

JUNE 2023

Automation Exercise

WEBSITE: AUTOMATION EXERCISE

Test Plan, Design and Strategy



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1. Introduction

This document describes the test automation strategy will be implemented as part of the "Automation Exercise" Project. Among the special points, the following stand out: scope, risks and emergency preparedness, environment and testing tools, design pattern, acceptance criteria, design and test execution; and test report.

2. Scope

The type of testing will be implemented, it will be black box (tests based on functionalities). It will manage the following techniques:

- Equivalence partitioning -> the idea behind the technique is to divide a set of test conditions into groups or sets that can be considered as same. Partitioning usually happens for test objects, which includes inputs, outputs, internal values, time-related values, and for interface parameters.
- Boundary value analysis (BVA) -> consisting of numeric or sequential data. The minimum and maximum values of a partition are its boundary values.

On the other hand, the test cases covered will be automated for desktop and mobile versions.

2.1 Automatable Functionalities

- Home Screen
- Product Details
- Cart and Cart Summary
- Check Out
- Account Creation / Sign Up
- Sign In
- Address
- Payment
- Order Confirmation
- Contact Us



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2.2 Non-Automatable Functionalities

Accessibility is not included.

2.3 User Flow

- 1. User lands on the page and scroll to the middle.
- 2. User chooses a product and clicks on "View product" at the bottom of the image.
- 3. User enters the value 30 in the quantity field.
- 4. User clicks on "Add to cart" and after clicking on "View cart".
- 5. User clicks on "Proceed to checkout".
- 6. User enters an email and clicks on "Register/Log in".
- 7. User enters a name and email in "New User Sign up".
- 8. User enters the rest of the information and clicks on "Create Account'.
- 9. User clicks on "Continue" ubicated below of the title "Account Created!".
- 10. User clicks on the shopping cart ubicated on the header.
- 11. User clicks on "Proceed to checkout".
- 12. User enters a comment and clicks on "Place Order".
- 13. User enters the information about fake credit card and clicks on "Pay and Confirm Order".
- 14. User clicks on the continue button.
- 15. User clicks on "Log out" at the top on the header.
- 16. User enters the previously created account in "Log in your account".
- 17. User clicks on the "Contact Us" ubicated on the header.
- 18. User fills out the form and clicks on the submit button.
- 19. User clicks on "OK" button localized on the pop-up.
- 20. User clicks on the "Log out" button on the header.

3. Roles and Responsibilities

Roles	Responsibilities		
QA Leader	Automation Testing planning and control Report the testing progress		
Automation Engineer / QA Analyst	Automation Test analysis and test design Automated test execution Report defects/bugs		
	Reporting the tests results		
Product Owner / Stakeholders	Decisions making		



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4. Risks Management y Emergency Preparedness

N	Risk	Probability (1-5)	Impact (1-5)	Severity (Pro * Imp)	Emergency Preparedness
1	Changes request in the automated test cases.	3	4	12	Prioritize the changed functionalities list for the next sprint.

5. Test Environment and Testing Tools

5.1 Environment

The testing environment is "Automation Exercise website": https://www.automationexercise.com/

5.2 Testing Tools

Tools	Description
Cypress (JavaScript)	Framework in order to automate the test
	cases of the project.
Viewport (Desktop and Mobile)	Desktop -> 1920 x 1080
	Mobile -> 390 x 844
Cypress Test Runner	It is a graphical user interface (GUI) that allows you to easily visualize and debug your tests. Also, shows the test results (failed, passed and skip test cases).
Browsers: Chrome and Electron.	Instances where the tests will be run.
Operating Systems	Windows and Mac
Faker Plugin	It is a popular library that generates fake (but reasonable) data that can be used for things.

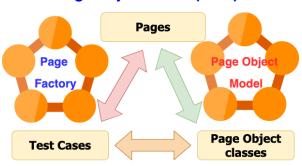


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6. Automation Software Architecture

Page Object Model (POM)



The project architecture is based on the **POM** (Page Object Model), which is a trending technique used in test automation in the Quality Engineering world. Simply put, the Page Object Model refers to using the Objects/Classes to depict and represent all the locators and functions (Components used for the automation) related to that particular page in a web application.

With the Page Object Model, you can simply break down a whole web application into multiple pages and use classes to depict those pages. In this way, each page in the web application corresponds to a particular class in the Page Object. Also sometimes a single page in the application can be used across multiple classes in the Page Object, according to the functionalities of the page.

7. Acceptance Criteria

7.1 Entry Criteria

- The environment should be ready for testing previously.
- The website should have been tested manually.
- The high and blockers bugs should have been tested and closed previously.
- The Cypress framework should be installed and ready.
- The website pages should have some **data-qa data-testid**, **id** or **class** (not recommended) in order to localize the elements of the pages.



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7.2 Exit Criteria

- The most functionalities have been automated (>90%).
- The test cases have been executed successfully.
- There are not high and several open bugs.

8. Automated Tests Planning

8.1 Timeline

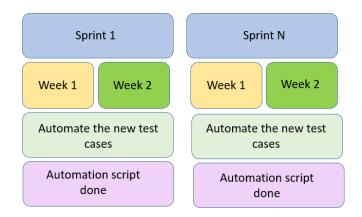
Sprint	Functionalities (Pages)	Days	Commentaries
	Home Screen	1	
	Product Details	0,5	
	Cart and Cart Summary	1	
	Check Out	1,5	
4	Account Creation / Sign Up	2	
1	Sign In	0,5	
	Address	1	
	Payment	0,5	
	Order Confirmation	0,5	
	Contact Us	1,5	
	Total	10	Sprint every 2 weeks
N			



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8.2 Automation Sprint Planning



The automation tasks should start after the manual tests have finished. The sprint will be 2 every weeks, the automation team should begin the development of the automation scripts by pages or functionalities. The team will do continuous deliveries during the sprint and at the end of the sprint should be done all planned automation scripts.

- 9. Test Results
- 9.1 Test Matrix



9.2 Test Report

Total Test Cases	Passed Test	Failed Test	Non- Automated
	Cases	Cases	Test Cases
47	35	0	12
47	35	0	12
	47	Cases 47 35	Cases Cases 47 35 0

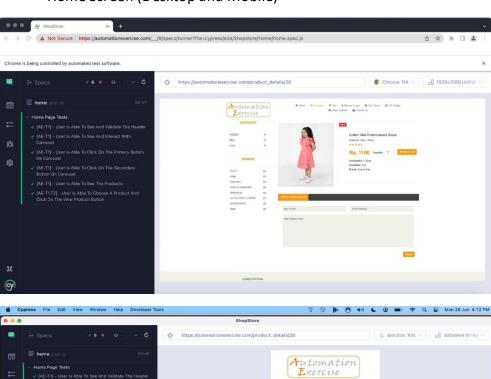


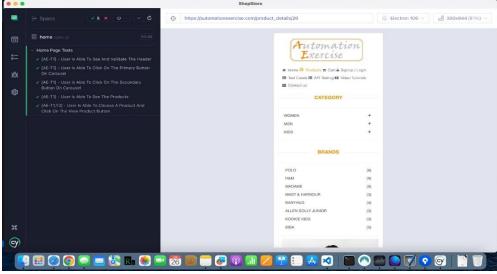
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The test report will be shown with some screenshots of the Cypress Test Runner for all automated modules.

• Home Screen (Desktop and Mobile)



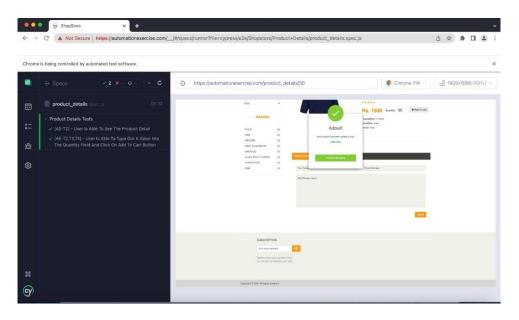


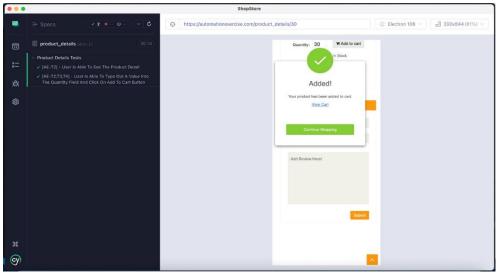


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• Product Details (Desktop and Mobile)



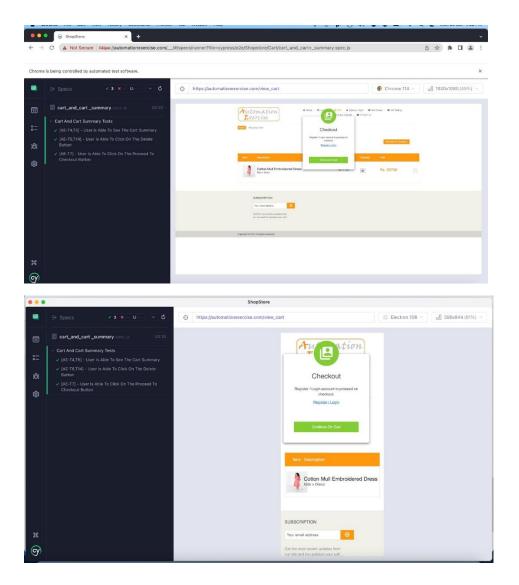




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• Cart and Cart Summary (Desktop and Mobile)

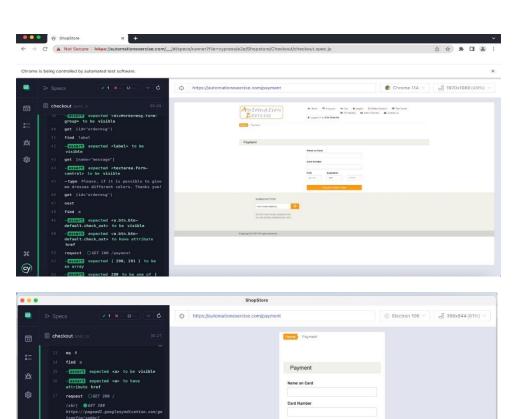




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• Check Out (Desktop and Mobile)

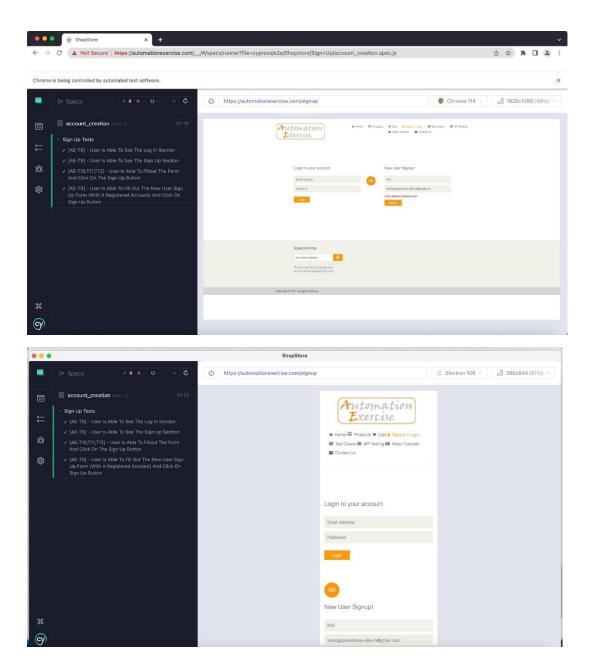




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• Account Creation / Sign Up (Desktop and Mobile)

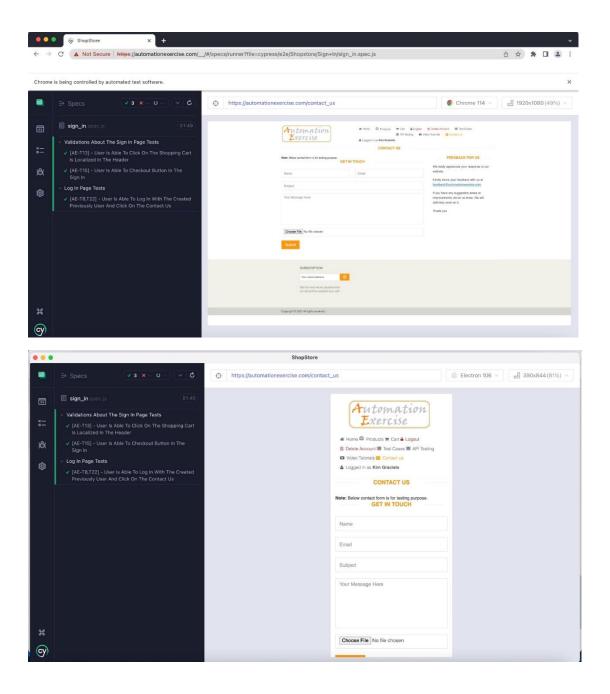




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• Sign In (Desktop and Mobile)

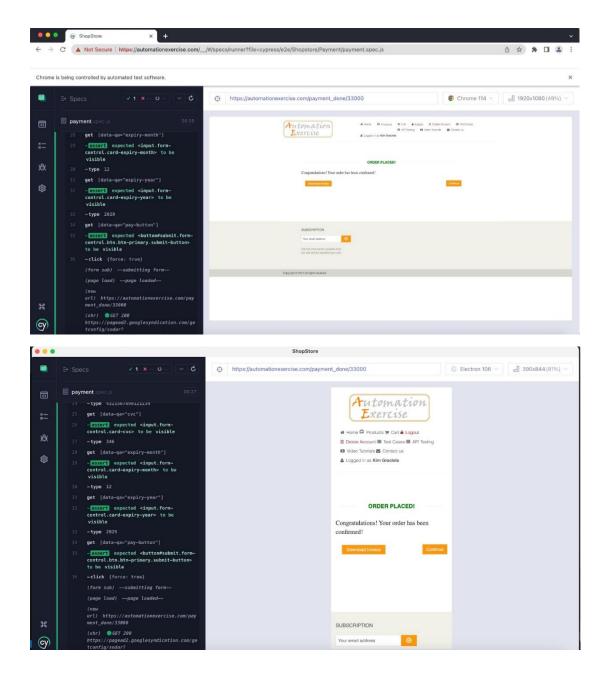




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• Payment (Desktop and Mobile)

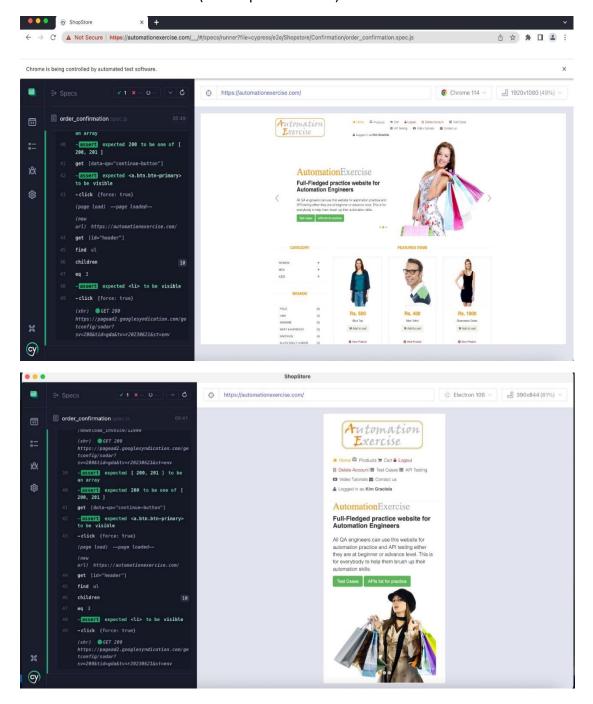




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Order Confirmation (Desktop and Mobile)





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• Contact Us (Desktop and Mobile)

