



***Department of Computer Engineering***  
***Academic Year 2024-2025***

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BATCH: C22

**SOFTWARE TESTING & QUALITY ASSURANCE (STQA)**  
**EXPERIMENT 02**

**AIM:** Detailed Test Plan in IEEE format for given case study.

**THEORY:**

Test Plan Identifier

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# EasyPay System

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**Abstract**—This test plan focuses on validating the core functionalities of the system, including **login features** and key system processes such as **mobile recharge, bill payment, loan applications, movie ticket booking, and insurance enrollment**. It ensures that users can log in securely, perform transactions, and interact with various system features smoothly.

Test cases are designed to verify successful actions (e.g., login, recharge, payments) and handle errors (e.g., invalid credentials, invalid recharge amounts). The plan also outlines expected results for each test case and provides a clear approach for defect resolution.

The goal is to ensure that the system meets functional requirements, provides a seamless user experience, and handles both successful and erroneous scenarios effectively.

**Keywords**— *Testing, Agile Methodology, Functional Testing, Automation, Defect Tracking*

## I. INTRODUCTION

This test plan focuses on validating multiple features of the system, including **login functionalities, mobile recharge, bill payment, loan browsing and applications, ticket booking, and insurance plans**. The primary goal is to ensure that each of these features works according to the specified requirements under different conditions.

## II. REFERENCES

- System Requirement Specification (SRS)
- Use Case Documents
- Test Strategy Document
- Project Plan
- Project Guidelines

## III. TEST ITEMS

- Login Features
- Mobile Recharge
- Bill Payment
- Loan Browsing and Applications
- Ticket Booking
- Insurance Plans Viewing and Enrollment

## IV. FEATURES TO BE TESTED

*Login and Session Management:*

- **Login Verification:**
  - Invalid login credentials handling (TC\_001)
  - Valid login credentials handling (TC\_002)
- **“Remember Me” Functionality:**
  - Ensuring the system remembers the login credentials after reopening the browser (TC\_003)

- **Logout Verification:**
  - User is logged out successfully and redirected to the login page (TC\_004)

*System Features:*

- **Mobile Recharge:**
  - **Recharge Initiation:** Successful recharge and invalid amount handling (TC\_MOB\_1\_1, TC\_MOB\_1\_2)
- **Bill Payment:**
  - **Bill Payment via UPI:** Successful payment with sufficient balance (TC\_BILL\_2\_1)
- **Loan Browsing and Application:**
  - **Browse Loans:** Ability to browse loan options (TC\_LOAN\_1\_1)
  - **Apply for Loans:** Ability to apply for loans (TC\_LOAN\_2\_1)
- **Ticket Booking:**
  - **Browse Movie Tickets:** Ability to browse available movie tickets (TC\_TIC\_1\_1)
  - **Book Movie Tickets:** Successful movie ticket booking and error handling (TC\_TIC\_2\_1, TC\_TIC\_2\_2, TC\_TIC\_2\_3)
- **Insurance:**
  - **View Insurance:** View existing insurance plans or browse new ones (TC\_INS\_1\_1)
  - **Confirm Enrollment:** Confirm enrollment in an insurance plan (TC\_INS\_2\_1)

## V. FEATURES NOT TO BE TESTED

- User registration or account creation process.
- Other non-login related functionalities not mentioned in the above tables.

## VI. APPROACH

- **Test Environment Setup:**
  - Testing will be conducted in a development or staging environment, where the entire application (including login, recharge, bill payment, ticketing, etc.) is deployed.
  - Both automated and manual testing will be used.
- **Testing Methodology:**
  - **Functional Testing:** To verify that all features work as expected.
  - **Usability Testing:** To ensure the system provides a good user experience.
  - **Performance Testing:** For validating how the system handles loads, especially for mobile recharge and ticket booking features.
  - **Regression Testing:** Ensuring that no new issues are introduced when testing these features.

## VII. PASS / FAIL CRITERIA

- **Pass Criteria:**

- For login-related features (TC\_001, TC\_002, TC\_003, TC\_004), the system must handle valid and invalid login attempts, remember the credentials when specified, and log the user out successfully.
- For system features such as **mobile recharge, bill payment, loan application, ticket booking, and insurance**, each feature must behave according to the expectations listed in the respective test cases.

- **Fail Criteria:**

- Any deviation from the expected results, such as incorrect error messages, failure to complete transactions, or improper system behavior (e.g., login failure, incorrect payment processing, or incomplete booking).

## VIII. SUSPENSION CRITERIA

Testing will be suspended if any of the core features (such as login or bill payment) become unavailable due to a system outage or severe bug that cannot be resolved during the testing cycle.

## IX. TEST DELIVERABLES

- Test Plan Document
- Test Cases and Test Data
- Test Execution Logs and Results
- Defect Reports (if applicable)
- Test Summary Report

## X. TESTING TASKS

- **Preparation:**

- Set up test accounts, test data, and required tools (test cases, reporting tools).
- Ensure the system environment is stable and all features are available.

- **Execution:**

- Execute login and system tests (refer to tables for details on individual tests).
- Capture and document results for all features.

- **Post-Execution:**

- Report any defects or issues encountered during testing.
- Verify fixes and re-test as necessary.

## XI. ENVIRONMENTAL NEEDS

- A working internet connection.
- Access to the staging environment and all required features (e.g., mobile recharge, bill payment, movie ticketing).
- Testing tools (e.g., TestRail, Jira).
- Web browser (e.g., Chrome, Firefox) for testing login and ticket booking functionality.

## XII. RESPONSIBILITIES

- **Test Lead:** Oversee the planning, execution, and reporting of tests.
- **Testers:** Perform the actual testing for login, recharge, bill payments, loans, tickets, and insurance features.
- **Developers:** Fix issues reported during testing and assist in creating test data or resolving environmental issues.
- **Business Analyst/Product Owner:** Approve test cases and review test results.

## XIII. STAFFING AND TRAINING NEEDS

- **Staffing:**

- 1 Test Lead
- 2 Testers
- 1 Developer (to fix defects and ensure features work correctly)

- **Training:**

- Familiarization with the test cases, the system's features, and testing tools.
- Orientation on testing methodologies and best practices for mobile apps and web applications.

## XIV. SCHEDULE

- Test Planning and Setup: 1 day
- Test Execution (Login and Features): 3 days
- Defect Fixing and Retesting: 2 days
- Final Report Generation: 1 day
- Total Duration: 7 days

## XV. RISKS AND CONTINGENCIES

- **Risk:** System or environment downtime may delay the testing schedule.
- **Mitigation:** Prepare backup plans, such as testing on a different server or delaying tests if necessary.
- **Risk:** Changes to functionality during testing.
- **Mitigation:** Ensure proper version control and communicate with developers regarding updates.

## XVI. APPROVALS

- Test Lead: Reviews and approves test cases, test execution reports, and defect resolutions before moving to the next phase.
- Project Manager: Provides final approval after verifying that all testing objectives are met before system deployment.
- Client/Stakeholders: Conducts acceptance testing to confirm that the system meets business requirements and approves it for release.