

Test Plan (Manual + Automation + Database + API)

1. Project Overview

This project includes functional, automation, database, and performance testing for different websites. The main site tested with Selenium is Automation Test Store, and additional tools were used to test APIs and databases on other platforms.

2. Objectives

- Validate website functionalities through manual and automation tests.
- Verify backend data using database operations.
- Test website performance using API requests and JMeter under load.

3. Scope

Included:

- Manual Testing: login, validation, error handling
- Automation Testing: registration, cart, checkout (E2E)
- Database Testing: ERD creation, MySQL operations
- API/Performance Testing: load testing using GET, POST, PUT, DELETE via JMeter

Excluded:

- Security testing
- Mobile app testing
- UI responsiveness

4. Test Approach

Type	Tools/Details
Manual Testing	Functional flows tested via JIRA
Automation Testing	Selenium WebDriver + Java + TestNG + Maven
Database Testing	MySQL using custom ERD, insert/select queries on a train ticket booking demo
API Testing	Used Postman
Performance Testing	JMeter: Load simulation via GET, POST, PUT, DELETE

5. Test Environment

Component	Details
Automation Site	Automation Test Store
API Test Site	https://fakerestapi.azurewebsites.net/index.html
DB Test Site	Mock train ticket booking platform
Browser	Google Chrome
DB Tool	MySQL
Performance Tool	Apache JMeter
IDE	IntelliJ
CI/CD	Jenkins + GitHub Actions

6. Test Case Summary

Manual Testing (from JIRA)

- TC_001 to TC_015 (login, forgot password, validations...)

Automation Testing

- AUTO_001: Registration
- AUTO_002: Add to Cart
- AUTO_003: Checkout
- AUTO_E2E: Full E2E from registration to checkout

Database Testing

- Verify data insertion after simple data base testing
- Confirm data retrieval from tables via SELECT queries
- Table and schema validation against ERD

API / Performance Testing

- Send multiple GET requests to test response stability
- POST/PUT/DELETE calls to simulate real traffic
- Stress test with concurrent users using JMeter

7. Roles and Responsibilities

Role	Responsibility
Manual Testers - Ahmed, Mai	Manual testing, test case writing
Automation Team - Omnia, Zeyad, Hoda	Write and run Selenium scripts
DB Tester - Hoda	Design ERD, create schema, and test data
API/Performance Team - Khaled	Create and execute JMeter test plans

8. Reporting & Tracking

- Test cases tracked in JIRA: All manual and automation test cases are now managed and tracked using JIRA. Test case statuses, priorities, and bug reports

are updated here.

- Bugs are reported manually with steps, severity, screenshots.
- Automation logs and JMeter results are reviewed after each test run.