

# **QUIZ SITE ONLINE QUIZ SITE**

**A PROJECT REPORT SUBMITTED IN PARTIAL  
FULFILMENT OF REQUIREMENT  
FOR THE AWARD OF THE DEGREE**

**MASTER OF COMPUTER APPLICATIONS (MCA)**

**OF**

**MAHATMA GANDHI UNIVERSITY, KOTTAYAM**

**BY**

**JIBIN JOSEPH  
Reg No: 22PMC130**



**MARIAN COLLEGE  
KUTTIKKANAM**

**(AUTONOMOUS)**

**MAKING COMPLETE**

**Marian College Kuttikkanam Autonomous**

**Peermade, Kerala – 685 531**

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**JIBIN JOSEPH**  
**Reg No : 22PMC130**

**Under the guidance of**

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**PG Department of Computer**  
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**Kuttikkanam Autonomous**



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# **PG DEPARTMENT OF COMPUTER APPLICATIONS**

## **Marian College Kuttikkanam Autonomous**

**MAHATMA GANDHI UNIVERSITY, KOTTAYAM**

**KUTTIKKANAM – 685 531, KERALA.**

### **CERTIFICATE**

This is to certify that the project work entitled

#### **ONLINE QUIZ SITE**

is a bonafide record of work done by

#### **JIBIN JOSEPH**

**Reg. No. 22PMC130**

In partial fulfillment of the requirements for the award of Degree of

#### **MASTER OF COMPUTER APPLICATIONS [MCA]**

During the academic year 2022-2024

**Mrs. Renny Jose**

Assistant Professor

PG Department of Computer Applications

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**Examiner**

**Examiner**

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JIBIN JOSEPH

## **ABSTRACT OF ONLINE QUIZ SITE**

The project: "**Online Quiz Site**" developed to overcome the time consuming problem of manual system. Apart from that in current system, checking the answer sheets after taking test, waste the examiners time, so this application will check the correct answer and save the examiner time and carry the examination in an effective manner. Its a collection of number of different types of quizzes like technical, games, sports, etc. User can access all of the quizzes. There is a limited number of questions , also user can see the results.

The abstract begins by discussing the increasing prevalence of online quizzes and their role in assessing knowledge in virtual learning environments. It emphasizes the convenience and accessibility of online quizzes, as they can be easily administered through web-based platforms, making them suitable for remote and distance learning. Furthermore, the abstract explores the advantages of online quizzes from an instructional perspective. It discusses how online quizzes can enhance learner engagement, promote active learning, and reinforce important concepts. The abstract also mentions the ability to customize quizzes based on individual learner needs and track progress over time.

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# **1. INTRODUCTION**



## **1.1 Problem Statements**

Inefficient and ineffective assessment methods in traditional educational settings pose challenges for educators and learners. Current paper-based or in-person quiz formats are time-consuming, resource-intensive, and limit the ability to provide immediate feedback. There is a need for an online quiz site that addresses these limitations and provides a user-friendly platform for creating, administering, and evaluating quizzes while promoting engagement, interactivity, and personalized learning experiences. This problem statement highlights the shortcomings of traditional assessment methods, such as paper-based quizzes, which often require manual grading and lack real-time feedback. It emphasizes the need for an online quiz site that can streamline the assessment process, making it more efficient and effective.

## **1.2 Proposed System**

The proposed system for the quiz site is a comprehensive online platform that offers a user-friendly interface for creating, administering, and evaluating quizzes. It incorporates advanced features to streamline the assessment process and provide an engaging learning experience. The system facilitates automated grading and instant feedback, eliminating the need for manual evaluation. Additionally, it offers personalized learning experiences by adapting quiz difficulty levels based on individual performance.

## **1.3 Features of the Project**

- Students and Colleges can register and perform their functions
- Students and colleges can attend the quiz
- Admin can add and delete users and quizzes

## **2. FUNCTIONAL REQUIREMENTS**

## **FUNCTIONAL REQUIREMENTS**

### **1.User Registration**

- The system shall allow a non-registered user to create a secure account.
- The system shall ask the user for a username and password.
- The system shall store the information in the database.

### **2.User login**

- The system shall allow a registered user to log-in to their account.
- The system shall require a username and password from the user.
- The system will verify the username and password, and the user will be considered “logged-in”.

### **3.Admin Dashboard**

The admin dashboard in a quiz site is a powerful tool that enables administrators or educators to have complete control over the platform. It serves as a centralized hub where they can perform various tasks related to quiz creation, user management, analytics, and overall system administration.

### **4. Ability to add questions and view the questions**

With the "Add Questions" feature, educators can easily input new questions into the system. Once questions are added, the "View Questions" feature enables educators to review the created question bank. They can navigate through the list of questions and access the details of each question, including the question prompt, answer options, correct answer.

### **5. Storing of each results under each user**

Storing each result under each user in a quiz site is an essential aspect of tracking individual performance and providing personalized feedback. It involves creating a database structure that associates each quiz attempt with the corresponding user

### **6. Previous quiz scores can be viewed on user page**

The feature of viewing previous quiz scores on the user page in a quiz site allows users to track and review their past quiz performances. It provides a convenient way for users, whether learners or participants, to access and analyze their quiz results over time.

## **7. Questions can be given a category**

In a quiz site, questions can be categorized to organize and classify them based on different criteria. Categorizing questions allows for better organization and easy navigation within the quiz site. It helps users, including educators and learners, to locate specific types of questions or topics more efficiently.

## **8. The multiple-choice question type**

The multiple-choice question type is a commonly used format in quiz sites that allows users to select the correct answer from a list of predefined options. This question type presents a statement or a question, followed by a set of answer choices, typically labeled with letters or numbers (e.g., A, B, C, D). Users must choose the option they believe is the correct answer.

## **9. Logout**

### **3. NON-FUNCTIONAL REQUIREMENTS**

## **NON-FUNCTIONAL REQUIREMENTS**

### ***a. Reliability***

The reliability of the overall project depends on the reliability of the separate components. The main pillar of reliability of the system is the backup of the database which is continuously maintained and updated to reflect the most recent changes, Also the system will be functioning inside a container. Thus, the overall stability of the system depends on the stability of container and its underlying operating system.

### ***b. Availability***

The system should be available at all times, meaning the user can access it using a web browser, only restricted by the down time of the server on which the system runs. A customer friendly system which is accessible for people around the world should work 24 hours. In case of a hardware failure or database corruption, a replacement page will be shown. Also, in case of a hardware failure or database corruption, backup of the database should be retrieved from the server and saved by the Organizer. Then the services will be restarted. It means 24 X 7 availability.

### ***c. Maintainability***

A commercial database is used for maintaining the database and the application server takes care of the site. In case of a failure, a re-initialization of the project will be done. Also, the software design is being done with modularity in mind so that maintainability can be done efficiently.

### ***d. Supportability***

The code and supporting modules of the system will be well-documented and easy to understand. Online documentation can in help system requirements.

## **4. FEATURES AND HIGHLIGHTS**

## 4.1 Features

**Login and registration :** The user will be able to register themselves using Django users. The user will be redirected to the user page after logging in. The admin adds the employee using the Django admin interface. Both admin and user will be redirected to their respective pages after logging in from the interface.

**Add user details:** The user will be able to add his/her details after logging in and can also update their details whenever they would like to using the interface.

**Add questions and view the questions :** With the "Add Questions" feature, educators can easily input new questions into the system. Once questions are added, They can navigate through the list of questions and access the details of each question, including the question prompt, answer options, correct answer.

**Storing results:** Storing each result under each user in a quiz site is an essential aspect of tracking individual performance and providing personalized feedback

**Category based:** Questions can be given a category

**Manage user:** admin can see the user details and the results of each users, also admin can see the total number of users, courses and questions

**Update user:** Admin can update the user details



## **5. TECHNICAL ASPECTS**

## Architecture of Project

### ***1. Presentation Layer***

Templates: HTML templates are used to define the structure and layout of the user interface. Django's template engine allows you to dynamically populate the templates with data.

### ***2. Application Layer***

Controllers: In Django, controllers are implemented as views, which handle the request/response flow and control the overall behavior of the application.

### ***3. Business Logic Layer***

Models: Django's models define the data structure and business logic of the application. Models represent entities like users, bookings, flights, hotels, etc. They handle database operations, such as querying, inserting, updating, and deleting data. Models can also include methods to perform complex business logic.

### ***4. Jazmin***

Django Jazmin is a customizable and modern admin interface for Django applications. It provides an alternative user interface for the Django admin site with a more visually appealing design and additional features. Jazmin aims to enhance the user experience and improve the productivity of developers working with Django.

By installing and configuring django-jazzmin in your Django project, you can customize the admin interface by changing themes, layouts, icons, and other visual elements. It offers features such as responsive design, drag-and-drop sorting, inline editing, and support for various third-party Django packages. To use Django Jazzmin, you typically need to install it using a package manager like pip, add it to your Django project's settings, and configure it according to your preferences.

Here's a basic example of how to install Django Jazzmin using pip:

**pip install django-jazzmin**

Once installed, you would need to add 'jazzmin' to the INSTALLED\_APPS list in your Django project's settings.py file:

```
INSTALLED_APPS = [
    ...
    'jazzmin',
    ...
]
```

Afterwards you can customize Django Jazzmin by modifying the settings in your Django project's settings.py file.

## 5. Django-widget-tweaks

Django-widget-tweaks is a popular third-party package for the Django web framework that provides additional functionality and flexibility in working with form widgets and form rendering. It offers a set of template tags that allow developers to easily modify and customize the rendering of form fields and widgets.

The primary purpose of Django-widget-tweaks is to enhance the control and customization options for form elements in Django templates. It provides a convenient way to add CSS classes, attributes, and other modifications to form fields without having to write extensive HTML markup or modify form definitions in Python code.

## 5. *Data Access Layer*

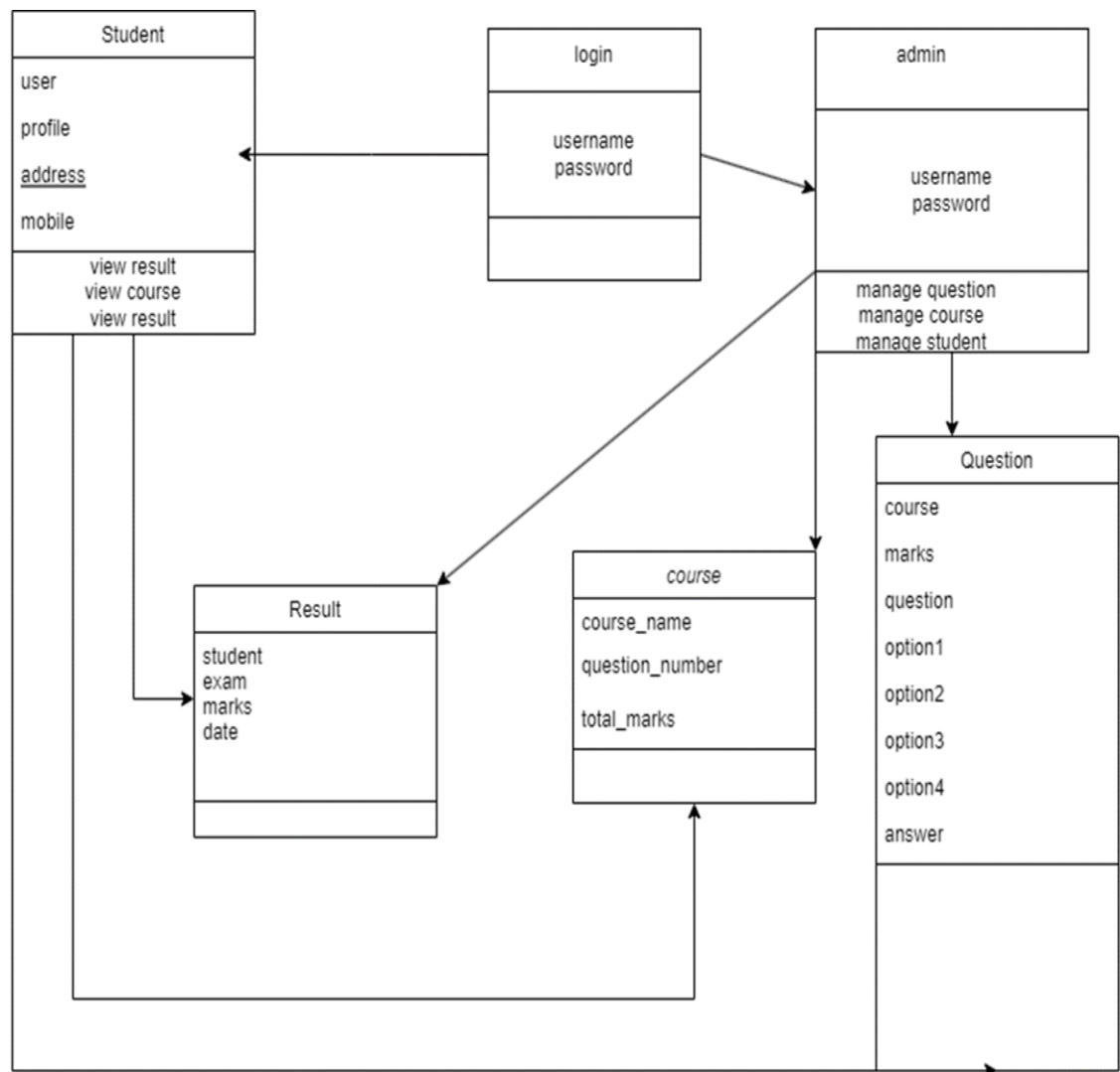
**Database:** Django integrates with various databases, allowing you to define and manage the application's data schema. You can use Django's Object-Relational Mapping(ORM) to interact with the database and perform CRUD operations.

## 6. *Database Models*

Django's models serve as both business logic entities and database models. They define the structure of the database tables and provide an abstraction layer for interacting with the database .

## Database

### Class Diagram



# **6. CHALLENGES**

### **User interface design and usability**

Designing an intuitive and user-friendly interface that accommodates different user roles and provides a smooth feedback submission experience can be challenging. Balancing the aesthetics, usability, and responsiveness of the system to cater to various devices and screen sizes can also pose difficulties.

### **Testing and quality assurance:**

Ensuring the system functions correctly, identifying and resolving bugs or issues, and ensuring the system meets the desired quality standards may pose difficulties during the project.

### **User-specific permissions and access control**

The feedback system needed to provide different levels of access and permissions based on user roles (students, faculty). Configuring granular access control and managing permissions for different user types within the admin interface presented a challenge.

### **Validation Mechanisms**

Implementing validation mechanisms helps ensure that user input is accurate and consistent. You need to validate user data at various stages, such as during registration, booking, or updating information. Validation can include for checking validation in email, phone number, password, pin number etc.

### **Database Management**

Designing an efficient database schema and managing the database operations can be complex. You need to carefully plan the structure of your database, define relationships between entities handle data integrity, and optimize queries for performance.

# **7.FUTURE ENHANCEMENTS**

**1.Time-Limited Quizzes:** Time-limited quizzes are a type of online assessment where users are given a specific amount of time to complete the quiz. Once the time limit expires, the quiz is automatically submitted, and the user's responses are evaluated. This approach adds a time constraint to the quiz-taking process and introduces an element of urgency and time management.

**2.Analytics and Insights:** Build a comprehensive analytics dashboard for administrators to track and analyze quiz performance, including statistics such as average scores, top-performing quizzes, or student progress over time. This data can help identify trends, strengths, and areas of improvement in the learning process.

**3.Social Interactions:** Social interactions in a quiz app can enhance user engagement and create a sense of community among users. Incorporating social features allows users to interact, compete, and collaborate with each other, making the quiz experience more interactive and enjoyable.

Here are some ways social interactions can be incorporated into a quiz app:

- Leaderboards
- Challenges and Tournaments
- Sharing Results
- Friend Invitations
- Group quizzes

**4.Mobile application:** A mobile application for quizzes provides users with the convenience of accessing and participating in quizzes anytime and anywhere using their mobile devices. Here are some key aspects and benefits of a mobile application in the context of a quiz:

- Accessibility and Convenience
- Offline Mode
- Push Notifications
- Enhanced User Experience
- Gamification Elements



## **8.CONCLUSION**

In conclusion, the Django quiz app project presents a robust and customizable platform for creating and managing quizzes. The app allows administrators to add courses, questions, and options, providing flexibility in designing quizzes for different subjects and topics. Students can access the quizzes, attempt them, and receive instant feedback on their performance. This website consist of a user friendly interface from where he/she will be able to attend the quizzes. In summary, the Django quiz app project serves as a foundation for building an interactive and comprehensive platform for quizzes and assessments. With the provided code and suggested future enhancements, the app can be further developed to meet specific requirements and provide an enriched learning experience for users.

Github link: <https://github.com/jibinxg/online-quiz.git>

## **9.REFERENCES**

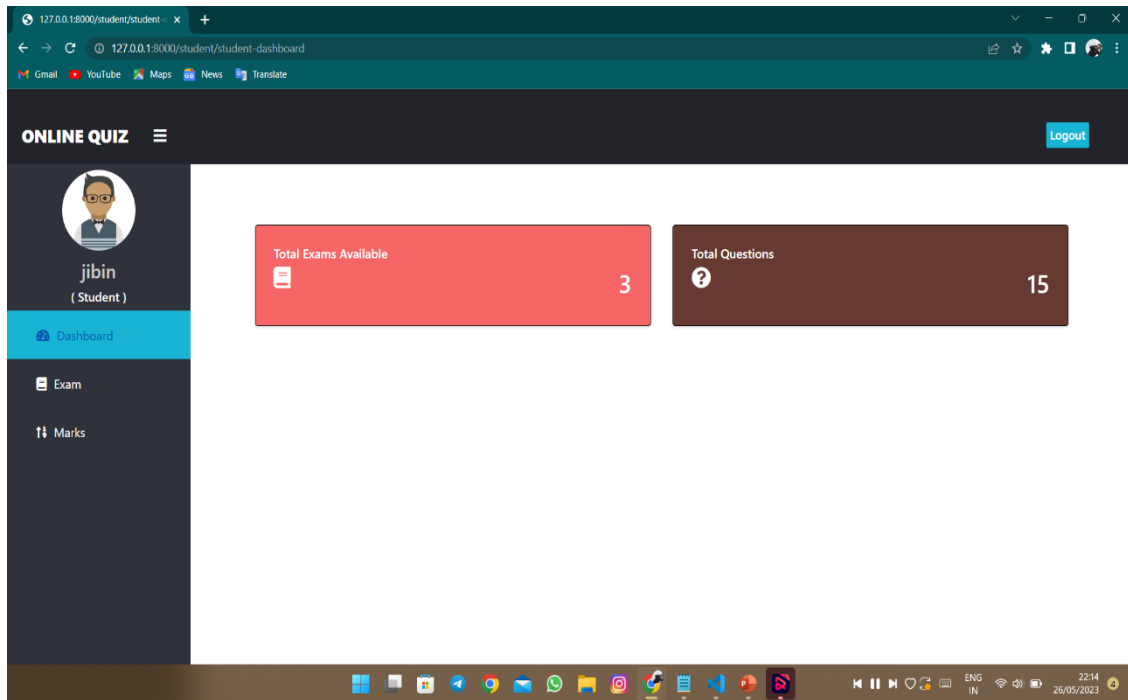
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- <https://www.youtube.com/watch?v=1aje8XM6DBc&t=2738s>
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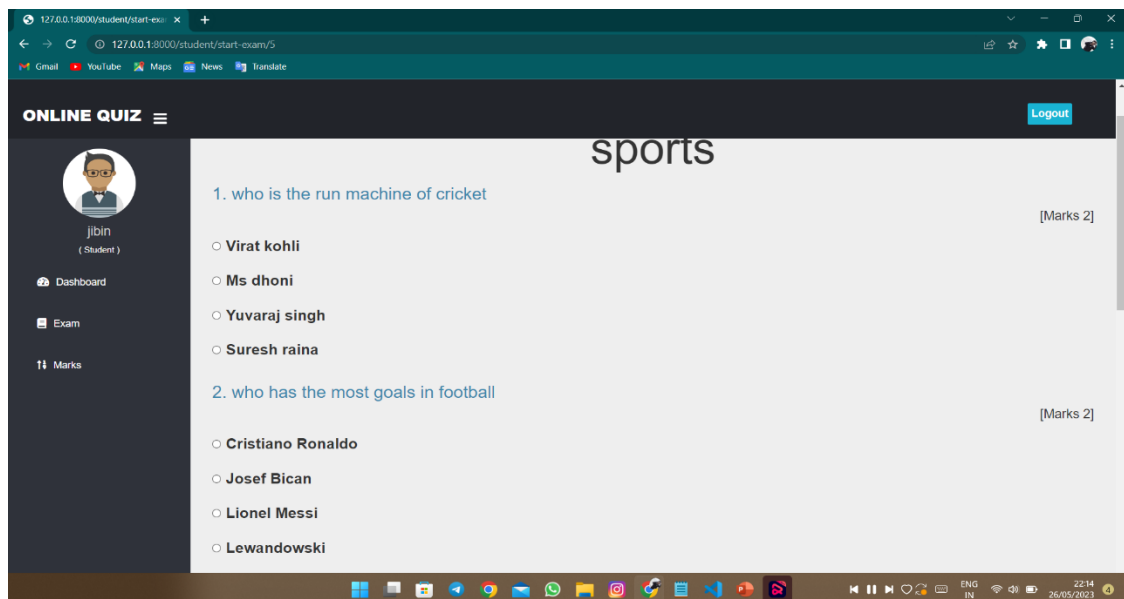
# ANNEXURE

## A. SCREENSHOT

### 1.USER HOME PAGE



### 2.USER EXAM PAGE



### 3.USER VIEW MARKS

**ONLINE QUIZ** Logout

**jibin**  
(Student)

- Dashboard
- Exam
- Marks

Exam Name	Total Marks	Attempt	Exam Date
mathematics	8	Attempt 1	May 25, 2023, 8:15 p.m.
mathematics	10	Attempt 2	May 25, 2023, 8:15 p.m.
mathematics	10	Attempt 3	May 26, 2023, 10:18 a.m.
mathematics	8	Attempt 4	May 26, 2023, 12:53 p.m.
mathematics	8	Attempt 5	May 27, 2023, 12:43 p.m.

### 4.ADMIN HOMEPAGE

**ONLINE QUIZ** Logout

**Admin**

- Dashboard
- Student
- Courses
- Questions




Total Students  
1

Total Courses  
3

Total Questions  
15

## 5.ADMIN USER VIEW

The screenshot shows the 'Admin User View' of the 'ONLINE QUIZ' application. The browser address bar displays '127.0.0.1:8000/admin-view-student'. The application has a dark sidebar with a menu containing 'Dashboard', 'Student', 'Courses', and 'Questions'. The main content area features a 'Students' table with the following data:

Name	Profile Picture	Mobile	Address	Update	Delete
jibin joseph		7306059054	asdfghjklqwertyulopzxcvbnm		

## 6.ADMIN ADD COURSE

The screenshot shows the 'Admin Add Course' interface of the 'ONLINE QUIZ' application. The browser address bar displays '127.0.0.1:8000/admin-add-course'. The application has a dark sidebar with a menu containing 'Dashboard', 'Student', 'Courses', and 'Questions'. The main content area features a form titled 'ADD COURSE' with the following fields:

- Course Name:
- Total Question:
- Total Marks:

An 'ADD' button is located below the form.



## 7.ADMIN ADD QUESTIONS

**ONLINE QUIZ** Logout

**ADD QUESTION**

**Course**

**Question**

**Marks**

**Option 1**

**Option 2**

**Option 3**

**Option 4**

## 8.ADMIN USER RESULT VIEW

**ONLINE QUIZ** Logout

**View Marks**

Exam Name	Total Marks	Attempt Number	Exam Date
mathematics	8	Attempt 1	May 25, 2023, 8:15 p.m.
mathematics	10	Attempt 2	May 25, 2023, 8:15 p.m.
mathematics	10	Attempt 3	May 26, 2023, 10:18 a.m.
mathematics	8	Attempt 4	May 26, 2023, 12:53 p.m.
mathematics	8	Attempt 5	May 27, 2023, 12:43 p.m.

## 9. DJANGO-ADMIN

