# **Test Plan for FineHome Real Estate Web Application**

**Version:** 1.0  
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## **1. Introduction**

### **1.1 Purpose**

The purpose of this test plan is to define the approach, scope, resources, schedule, and deliverables for the **FineHome Real Estate** web application testing process. This document outlines the detailed testing strategy for the modules and functionality of the website.

### **1.2 Objective**

The objective is to ensure that the **FineHome Real Estate web application** is thoroughly tested and meets the business and technical requirements, including functionality, security, usability, and performance. This test plan covers testing for the following modules: Home page, Properties (Luxury, Agriculture, Industry), Services, Agents, Network (Local & International), and About Us.

## **2. Scope of Testing**

### **2.1 Features to be Tested**

* **Home Page**
* **Properties** (Luxury, Agriculture, Industry)
* **Services**
* **Agents**
* **Network** (Local & International)
* **About Us**
* **Cross-browser Compatibility**
* **Mobile Responsiveness**
* **Security** (Login, Registration, Data Handling)
* **API Integrations**

### **2.2 Features Not to Be Tested**

* Non-web-based platforms (i.e., mobile apps unless specified)
* Third-party internal APIs beyond input/output validation

## **3. Test Strategy**

### **3.1 Types of Testing**

| **Testing Type** | **Objective** | **Tools** |
| --- | --- | --- |
| **Functional Testing** | Ensure that all functions work as per requirements | Selenium, TestNG |
| **UI/UX Testing** | Validate UI consistency, responsiveness, and usability across devices | BrowserStack, Lighthouse |
| **Performance Testing** | Test the scalability, load time, and stress under heavy traffic | JMeter, k6 |
| **Security Testing** | Identify vulnerabilities (SQLi, XSS, Authentication, etc.) | OWASP ZAP, Burp Suite |
| **API Testing** | Validate API endpoints for correct request/response formats | Postman, RestAssured |
| **Regression Testing** | Ensure that new changes don’t break existing functionality | Selenium, TestNG |
| **Cross-browser Testing** | Ensure compatibility across browsers | BrowserStack |
| **Database Testing** | Verify data integrity, CRUD operations | MySQL Workbench, Postman |

### **3.2 Test Levels**

* **Unit Testing:** To be performed by developers
* **Integration Testing:** Ensure smooth interaction between modules
* **System Testing:** Validate the overall functionality of the system
* **Acceptance Testing:** Final testing before deployment

## **4. Test Deliverables**

* **Test Plan Document** (This document)
* **Test Cases & Test Scripts**
* **Test Execution Reports**
* **Defect Reports**
* **Performance Testing Reports**
* **Security Vulnerability Reports**
* **Final Test Summary Report**

## **5. Test Environment**

### **5.1 Hardware Requirements**

| **Device** | **Processor** | **RAM** | **OS** |
| --- | --- | --- | --- |
| Desktop | Intel i7+ | 16GB+ | Windows, macOS |
| Mobile (Android) | Snapdragon 888+ | 6GB+ | Android (latest version) |
| Mobile (iOS) | A14 Bionic | 6GB+ | iOS (latest version) |

### **5.2 Software & Tools**

* **Browsers:** Chrome, Firefox, Safari, Edge (Latest Versions)
* **Automation Tools:** Selenium, TestNG, Postman, RestAssured
* **Performance Testing Tools:** JMeter, k6
* **Security Testing Tools:** OWASP ZAP, Burp Suite
* **Cross-Browser Testing Tools:** BrowserStack
* **Database Management:** MySQL Workbench

### **5.3 Test Data Management**

* **User Data:** Different user roles like Admin, Agent, and Client
* **Property Data:** Sample data for luxury, agriculture, and industrial properties
* **API Test Data:** Request/Response for API testing

### **5.4 Test Environment Setup**

* **URL**: [Staging URL for FineHome Real Estate]
* **Backup Environment:** Setup a backup testing environment for failover scenarios
* **Data Setup:** Pre-create test data in the system (property listings, user profiles, etc.)

## **6. Modules and Test Scenarios**

| **Module** | **Key Test Scenarios** |
| --- | --- |
| **Home Page** | - Verify featured property listings and search functionality |
|  | - Check navigation between homepage sections |
| **Properties** | - Verify filters and search functionality (price, location, type) |
|  | - Validate property details page (images, descriptions, maps) |
| **Services** | - Validate service section links and contact forms |
| **Agents** | - Verify agent profiles, contact details, and availability status |
|  | - Test agent messaging functionality |
| **Network** | - Test local and international network listings and map functionality |
| **About Us** | - Verify company information and content display |
| **Cross-Browser Compatibility** | - Ensure the website displays and functions correctly across multiple browsers |
| **Performance Testing** | - Measure load time under different traffic volumes |
|  | - Stress test the application to validate scalability |
| **Security Testing** | - Test for vulnerabilities such as SQL injection, XSS, and improper data handling |
| **API Testing** | - Test GET/POST requests for various API endpoints (property data, user data) |
| **Regression Testing** | - Verify that existing functionalities are not affected by new features or code changes |

## **7. Test Schedule and Milestones**

| **Phase** | **Start Date** | **End Date** | **Deliverables** |
| --- | --- | --- | --- |
| **Test Plan Preparation** | 01/01/2024 | 07/01/2024 | Finalized Test Plan Document |
| **Test Case Development** | 08/01/2024 | 15/01/2024 | Test Cases |
| **Test Environment Setup** | 16/01/2024 | 20/01/2024 | Test Environment Ready |
| **Test Execution** | 21/01/2024 | 10/02/2024 | Test Execution Reports |
| **Performance & Security Testing** | 11/02/2024 | 20/02/2024 | Performance & Security Test Reports |
| **UAT & Final Sign-off** | 21/02/2024 | 25/02/2024 | Final Test Summary Report and UAT Sign-off |

## **8. Entry & Exit Criteria**

### **8.1 Entry Criteria**

* Approved business and functional requirements
* Test environment ready (including data setup)
* Development team completed unit testing
* Test cases prepared and reviewed

### **8.2 Exit Criteria**

* All test cases executed
* No **P1/P2** defects remain open
* UAT passed and sign-off received
* Test summary report delivered to stakeholders

## **9. Risk Management**

| **Risk** | **Impact** | **Mitigation Plan** |
| --- | --- | --- |
| **Scope Creep** | Potential delays due to added features | Lock down requirements and scope early on |
| **Test Environment Downtime** | Testing disruptions | Ensure redundant test environments and backup plans |
| **Browser Incompatibility** | Inconsistent UI/Functionality | Conduct cross-browser testing early in the cycle |
| **Third-party API Changes** | Disruptions in API testing | Collaborate with the API team and plan for possible changes |

## **10. Defect Management**

### **10.1 Defect Life Cycle**

1️⃣ **New** → 2️⃣ **Assigned** → 3️⃣ **In Progress** → 4️⃣ **Fixed** → 5️⃣ **Ready for Retest** → 6️⃣ **Closed**

### **10.2 Severity & Priority Matrix**

| **Severity** | **Impact** | **Example** | **Priority** |
| --- | --- | --- | --- |
| **Critical** | Blocks user interaction | Login failure, data loss | P1 |
| **High** | Major issue but workaround exists | Broken property filter functionality | P2 |
| **Medium** | Affects usability or looks | Minor image misalignment | P3 |
| **Low** | Cosmetic issues | Font or style issues | P4 |

## **11. Test Automation Strategy**

* **Smoke Testing:** Automate high-risk areas (login, property search, agent contact) using Selenium + TestNG
* **Regression Testing:** Automate key functionalities that are regularly tested
* **Performance Testing:** Automate load and stress tests using JMeter or k6
* **API Testing:** Automate REST API tests using Postman and RestAssured

## **12. Approval and Sign-off**

| **Role** | **Name** | **Signature** |
| --- | --- | --- |
| QA Lead | [Your Name] |  |
| Project Manager | [PM Name] |  |
| Product Owner | [PO Name] |  |

## **Conclusion**

This test plan ensures that all critical functionalities of **FineHome Real Estate** are thoroughly tested to meet quality standards, and any identified risks are mitigated effectively.