1. **Test Strategy.**

Design the end-to-end / System Testing Strategy for the chosen application. You can use diagrams.

The test strategy for the web application will be composed by the following content:

* Test Approach
* Test Environment
* Testing tools
* Release Control
* Risk analysis
  1. **Test Approach**

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Description automatically generated**

As we are going to following the Agile methodology the process of testing will be included in each sprint and we will consider a ticket covering the implementation of a user story finished when all the test cases execution result related to this user story was Passed and the tests automation code is already finished.

There will be tests in the following levels: unit test, component tests and End-to-End Tests.

The developers are responsible for unit testing and QA Engineer will be responsible for component and End-to-End tests.

Regarding the non-functional testing we must consider also: Load Testing, Security testing and Performance testing.

The goal the automation test is to automate the maximum of test-cases as possible and include them in the Regression test Phase.

* 1. **Test Environment**

We will work with 3 levels of test environments: Development, QA and PreProduction.

The development environment will be used by the Developers when the user stories are in phase of development.

QA environment will be used by QA engineers to test if the development of each user story accomplishes the validation criteria.

PreProduction environment will be the used for non-functional testing such as Load, Security and Performance Testing.

* 1. **Testing tools**

Regarding the testing tools we will use JIRA for tracking the manual execution results and Cypress as framework for test automation.

* 1. **Release Control**

Release management plan with appropriate version history that will make sure test execution for all modification in that release

**2. Manual testing.**

**○ Define manual test scope (what should be tested)**

1. Feature 1: Registering and authentication.
   1. User creates a new account on the website Product Store
   2. User logs on the website Product Store
2. Feature 2: Purchasing products.
   1. User sees all the monitors available on the website Product Store
   2. User sees the details about one of the available phones on the website Product Store
   3. User adds a phone in the cart.
   4. User purchases an order.
3. Feature 3: Information about the Product Store website.
   1. User contacts with the Product Store customer support
   2. User sees the video About Us on the website Product Store

**○ Select 3-4 of the tests defined in the test scope, and detail the steps**

1. User creates a new account on the website Product Store

**Given** the user is on the home page of the website Product Store

**When** user clicks on Sign up button

**And** user enters his username

**And** user enters his password

**And** user clicks on Sign up button

**Then** a pop-message containing the text “This user already exist” is raised

1. User logs on the website Product Store

**Given** the user is on the home page of the website Product Store

**When** user clicks on Log in button

**And** user enters his username

**And** user enters his password

**And** user clicks on Log in button

**Then** user is on the home page of the website Product Store

**And** a text containing the string “Welcome” followed by the username is displayed in the webpage

**And** the button Log out is visible

1. User adds a phone in the cart.

**Given** the user is logged on the website Product Store

**When** user clicks on the desired phone

**And** user clicks on Add to Cart button

**Then** a pop-message containing the text “Product added” is raised

1. User purchases an order.

**Given** the user is logged on the website Product Store

**And** at least one item is the cart

**When** user clicks on Place Order button

**And** user fulfills the place order required information

**And** user clicks on Purchase button

**Then** a confirmation pop-message containing the text “Thank you for your purchase ” is raised

**And** the confirmation pop-message contains the following information: Id, Amount, Card number, Name and date

**○ Execute the manual tests and create a report with the results**

|  |  |  |
| --- | --- | --- |
| **Test ID** | **Test Title Scenario** | **Execution Result** |
| **Feature 1: Registering and authentication** | | |
| Test-case-1 | User creates a new account on the website Product Store | **Passed** |
| Test-case-2 | User logs on the website Product Store | **Passed** |
| **Feature 2: Purchasing products** | | |
| Test-case-3 | User sees all the monitors available on the website Product Store | **Passed** |
| Test-case-4 | User sees the details about one of the available phones on the website Product Store | **Passed** |
| Test-case-5 | User adds a phone in the cart | **Passed** |
| Test-case-6 | User purchases an order | **Passed** |
| **Feature 3: Information about the Product Store website** | | |
| Test-case-7 | User contacts with the Product Store customer support | **Passed** |
| Test-case-8 | User sees the video About Us on the website Product Store | **Passed** |

**3. Automation testing.**

○ Define the automation test scope (what should be automated)

|  |  |
| --- | --- |
| **Test ID** | **Test Title Scenario** |
| **Feature 1: Registering and authentication** | |
| Test-case-1 | User creates a new account on the website Product Store |
| Test-case-2 | User logs on the website Product Store |
| **Feature 2: Purchasing products** | |
| Test-case-5 | User adds a phone in the cart |
| Test-case-6 | User purchases an order |

○ Select 4-5 of the tests defined in the test automation scope and develop the tests using Cypress or Selenium (Cypress is our preferred option)

The automation tests-cases will be developed following the pattern: Page-Object model.

○ Generate test results

NOTE: In all cases validation/assertion checkpoints must be included in the tests.