

Group no :17

Testing document

Real estate management system

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1.Introduction

A website for managing estate revolutionizes property transactions by offering an approach to buying, selling and property management. It makes the process of listing properties allowing users to effortlessly add, update or remove listings with the inclusion of photos and videos. The customer relationship management (CRM) system maintains records of clients making interactions, reminders and follow ups efficient. A robust transaction management feature oversees offers, agreements and closings. The system also ensures storage and convenient access to documents through its document management functionality. Financial tools handle invoicing, receipts and ledgers seamlessly integrating with accounting software. Additionally lease management caters to rental properties by managing tenant details, agreements and payments. Users can benefit from reports and analytics on sales data as well as listings and financial information that empower them in the realm of property ownership.

This test plan provides an overview of the project's goals, testing strategies, for components, evaluations of features, the set of items to be tested approaches, to testing, necessary prerequisites, team responsibilities and potential risks associated with the project.

2.Objectives & tasks:

A. Objectives

- Check how well different things on our property trading website are working.
- Find places where things can be improved.
- Understand how the whole website performs after testing everything.

B. Tasks

- Come up with a plan that fits our website's unique features.
- Test everything step by step using our plan.

3. Testing Process:

i. Requirements Understanding

- Identify stakeholders and gather requirements from them.
- Analyze and assess requirements for integration into the project.

ii. Preparing Test Cases and Test Matrix

- Create test cases based on various scenarios and user stories.
- Develop a test matrix linking test cases to project requirements, ensuring comprehensive coverage.

iii. Reviewing Test Cases and Matrix

- Conduct peer reviews for test cases and matrices.
- Implement suggestions from reviewers, followed by a subsequent review for further improvements.

iv. Executing Test Cases

- Perform test cases for different scenarios aligned with requirements and user stories.
- Update test case status (Pass/Fail) in the documentation.

v. Regression Testing and Retesting

- Perform regression testing for database issues, new functionalities, or unresponsive behavior.
- Retest and update documentation upon resolution of identified bugs.

vi. Deployment

- Issue a comprehensive report upon completing bug-free testing.
- Deploy the application in a suitable environment for performance and functionality validation.
- Validate successful test results before transitioning the application into production.

4. Testing methods

1. Unit Testing:

- **Objective:** Verify the functionality of individual units or components (e.g., functions, methods).
- **Requirements:** Developers should conduct unit tests during the development phase to catch and rectify code-level issues.
- **Example:** For a function that calculates the total area of a property based on the dimensions of its rooms, a unit test could be written to verify that the function returns the correct result for a given set of room dimensions.

2. Integration Testing:

- **Objective:** Confirm that different modules or components of REMS work seamlessly together.
- **Requirements:** Ensure proper data flow, API integrations, and communication between various parts of the system.
- **Example:** Testing the integration between the property listing module and the payment processing module. This involves confirming that when a

user successfully lists a property, the corresponding payment transaction is processed seamlessly.

3. System Testing:

- **Objective:** Validate the entire system against its specified requirements.
- **Requirements:** Comprehensive testing of all functionalities, user interfaces, databases, and external integrations.
- **Example:** Testing the entire REMS to ensure that all features work as expected. This includes checking property search functionality, user registration, database interactions, and third-party integrations.

4. User Acceptance Testing (UAT):

- **Objective:** Verify that REMS meets user expectations and business requirements.
- **Requirements:** Involvement of end-users to perform real-world scenarios and validate that the system aligns with their needs.
- **Example:** Inviting real estate agents and property owners to perform tasks in a test environment, such as listing a property, updating property details, and generating reports. The focus is on ensuring that the system meets their requirements and is user-friendly.

5. Performance Testing:

- **Objective:** Assess the system's responsiveness, speed, and stability under different loads.
- **Requirements:** Ensure that REMS can handle the expected number of concurrent users and data volume without performance degradation.
- **Example:** Simulating a high volume of users searching for properties simultaneously to assess how the system handles the load. This includes monitoring response times, server resource usage, and ensuring that the system remains stable under peak usage.

6. Security Testing:

- **Objective:** Identify and address vulnerabilities to protect against unauthorized access, data breaches, or other security threats.
- **Requirements:** Test authentication, authorization, encryption, and other security measures.
- **Example:** Checking the system for vulnerabilities such as SQL injection or unauthorized access attempts. This involves validating that user authentication and authorization mechanisms are robust and that data is transmitted securely.

7. Compatibility Testing:

- **Objective:** Ensure that REMS works correctly across various browsers, devices, and operating systems.
- **Requirements:** Test compatibility with the specified browsers (e.g. Chrome, Firefox, Safari) and devices (desktop, tablet, mobile).
- **Example:** Testing the REMS on different web browsers (Chrome, Firefox, Safari), devices (desktop, tablet, mobile), and operating systems (Windows, macOS, Android, iOS) to ensure a consistent user experience across various platforms.

All the tests were done manually by the members of the development team and testers among them.

5. Quality Goals:

a. Main Goals

- Make sure our property trading website does what it's supposed to.

- Meet the quality standards we set, making sure users are happy.

b. Extra Goals

- Quickly fix any problems we find in the website.
- Smartly solve problems after checking the whole website, so users have a great experience.

6. Test cases:-

Test Case ID	Test Scenario	Test Steps	Expected Outcome	Actual Outcome	Status
1	User Registration - Positive	Register a new user with valid details	User registration is successful	Registration is successful	pass
2	User Authentication - Positive	Log in with correct credentials	User is successfully authenticated	User is successfully authenticated	pass
3	Forgot Password - Positive	Test the "Forgot Password" functionality	Password reset is successful	Password reset is successful	pass

4	User Registration - Negative	Register with incomplete or invalid information	Proper error message is displayed	Proper error message is displayed	pass
5	User Authentication - Negative	Log in with incorrect credentials	Appropriate error message is displayed	Login invalid message.	pass
6	Forgot Password - Negative	Attempt password reset with invalid information	Proper error message is displayed	Invalid message/error displayed	pass
7	Property Listing - Positive	List a property with all required information	Property is successfully listed	Property is successfully listed	pass
8	Property Listing - Negative	List a property with incomplete or invalid information	Proper error message is displayed	Proper error message is displayed	pass
9	Property Listing - Negative	List a property with an unauthenticated account	Proper error message is displayed	User login required message displayed	pass

10	Property Search - Positive	Perform a basic property search	Relevant properties are displayed	Relevant properties are displayed	pass
11	Property Search - Positive	Test advanced search filters	Accurate results are displayed	Accurate results are displayed	pass
12	Property Search - Negative	Search with invalid criteria	Proper error message is displayed	Error message displayed	pass
13	Property Search - Negative	Unauthorized users cannot access property search	Proper error message is displayed	Property search can be accessed by unauthorised users	fail
14	Property enquiry-positive	Enquire for the property if not done yet.	Enquiry sent successfully	Enquiry sent successfully	pass
15	Property enquiry-negative	Enquiring again if the enquiry done before	Display enquiry re-attempt error message	Display enquiry re-attempt error message	pass

16	Update the property listed by the user	Entering valid updation details of the property	Property updated successfully	Property updated successfully	pass
17	Delete property listed by the user	Deletion of the property from the user's listing	Property deleted successfully	Property deleted successfully	pass
18	User Profile - Positive	Update user profile with accurate information	Profile is successfully updated	Profile is successfully updated	pass
19	User Profile - Negative	Update profile with invalid or incomplete information	Proper error message is displayed	Proper error message is displayed	pass
20	User Profile - Negative	Unauthorized attempts to access or modify user profiles	Proper error message is displayed	Proper error message is displayed	pass
21	System Performance	Test system response time under normal user load	Response time is within acceptable limits	It is within acceptable limits	pass

22	System Performance	Assess system performance with a high volume of simultaneous actions	System performs well under load	System performs well under load	pass
23	Edge Cases	Test application behavior with large volumes of data	Application handles large volumes appropriately	Application handles large volumes appropriately	pass
24	Edge Cases	Test system response to unexpected input	Application handles unexpected input correctly	Application handles unexpected input correctly	pass
25	Usability and Accessibility	Test usability on different devices and browsers	Application is usable across various platforms	Application is usable across various platforms	pass
26	Usability and Accessibility	Assess accessibility features for users with disabilities	Application is accessible for users with disabilities	Not fit for every type of disabilities	fail

27	Security	Attempt URL manipulation, SQL injection, or exploitation	Security measures prevent unauthorized access	It prevents unauthorized access	pass
28	Security	Test session management security	Sessions are managed securely	Sessions are managed securely	pass
29	Messaging the admin	User goes to message section and types a message	Message sent successfully	Message sent successfully	pass
30	User registration - negative	User registers with an email already in use	Error message displayed	Error message displayed successfully	pass

7. Non functional requirement test cases:-

No.	Test Case	Test Description	Checklist
1	Security testing	Validate customer cannot view a non listed property by modifying URL	Done

2	Security testing	Validate customer cannot edit listing by modifying URL	Done
3	Security testing	Validate customer cannot delete the user by modifying URL to the admin panel	Done
4	Security testing	Password hidden (no view password option)	Done
5	Security testing	Password saved after encryption	Done
6	Security testing	Only logged in user can post the property	Done
7	Usability Testing	Verify that the layout conforms to the design	Done
8	Usability Testing	Verify the font, color and other details	Done
9	Acceptance Testing	Check fulfillment of product requirements	Done

