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Online Quiz Application:  
Streamlining Educational  
Assessment  
(SEMESTER -VII)

Submitted by:

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**Title:** Online Quiz Application: Streamlining Educational Assessment

**Objective:** Create a small application by selecting relevant system environment / platform and programming languages. Narrate concise Test Plan consisting features to be tested and bug taxonomy. Prepare Test Cases inclusive of Test Procedures for identified Test Scenarios. Perform selective Black-box and White-box testing covering Unit and Integration test by using suitable Testing tools. Prepare Test Reports based on Test Pass/Fail Criteria and judge the acceptance of application developed.

### **Software and Hardware Requirements:**

Software Requirements:

Operating System: Windows 7 or later, macOS, Linux.

Backend Framework: Django (Python web framework).

Database Management System: SQLite.

Frontend Technologies: HTML5, CSS3, JavaScript.

Web Browser: Google Chrome, Mozilla Firefox, Safari, Microsoft Edge.

Hardware Requirements:

Processor: Dual-core 2.0 GHz or higher.

RAM: Minimum 4 GB.

Storage: At least 20 MB free disk space.

Network: Stable internet connection.

### **Introduction:**

The proposed application aims to address the need for a user-friendly and efficient online quiz platform. In the academic and professional realms, quizzes play a crucial role in assessing knowledge and learning progress. This application will provide a centralized platform for quiz creation, management, and participation, catering to educational institutions, trainers, and individuals seeking an accessible and customizable quiz experience.

### **Theory:**

The application's primary purpose is to streamline the creation and participation in online quizzes. Users, including educators and learners, can effortlessly create, categorize, and take quizzes. The

scope covers key features like user authentication, quiz creation and management, quiz-taking functionality, and a responsive user interface.

Online quizzes hold significance due to their advantages, such as real-time assessment, instant feedback, and the ability to engage a diverse audience. The application capitalizes on these benefits to enhance the overall quiz-taking experience for creators and participants in educational and training contexts.

Ensuring user authentication and security is paramount to maintaining the integrity of quiz results and user data. The application implements robust authentication mechanisms to protect user accounts and sensitive information. Additional measures are in place to prevent unauthorized access and safeguard user data privacy.

A responsive and intuitive user interface is crucial for a positive user experience. The application adopts a user-centric design approach, ensuring easy navigation, clear information presentation, and compatibility with various devices and screen sizes. This commitment enhances accessibility and usability for a diverse user base.

Efficient database management is critical for storing and retrieving quiz data. The application utilizes SQLite, a lightweight relational database known for its simplicity and suitability for small to medium-scale applications. This choice ensures reliable data storage and retrieval, contributing to the overall performance of the application.

## **Results:**

### **Test Plan:**

Features to be Tested:

#### 1. User Authentication:

- Verify that users can register, login, and logout successfully.
- Ensure proper handling of invalid credentials.

#### 2. Quiz Creation and Management:

- Test the creation of new quizzes.
- Verify the ability to edit and delete quizzes.
- Ensure proper categorization of quizzes.

#### 3. Quiz Taking:

- Test the functionality of users taking quizzes.
- Ensure correct calculation of scores.
- Validate the submission and scoring process.

#### 4. User Interface:

- Validate the responsiveness of the application on different devices.
- Ensure proper navigation between different quiz-related pages.

### **Bug Taxonomy:**

#### Critical Bugs:

- Application crashes or becomes unusable during quiz submission.
- Security vulnerabilities in authentication.

#### Major Bugs:

- Incorrect quiz scores calculation.
- Issues with quiz creation and editing.

#### Minor Bugs:

- UI inconsistencies (e.g., misaligned buttons).

- Non-critical error messages.

### **Test Cases:**

#### 1. User Authentication:

- Test Case 1: Verify that a new user can successfully register.
- Test Case 2: Check that a registered user can log in using valid credentials.
- Test Case 3: Ensure that the application prevents login with incorrect credentials.

#### 2. Quiz Creation and Management:

- Test Case 4: Test the creation of a new quiz and its proper display.
- Test Case 5: Check if editing a quiz updates the details correctly.
- Test Case 6: Verify that a quiz can be deleted successfully.

#### 3. Quiz Taking:

- Test Case 7: Test the functionality of users taking quizzes.
- Test Case 8: Ensure correct scoring of quiz responses.
- Test Case 9: Validate the submission process and display of results.

#### 4. User Interface:

- Test Case 10: Test the responsiveness of the application on different devices.
- Test Case 11: Check navigation between different quiz-related pages.

### **Test Procedures for Identified Test Scenarios:**

#### User Authentication:

- For each test case, enter valid or invalid credentials and observe the system's response.

#### Quiz Creation and Management:

- Create, edit, and delete quizzes, and verify the changes on the UI and in the database.

#### Quiz Taking:

- Simulate users taking quizzes, providing different responses to test scoring.

#### User Interface:

- Access the application from different devices and browsers, checking for layout consistency.

### **Testing Tools:**

- Unit Testing (White-box): Django's built-in testing tools for testing Python code.
- Integration Testing (Black-box): Selenium for automated browser testing.
- User Interface Testing (Black-box): CrossBrowserTesting or BrowserStack for testing on various browsers.

### **Test Reports:**

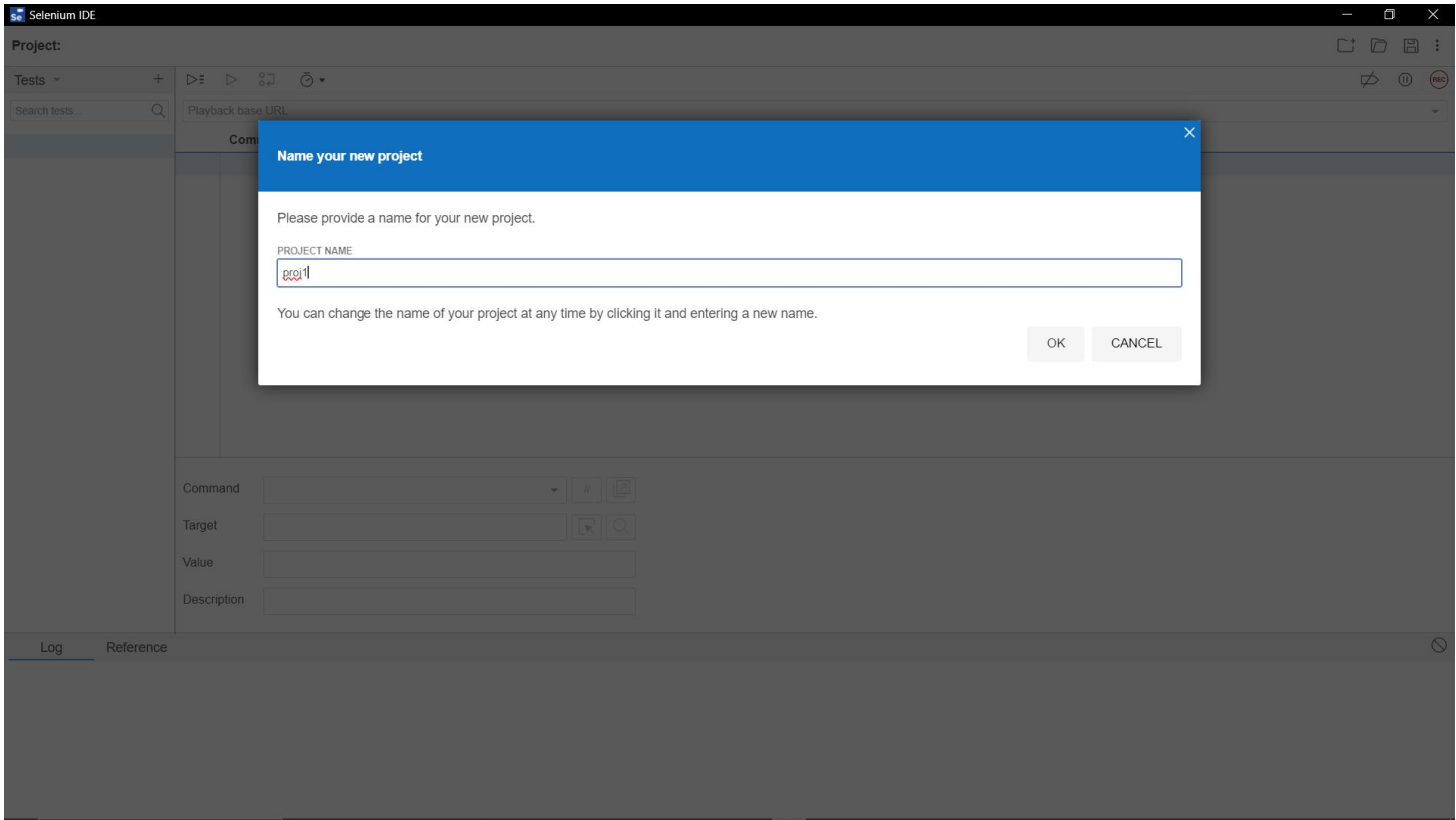
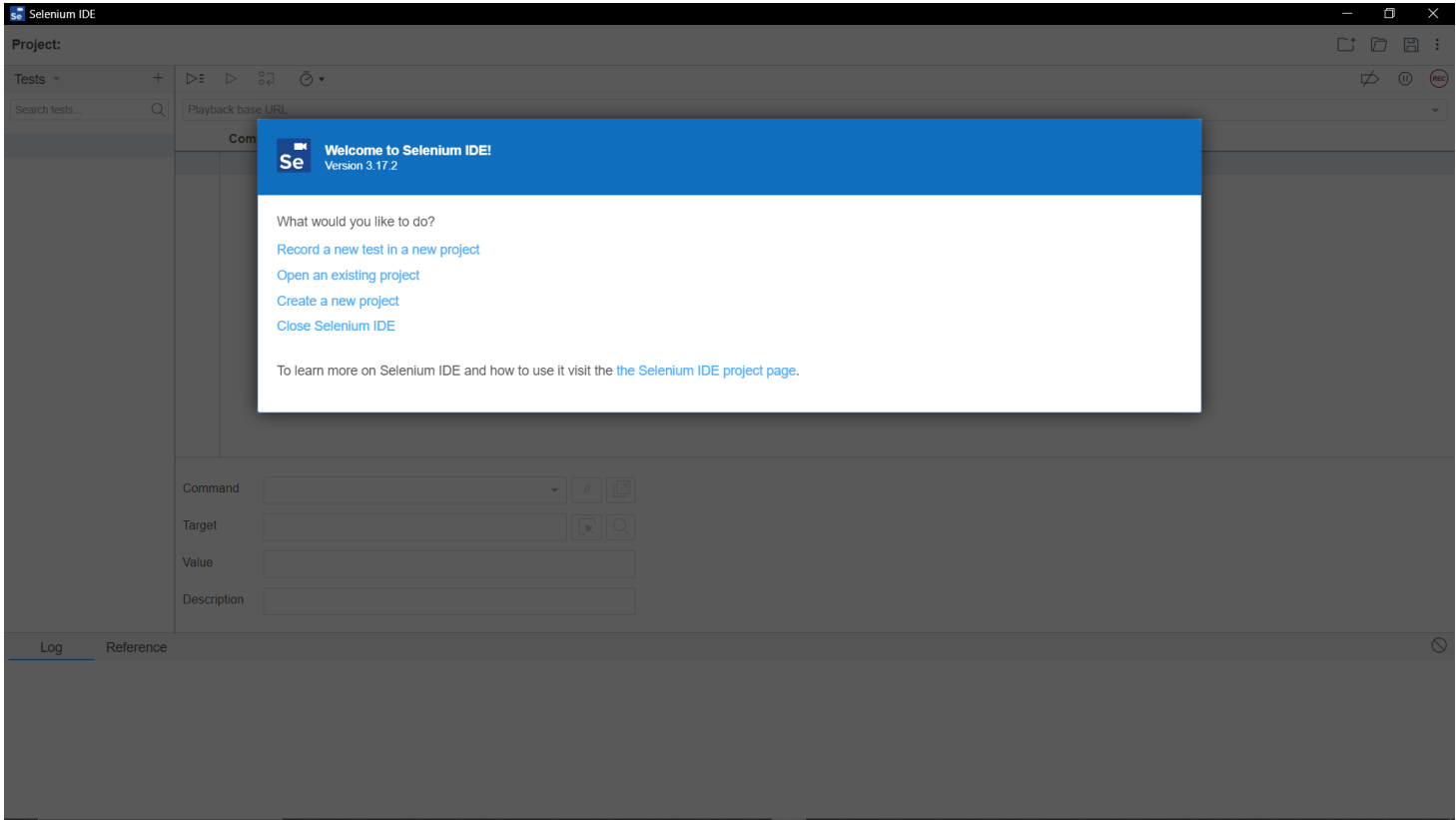
- Generate reports after each testing phase.
- Clearly state if a test case passes or fails.
- Provide details on failed test cases, including steps to reproduce and screenshots.

### **Acceptance of Application:**

- The application is considered acceptable if all critical test cases pass.
- Major and minor bugs should be documented and addressed in subsequent development cycles.
- The final acceptance is based on the resolution of critical and major issues, meeting the defined acceptance criteria, and achieving the desired performance and usability.

**Conclusion:** The Online Quiz Application stands as a user-centric solution, enhancing the educational experience through streamlined quiz creation and participation. With a focus on real-time assessment and user-friendly design, it addresses the diverse needs of educators and learners.

The application's significance lies in its ability to engage a wide audience, providing dynamic evaluation and instant feedback. Strong user authentication and security measures ensure the integrity and privacy of data, fostering a secure environment. The responsive user interface promotes accessibility, while efficient SQLite database management contributes to overall performance. The application is positioned as a valuable tool in the evolving landscape of online education, promising a modern and engaging quiz-taking experience for users.







# Preparing to run your test

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github.com/monunarnaware17


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Overview Repositories 4 Projects Packages Stars



Monu Narnaware

monunarnaware17

Edit profile

4 followers · 6 following

Pune Institute Of Computer Technology, Dhankawadi Pune

Pune

<https://www.linkedin.com/in/monunarnaware17/>

<https://youtu.be/o1EYd87SXEa>

Popular repositories

Jokes-Extension

Public

jokes Extension for making people laugh anytime

CSS

Car-Dealership

Public

An online Car Dealership platform where clients can chose their favorite by giving their choices.

PHP

Dev-Detective

Public

A fully Responsive Project in which you can search profile of any valid github user. It will show some details about him/her. It is available in Dark as well as Light theme.

CSS

SpaceCraft-Problems

Public

Problem Statement : Chandrayaan 3 Lunar Craft: Galactic Space Craft Control

C++

16 contributions in the last year

Contribution settings

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Mon													
Wed													
Fri													

Learn how we count contributions

Less More

Contribution activity

Selenium IDE is recording

2023

# All Test Cases Successfully Completed

Selenium IDE

Project: \*

Tests +

Search tests...

✓ \*

✓ test1

▶ ⏮ ⏭ ⌚

https://github.com/monunarnaware17

	Command	Target	Value
1	✓ open	https://github.com/monunarnaware17	
2	✓ set window size	788x864	
3	✓ click	id=repositories-tab	

Command

open

//

Target

https://github.com/monunarnaware17

Value

Description

Log

Reference

" completed successfully

Running 'test1'

'test1' completed successfully

Running "

1. open on https://github.com/monunarnaware17 OK

2. setWindowSize on 788x864 OK

3. click on id=repositories-tab OK

" completed successfully

Running 'test1'

'test1' completed successfully