

1. Test Plan Overview

Project Name: Student Registration System

Test Plan Title: Functional and Unit Testing for Student Registration and Payment System

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Date: [17/1/25]

Version: 2.0

2. Test Objectives

The primary objectives of the testing process are as follows

- To ensure that the registration system satisfies all specified functional and non-functional requirements.
- To validate the successful integration of the payment module, specifically the Stripe API, within the system.

3. Test Scope

- In-Scope
 - User login/logout functionality.
 - Payment amount entry and validation.
 - Payment processing using Stripe API.
 - Notifications for payment success or failure.
- Out-of-Scope
 - Backend configuration of Stripe.
 - Testing of other payment gateways.
 - Stress and load testing.

4. Test Strategy

- Testing Levels
 - Unit Testing: Test individual components like login and payment modules.
- Testing Techniques
 - Black-Box Testing: Focus on inputs and outputs.
 - Regression Testing: Re-test features after updates.

5. Test Environment

The hardware requirements for the system include a client machine, such as a laptop or desktop, equipped with a modern web browser to ensure compatibility and optimal performance.

The software components include the following:

- Backend Framework: Django, which serves as the primary framework for the system's development.
- Payment Gateway: Stripe API, utilized for secure and efficient payment processing.
- Testing Tools: pytest, employed for writing and executing test cases to ensure the system's reliability and functionality.

6. Entry and Exit Criteria

- Entry Criteria
 - Functional requirements are finalized.
 - Development is complete for individual modules.
 - Test cases are reviewed and approved.
- Exit Criteria:
 - All critical defects are resolved.
 - All planned test cases are executed with a pass rate of 95% or higher.

7. Test Deliverables

- Test Plan Document
- Test Scenarios and Test Cases
- Test Execution Report

8. Roles and Responsibilities

Role	Responsibility
Developer	Plan, monitor, and control the testing process.
Developer	Create and execute test cases, log defects.
Developer	Fix defects, assist with debugging.

9. Test Cases Overview

Test Case ID	Description	Expected Outcome	Priority
TC001	Validate user login functionality.	User successfully logs in.	High
TC003	Validate payment amount entry.	Payment amount is correctly calculated.	Medium
TC004	Test payment processing via Stripe.	Payment is successfully processed.	High
TC006	Test error handling during payment.	User sees appropriate error messages.	High

10. Test Schedule

Phase	Start Date	End Date
Test Plan Preparation	[17/1/25]	[18/1/25]
Test Case Design	[19/1/25]	[22/1/25]
Test Execution	[22/1/25]	[28/1/25]
Bug Fixing & Retesting	[29/1/25]	[30/1/25]
Final Sign-Off	[1/2/25]	[2/2/25]