Test Report

Project Name: **eMAG.ro**

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# Testing Scope

The testing scope of this project was to test the main functionalities of eMAG.ro from a normal user and tester perspective and find any possible features which were not working correctly and possible improvements for this website.

**Why eMAG.ro?**

It is one the biggest e-commerce chain in Romania with a complex website that features many important functionalities for a shopping website to be tested.

**Testing approach?**

I created a website-mindmap using Xmind to understand it better and view the basic layout and it’s main features included in the Header-Body-Footer. After reviewing the website-mindmap, the main functionalities and features were exctracted that were put in a testing-mindmap. This testing-mindmap helped create the actual test cases in TestLink for the main functionalities.

**What was actually tested?**

Key functionalities for a shopping website like login-logout, creating an account, add to bag, checkout, shopping cart operations, wishlisting products, filtering, search bar.

## Test Environment – [GitHub](https://github.com/luciancalinescu95/Final-Project-eMAG.ro)

Tests were run in the production because we don’t have access to the stage environment. In the github repository you can find the manual Test Cases Plan and Execution Report in TestLink, the UI Tests that were automated with Cypress using JavaScript, the Postman collection of tests for the API Tests and the performance scores of the website that resulted from running Lighthouse.

| Test Environment | Software Details | Comments |
| --- | --- | --- |
| Production | OS:Windows 10 Pro (10.0.19041)  Mobile: Android 9  Devices: Desktop PC, Mobile | Android:eMAG official app; Samsung Internet Browser |
| Browsers:Mozilla Firefox 82.0.3 (64-bit); Google Chrome 86.0.4240.198 (64 bits); Microsoft Edge 86.0.622.56 (64-bit) | DevTools app for Chrome |

1.2. Test Specification

Mind Maps for the website and it’s main functionalities that were tested

* [Website-mindmap](./Mind%20Maps/eMAG.ro%20-%20Site%20Mind%20Map.xmind)
* [Testing-mindmap](./Mind%20Maps/eMAG.ro%20-%20Testing%20Mind%20Map.xmind)

Test Cases Plan → [link](./Test%20Cases%20Plan/Test_Cases_plan_2020-11-10%20.doc)

Test Cases Execution Report → [link](./Test%20Cases%20Plan/Test%20Plan%20Execution%20Report%20-%20eMAG.ro%20-2020-11-13.pdf)

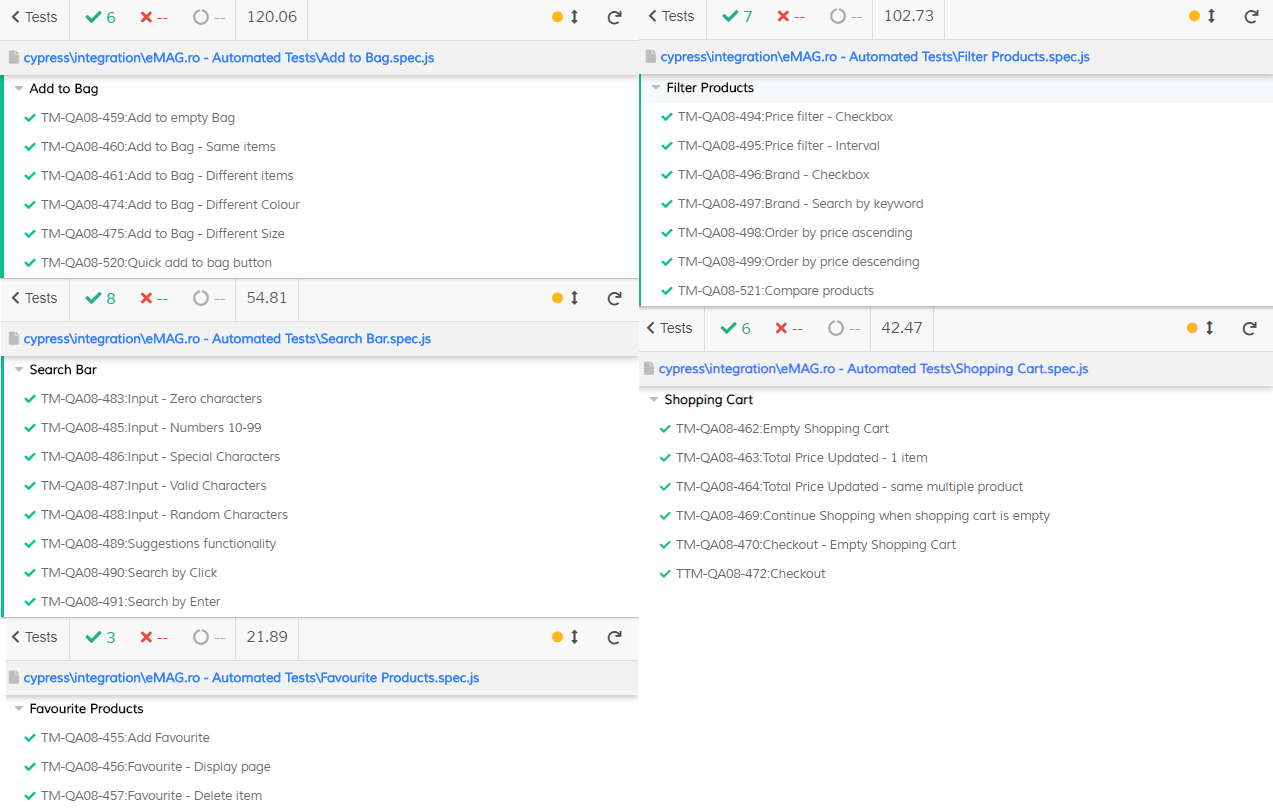
1.3 Test Cases:

|  |  |  |
| --- | --- | --- |
| **Test Case ID(TM-QA08-number)** | **Functionality** | **Comments** |
| 448,449,450,451,452,525 | Login |  |
| 453,454,517,518,519,523,524 | Register Account |  |
| 455,456,457,501 | Favourite Products |  |
| 459,460,461,474,475,520 | Add To Bag |  |
| 462,463,464,465,466,469,470,471,472,  473,541 | Shopping Cart |  |
| 504,503,502,467,468,538,539,542,543 | Account Page(Operations) |  |
| 483,484,485,486,487,488,489,490,491 | Search Bar |  |
| 494,495,496,497,498,499,500,521 | Filter Products |  |
| 533,534,535,536 | - | User Interface |
| 507,508,528,530,531,540 | - | End-to-end |
| 477,476,478,479,480,481,537,505,506,  492,522,526,527,532,529 | - | Non-Functional Tests |

1.4 Automated Tests

For simplifying test execution, increasing the speed of executing manual tests and saving time, the manual tests are automated using the Cypress environment with JavaScript. Note that not all tests can be automated at this point (eg. Login tests require captcha or products changing price or name constantly etc.) and are subject to change. At this point the following tests are automated:

|  |  |  |
| --- | --- | --- |
| **Test Case ID(TM-QA08-number)** | **Functionality** | **Comments** |
| 459,460,461,474,475,520 | Add To Bag |  |
| 462,463,464,469,470,472 | Shopping Cart |  |
| 483,485,486,487,488,489,490,491, | Search Bar |  |
| 494,495,496,497,498,499,521 | Filter Products |  |
| 455,456,457 | Favourite Products |  |

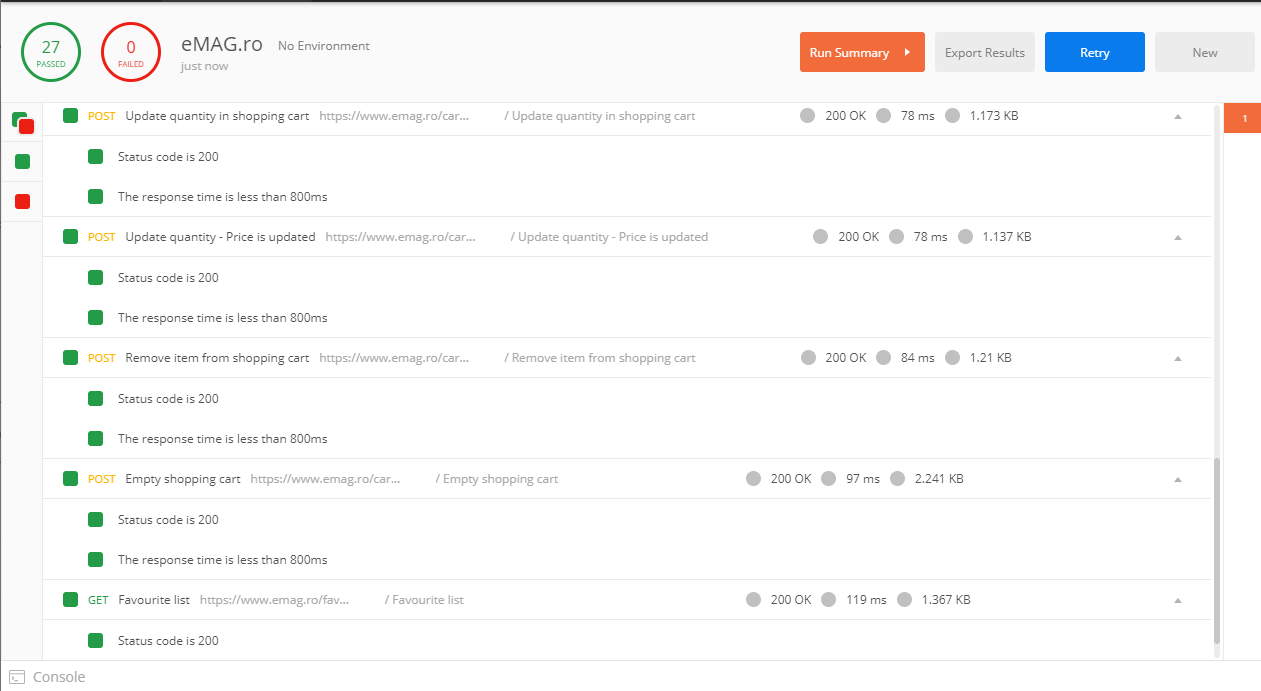


1.5 API Tests

To better understand and check the functionalities, testing techniques, and the execution of test cases, API Testing can be approached. API (Application Programming Interface) enables communications and data exchange between tow separate software systems. Instead of using user inputs and outputs, we can use software to send calls to API, get an output and check the system’s response. API Testing was done using the Postman tool to make requests and check the website’s response on various functionalities.

API test collection → [link](file:///C:/Users/lucia/Desktop/eMAG.ro/Final-Project-eMAG.ro/API%20Test%20Collection/eMAG.ro.postman_collection.json)

API test run results → [link](file:///C:/Users/lucia/Desktop/eMAG.ro/Final-Project-eMAG.ro/API%20Test%20Collection/eMAG.ro.postman_test_run.json)



# 

# Test Results

## 2.0. Executed Test Cases – Functional

| Functionality | Total | Pass | Failed | Blocked | Not Run | Defects |
| --- | --- | --- | --- | --- | --- | --- |
| Login | 6 | 6 | 0 | 0 | 0 |  |
| Register Account | 7 | 7 | 0 | 0 | 0 |  |
| Favourite Products | 4 | 4 | 0 | 0 | 0 |  |
| Add To Bag | 6 | 6 | 0 | 0 | 0 |  |
| Shopping Cart | 11 | 11 | 0 | 0 | 0 |  |
| Account Page Operations | 9 | 9 | 0 | 0 | 0 |  |
| Search Bar | 9 | 9 | 0 | 0 | 0 |  |
| Filter Products | 7 | 6 | 1 | 0 | 0 | 1 |
| User Interface | 4 | 4 | 0 | 0 | 0 |  |
| End-to-end | 6 | 4 | 2 | 0 | 0 | 2 |
| **Overall Results** | **70** | **67** | **3** | **0** | **0** | **3** |

1.3.1. Executed Test Cases – Non-Functional

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Description | Total | Pass | Failed | Blocked | Not Run | Defects |
| Performance | 2 | 1 | 1 | 0 | 0 | 1 |
| Compability | 7 | 7 | 0 | 0 | 0 |  |
| Security | 5 | 4 | 1 | 0 | 0 | 1 |
| API | 1 | 1 | 0 | 0 | 0 |  |
| **Overall Results** | **15** | **13** | **2** | **0** | **0** |  |

# Defects

## 1.5 New defects

| Defect ID | Defect summary | Severity |
| --- | --- | --- |
| [0006851](http://bugs.scoalainformala.ro/view.php?id=6851) | Shopping Cart: Incorrect Items Counting | **major** |
| [0006853](http://bugs.scoalainformala.ro/view.php?id=6853) | Shopping Cart: Identical Items Appear on Distinct Positions | **major** |
| [0006854](http://bugs.scoalainformala.ro/view.php?id=6854) | Shopping Cart: Exceeding Stock Availability is Allowed | **major** |
| [0006855](http://bugs.scoalainformala.ro/view.php?id=6855) | Shopping Cart: Price Updates for Big Data | **major** |
| [0006856](http://bugs.scoalainformala.ro/view.php?id=6856) | Shopping Cart: Incorrect Price | **major** |
| [0006858](http://bugs.scoalainformala.ro/view.php?id=6858) | Shopping Cart: No Confirmation Message for Empty Cart | **major** |
| [0006859](http://bugs.scoalainformala.ro/view.php?id=6859) | Add To Cart: No Validation on Input for Quantity | **major** |
| [0006862](http://bugs.scoalainformala.ro/view.php?id=6862) | Name Store: Change Typeface for Blocks Improper Result | **major** |
| [0006864](http://bugs.scoalainformala.ro/view.php?id=6864) | Checkout: Checkout Permitted for Out of Stock Quantity | **major** |
| [0006870](http://bugs.scoalainformala.ro/view.php?id=6870) | Mobile Device: Shopping Cart: Remove Button Missing | **major** |
| [0006852](http://bugs.scoalainformala.ro/view.php?id=6852) | Shopping Cart: Estimate Arrival on a Past Date | normal |
| [0006860](http://bugs.scoalainformala.ro/view.php?id=6860) | Invented Here: Sort By Doesn't Work For Filters | normal |
| [0006861](http://bugs.scoalainformala.ro/view.php?id=6861) | Name Store: Blank Entry Generates Results | normal |
| [0006863](http://bugs.scoalainformala.ro/view.php?id=6863) | Name Store: Missing Error Message for Special Characters | normal |
| [0006865](http://bugs.scoalainformala.ro/view.php?id=6865) | Checkout: No Name Validation | normal |
| [0006866](http://bugs.scoalainformala.ro/view.php?id=6866) | Checkout: Invalid Shipping Address Accepted | normal |
| [0006868](http://bugs.scoalainformala.ro/view.php?id=6868) | Standard Guest Checkout: User Can Jump to Last Step | normal |
| [0006869](http://bugs.scoalainformala.ro/view.php?id=6869) | My Account: Invalid Registration Data Allowed | normal |
| [0007094](http://bugs.scoalainformala.ro/view.php?id=7094) | My Account: Login Button Not Visible Enough | normal |
| [0007096](http://bugs.scoalainformala.ro/view.php?id=7096) | My Account: Invalid Birthday in Birthday Club | normal |

## 

# Conclusions

Smoke Test Cases, for the main functionalities in a percent of 100% were executed, 90.5% passed and 9.5% failed. The failed test cases are related to the Cart functionality.

A total number of 20 new bugs were identified, half of them were identified as major severity, the other half as normal severity. No bugs were validated.

In addition to Smoke and Positive testing, testing types such as: Functional Testing, Exploratory, Compatibility, Negative, UI, Usability, were covered.

Exploratory testing was performed for important functionalities. A large number of bugs were identified during exploratory testing, 9 of them are major, most of them related to the Shopping Cart, but also for other functionalities.

Most of the bugs were identified by Negative Testing.

Compatibility testing was also performed, for different browsers and devices. The bugs reproduce on all browsers. In addition to the bugs identified on Windows OS, that also reproduce on Android, 1 new major bug related to the Shopping Cart was identified on the mobile device.

Considering the number of high severity bugs identified, on all important functionalities, the fixing of at least the major severity bugs is recommended, although the application is already in production.