

PROPERTY FINDER [.BH SITE]
TEST REPORT SUMMARY

02/09/2023

VERSION HISTORY

Version #	Implemented By	Implementation Date	Reason
1.0.0	Mohsin Habiya	02/09/2023	This repository has been created for a coding challenge as part of the Property Finder Dubai interview process.

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1. INTRODUCTION

1.1. PURPOSE

This **property-finder-e2e** Test Report provides a summary of the results of tests performed as outlined within this document.

2. TEST SUMMARY

Project Name: property-finder-e2e

Version Number: 1.0.0

Implementation Date: 31/08/2023 - 02/09/2023

2.1 SCENARIO 1 - PROPERTY SEARCH FILTERS AND RESULTS

Test Description: This scenario aimed to search for Villas priced at 300,000 or above. It involved selecting 'Villa' as the property type and '300,000' as the price filter. The next step was to assert the correct number of search results displayed.

Results: The test has passed successfully and the functionality works well.

2.2 SCENARIO 2 - PROPERTY SEARCH FILTER PARAMETERS AND RESULTS

Test Description: The objective is to search for commercial offices. Once the page has loaded completed, the algorithm is once again called from scenario 1 to assert all search results.

Results: The test has passed successfully and the site functionality works.

2.3 SCENARIO 3 - LOCATION BASED PROPERTY SEARCH

Test Description: The objective is to search by property location. In this case - **The Bahrain Bay**. Upon page is load, Cypress must assert critical property details.

Results: The test has passed successfully and the site functionality works.

2.4 PERFORMANCE TEST USING LIGHTHOUSE

Test Description: This was a brief performance test conducted on www.propertyfinder.bh in 2 parts using Lighthouse. One part involved running the tests manually in an incognito window, and the other being running the same test using Cypress.

Results: We are seeing different results between Cypress and Manual lighthouse testing, with the manual test consistently scoring higher in performance compared to Cypress. We can conclude that the manual testing results are accurate here, as there are actions Cypress performs when running lighthouse that seems to be negatively impacting the test. The Cypress test results are logged in the console when running, and the results of the manual test have been added to */performance-reports* as HTML files. Following the manual test results, with a score of 90+ over 100, the site is very responsive. There are still some small suggestions identified that could improve performance. They are outlined in the HTML results.

3. TEST ASSESSMENT

3.1. For scenarios 1 and 2, the assertion algorithm has been adopted for the sake of scalability on queries with high volume results. It was realised that a user could only select from 10 pages at a time on the UI and upon clicking the last available pagination button, only 5 more would load. Hence, if a search yielded 5000 results, it would take the Cypress bot 26 minutes to click and assert each page (8s per page) and 5 minutes if it were to keep clicking the last available pagination button. Alternatively, the algorithm maintains test integrity while keeping it simple. The entire test scenario now only spans about 20-30 seconds.

3.2. The test plan originally required the use of the Page Object Model (POM), which typically involves creating multiple classes in different files and exporting them separately for use in test case files. However, it became apparent that this traditional POM approach wouldn't efficiently fit the scope of this test plan. Many of the outlined test cases didn't share extensive consecutive steps with each other.

To streamline the test case development process and avoid unnecessary complexity, a modified form of POM was implemented using Custom Commands (`cy.Cypress.Commands.add()`). Shared test steps are centralised in `/support/commands.js` and can be directly invoked within test cases without the need for explicit imports or exports. Test cases that share steps can simply call the same custom command while providing their specific parameters based on the test scenario.

This approach enhances test case organisation and readability while promoting code reusability, making it more efficient to write, maintain and run the test suite.

3.3. It is considered a good practice to target DOM elements using 'data-testid' attributes in Cypress as it enhances test reliability and reduces maintenance efforts. However, during the process of writing Cypress scripts for `www.propertyfinder.bh`, it was observed that a significant portion of the elements lacked 'data-testid' attributes.

It's worth noting that not using 'data-testid' attributes in a production environment can be a security-conscious decision. In light of this, I have defaulted to using XPath for targeting. However, it's important to acknowledge that relying solely on XPath selectors may potentially result in flaky tests, especially if the website undergoes significant changes in the future.

4. SUMMARY

The `property-finder-e2e` project, version 1.0.0, underwent development from August 31st to September 2nd, 2023. Key scenarios focused on property searches, filter parameters, and location-based queries.

Scenario 1, evaluating villa searches, successfully validated the site's functionality. Scenario 2, testing commercial property searches, and Scenario 3, location-based

property searches in Bahrain Bay, also passed, affirming the site's robust performance. An assertion algorithm optimised test efficiency.

To maintain scalability, a modified Page Object Model (POM) approach was utilised, streamlining test case development. The absence of 'data-testid' attributes necessitated XPath selectors, posing potential fragility in future site updates. Nevertheless, these tests have demonstrated that the Property Finder website is working optimally, without there being any bugs on the features tested.