

Software Testing Plan

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1. Introduction

This document describes the testing strategy, objectives, environment, and procedures used to ensure the quality and reliability of the Software Personal Management System.

Objectives

- Verify that all system functions work as expected
- Identify defects early in the development process
- Ensure data security and system stability
- Validate that the system meets user requirements

2. Test Strategy

Unit Testing

- Individual modules such as Login, Task, Note, and Reminder are tested separately
- Focuses on validating functions and methods
- Performed by developers

Example:

- Testing task creation function with valid and invalid inputs

Integration Testing

- Tests interaction between modules
- Ensures correct data flow between UI, logic, and database

Example:

- Verifying that tasks entered through UI are correctly stored in the database

System Testing

- Tests the complete system as a whole
- Ensures functional and non-functional requirements are met

Example:

- Checking reminder notifications at scheduled times

Acceptance Testing

- Conducted to verify system readiness for end users
- Confirms system meets user expectations

Example:

- User successfully manages tasks, notes, and reminders

3. Test Environment

Hardware Requirements

- Minimum 4 GB RAM
- Personal computer or mobile device
- Internet connection (if applicable)

Software Requirements

- Operating System: Windows / Linux / Android
- Backend: Java / Python / Node.js
- Database: MySQL / SQLite
- Testing Tools: Manual testing / JUnit (optional)

Test Data Requirements

- Sample user accounts
- Sample tasks, notes, and reminders
- Invalid inputs for negative testing

4. Test Cases

Test Case ID	Description	Input Data	Expected Output	Result
TC01	User Login	Valid username & password	Successful login	Pass/Fail

Test Case ID	Description	Input Data	Expected Output	Result
TC02	Add Task	Task title, due date	Task saved successfully	Pass/Fail
TC03	Add Note	Note content	Note stored correctly	Pass/Fail
TC04	Set Reminder	Date & time	Reminder notification	Pass/Fail
TC05	Invalid Login	Wrong password	Error message displayed	Pass/Fail

Pass/Fail Criteria

- **Pass:** Actual result matches expected output
- **Fail:** Actual result does not match expected output

5. Defect Management

Defect Logging

- Defects are recorded with:
 - Defect ID
 - Description
 - Severity (Low, Medium, High)
 - Status (Open, In Progress, Fixed, Closed)

Defect Resolution Process

1. Tester identifies and logs defect
2. Developer analyzes and fixes defect
3. Tester retests the functionality
4. Defect is closed after successful verification