6">
24          <label for="inputPassword4">Password</label>
25          {% render_field userForm.password|attr:'required:true' class="form-control" placeholder="password" %}
26        </div>
27      </div>
28      <div class="form-row">
29        <div class="form-group col-md-6">
30          <label for="first_name">First Name</label>
31          {% render_field userForm.first_name|attr:'required:true' class="form-control" placeholder="First Name" %}
32        </div>
33        <div class="form-group col-md-6">
34          <label for="last_name">Last Name</label>
35          {% render_field userForm.last_name|attr:'required:true' class="form-control" placeholder="Last Name" %}
36        </div>
37      </div>
38      <div class="form-row">
39        <div class="form-group col-md-6">
40          <label for="mobile">Mobile</label>
41          {% render_field studentForm.mobile|attr:'required:true' class="form-control" placeholder="Mobile" %}
42        </div>
43        <div class="form-group col-md-6">
44          <label for="address">Address</label>
45          {% render_field studentForm.address|attr:'required:true' class="form-control" placeholder="Address" %}
46        </div>
47      </div>
48      <div class="form-row">
49        <div class="form-group col-md-12">
50          <label for="profile_pic">Profile Picture</label>
51          {% render_field studentForm.profile_pic|attr:'required:true' class="form-control" placeholder="" %}
52        </div>
53      </div>
54      <button type="submit" class="btn btn-primary">Sign Up</button>
55    </form>
56    <br><br>
57    {% include "quiz/footer.html" %}
58  </body>
59 </html>
```

SQLite DATABASE

auth_user

Databases											
Structure											
Data											
Constraints											
Indexes											
Triggers											
DDL											
Grid view											
Form view											
Filter data											
Total rows loaded: 8											
id	password	last login	is superu	username	last name	email	is staff	is active	date joined	first name	
1	pbkdf2_sha256\$320000\$ccGrZKEZRTkOcDD4U6i5r\$5mWy...	2023-03-19 17:19:18.942298	1	Abhishek		raoabhishek@gmail.com	1	1	2023-03-18 13:50:20.877076		
2	pbkdf2_sha256\$320000\$g7PwDqCuCoKppViwA3tHg4\$...	2023-03-18 15:17:26.542361	0	Arjun	A		0	1	2023-03-18 14:05:49.705049	Arjun	
3	pbkdf2_sha256\$320000\$gz0Y89OLRyv7s1Czz1mmkQ\$Vpl...	2023-03-19 17:25:13.372297	0	Suja	R		0	1	2023-03-18 14:12:23.277720	Suja	
4	pbkdf2_sha256\$320000\$6tZFHidEEuIIY8wsX5x13LSMbZPif...	2023-03-18 14:35:13.275262	0	Ram	L		0	1	2023-03-18 14:35:02.839682	Ram	
5	pbkdf2_sha256\$320000\$EwKgeFZtu9N2RukK0umXjm\$fa...	NULL	0	Siva	V		0	1	2023-03-18 14:36:11.452783	Siva	
6	pbkdf2_sha256\$320000\$ccGrZKEZRTkOcDD4U6i5r\$5mWy...	2023-03-18 15:58:16.992388	1	Sandiya	J	sandiya@gmail.com	1	1	2023-03-18 14:36:11.452783	Sandiya	
7	pbkdf2_sha256\$320000\$0LhfHmruLwd1yTCY3yitlm\$...	2023-03-18 15:52:52.991607	0	Jayasudha	Y	jayasudha@gmail.com	0	1	2023-03-18 15:37:05.157149	Jayasudha	
8	pbkdf2_sha256\$320000\$0eudRn4gPflvlyNOsL8zYNSb0Wr...	2023-03-19 17:23:47.851147	0	Naveen	U		0	1	2023-03-18 15:55:09.931999	Naveen	

quiz_question

Databases									
Structure									
Data									
Constraints									
Indexes									
Triggers									
DDL									
Grid view									
Form view									
Filter data									
Total rows loaded: 10									
id	marks	question	option1	option2	option3	option4	answer	course id	
1	1	2 What is the maximum possible length of an identifier?	16	32	64	None of these above	Option4	1	
2	2	2 Who developed the Python language?	Zim Den	Guido van Rossum	Niene Stom	Wick van Rossum	Option2	1	
3	3	2 In which year was the Python language developed?	1967	1990	1981	1989	Option4	1	
4	4	2 In which language is Python written?	English	PHP	HTML	C	Option4	1	
5	5	2 Which one of the following is the correct extension of the Python file?	.py	.pY	.PY	All the above	Option1	1	
6	6	2 Who invented Java Programming?	Zim Den	James Gosling	Niene Stom	Wick van Rossum	Option2	2	
7	7	2 Which component is used to compile, debug and execute the java programs?	JRE	JIT	JDK	JV	Option3	2	
8	8	2 What is the extension of java code files?	.js	.txt	.class	.java	Option4	2	
9	9	2 What is the extension of compiled java classes?	.js	.txt	.class	.java	Option3	2	
10	10	2 Which of these are selection statements in Java?	break	continue	for()	if()	Option4	2	

student_student

Databases		Structure	Data	Constraints	Indexes	Triggers	DDL
Filter by name		Grid view					
db (SQLite 3)		Form view					
Tables (15)		Filter data					
auth_group		Total rows loaded: 3					
auth_group_permissions							
auth_permission							
auth_user							
auth_user_groups							
auth_user_user_permiss...							
django_admin_log							
django_content_type							
django_migrations							
django_session							
quiz_course							
quiz_question							
quiz_result							
student_student							
teacher_teacher							
Views							

id	profile_pic	address	mobile	user id
1	profile_pic/Student/360_F_229758328_7x8jwCwjtbMmC6rgFzLFhZoEpLobB6L8.jpg	ABC Street, Chennai.	9176252201	2
2	profile_pic/Student/360_F_229758328_7x8jwCwjtbMmC6rgFzLFhZoEpLobB6L8_mqHdDUL.jpg	WSX Street, Kovai.	9361612320	4
3	profile_pic/Student/360_F_229758328_7x8jwCwjtbMmC6rgFzLFhZoEpLobB6L8_EBEcnZY.jpg	KYI Street, Kovai.	789412530	10

teacher_teacher

Databases		Structure	Data	Constraints	Indexes	Triggers	DDL
Filter by name		Grid view					
db (SQLite 3)		Form view					
Tables (15)		Filter data					
auth_group		Total rows loaded: 3					
auth_group_permissions							
auth_permission							
auth_user							
auth_user_groups							
auth_user_user_permiss...							
django_admin_log							
django_content_type							
django_migrations							
django_session							
quiz_course							
quiz_question							
quiz_result							
student_student							
teacher_teacher							
Views							

id	profile_pic	address	mobile	status	user id	salary
1	profile_pic/Teacher/360_F_229758328_7x8jwCwjtbMmC6rgFzLFhZoEpLobB6L8.jpg	ABC Street, Trichy.	7299215123	1	3	45000
2	profile_pic/Teacher/360_F_229758328_7x8jwCwjtbMmC6rgFzLFhZoEpLobB6L8_QkFKnjd.jpg	IJK Street, Chennai.	7299541236	1	5	50000
3	profile_pic/Teacher/360_F_229758328_7x8jwCwjtbMmC6rgFzLFhZoEpLobB6L8_Up5hvYe.jpg	OPI Street, Chennai	74563189	1	9	96900

CHAPTER-6

CONCLUSION

6.1 CONCLUSION:

This project focuses more on the problems faced by the lecturers due to the manual system which are available now is not efficient. For instance, the student has no pencil and no pen to do quiz on time. In manual system the lecturer has to conduct the quiz at a particular time and at a place. Lecturer also needs to spend more time on grading. This problem can be solved by Online Quiz Application. This kind of system can replace the manual system in order to increase the efficiency of the quiz management.

This online quiz system provides facility to conduct online examination worldwide. 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. It can be possible to make it more users friendly by adding more variety of functions to it. Administrator has a 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. To conclude, this is a simple Online MCQ Quiz which able a teacher to punch MCQ question to system which will be store in SQL Server database and able the student to attempt any test for once. The marks of student will be calculated according to questions they attempt and will be displayed by the system to teachers and students.

6.2 Future Work:

Every developer has aims to improve their system or project for the next project. For this system, the improvements are needed on question type such as essay and random short answer. A lot of improvements need to be done on the interface part and admin, and user module. The process of performance system on the coding with database server will be more efficient if these improvements are achieved. Besides that, the improvements on the interface part and functionality system can prevent the error while running the system.

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