The automated tests were developed using Selenium WebDriver and Java as the primary tools. For the Integrated Development Environment (IDE), Intellij was utilized.

Regarding the testing framework, JUnit in conjunction with Maven was employed. The intention was to maintain a simplistic structure, with all tests being placed under the "test" folder, and the corresponding objects organized under the "org.objects" folder. The main objective behind using page objects was to segregate the element items from the actual test logic.

Specifically, all tests represents three distinct test cases executed with different resolutions. JUnit 5's "ParameterizedTest" library facilitated the execution of these tests with multiple inputs. I preferred this method Instead of using external data from file. For Assertion i used Truth that is a fluent and flexible open-source testing framework designed to make test assertions and failure messages more readable.

Test Cases.

As said before the architecture I followed was to keep all tests below folder test->java and one class per test case, that way is more organized and clear the structure. Main static configuration values are stored and retrieved from test->java->resources-> site.properties, with variables like url, and api\_url.

The following scenarios based on the use case was implemented:

* MainPageTestCase1
  + Open the browser with three different resolutions, and click “accept to all” in the pop up, then i verify that the page loaded successfully. I assert that a value exists on main page.
* ResearchAndEducationTestCase2:
  + Open the browser with three different resolutions, click on page research and education. Note that with resolution 800x600 I have to find the menu from the menu on the top left. Again I verify/assert that page has opened based on a value on this page.
* EconomicCalendarTestCase3
  + Open the browser with three different resolutions, click on page research and education and then to Economic calendar. I assert with an element that I have opened the correct page and close the browser.
* CalendarActionsTestCase4
  + Open the browser with three different resolutions, click on page research and education and then to Economic calendar.
  + Next step is to move the slider to “today”, ”tomorrow” and “next week”
  + Last step is to assert on the calendar that the selected date is the correct date.
* EducationalVideoTestCase5
  + Open the browser with three different resolutions, select educational videos and from “Intro to the markets” the lesson 1.1.
  + At this point I get to the iframe with the video and I start it to play for 7 seconds.

The following scenarios based on the API scenarios was implemented:

* latestReleaseTest1
  + On this scenario I retrieve the film with the latest release date
* TallestCharacterNewerFilmTest2
  + Based on previous test case I search for the tallest person among the characters of the film with the latest release date.
* TallestCharacterStarWarsEverTest3
  + On this test case after parsing all star wars actors I print the tallest among the actors.
* On this scenario I validate the json schema for /people/1, based on SchemaPeople.json under “resources”

In order to create a report with the test results I execute the following command from cmd “mvn test surefire-report:report”. Had to add surefire plugin to pom.xml. After the execution of the tests, html file is been created with the report. Below the generated report

**Package List**

[[Summary](file:///C:\Users\maurogiannopoulos\IdeaProjects\xm_project\target\site\surefire-report.html#Summary)] [[Package List](file:///C:\Users\maurogiannopoulos\IdeaProjects\xm_project\target\site\surefire-report.html#Package_List)] [[Test Cases](file:///C:\Users\maurogiannopoulos\IdeaProjects\xm_project\target\site\surefire-report.html#Test_Cases)]

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Package** | **Tests** | **Errors** | **Failures** | **Skipped** | **Success Rate** | **Time** |
| [Api](file:///C:\Users\maurogiannopoulos\IdeaProjects\xm_project\target\site\surefire-report.html#Api) | 4 | 0 | 0 | 0 | 100% | 187.8 s |
| [Main](file:///C:\Users\maurogiannopoulos\IdeaProjects\xm_project\target\site\surefire-report.html#Main) | 12 | 0 | 0 | 0 | 100% | 132.8 s |
| [Videos](file:///C:\Users\maurogiannopoulos\IdeaProjects\xm_project\target\site\surefire-report.html#Videos) | 3 | 0 | 0 | 0 | 100% | 49.25 s |

Note: package statistics are not computed recursively, they only sum up all of its testsuites numbers.

Api

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **-** | **Class** | **Tests** | **Errors** | **Failures** | **Skipped** | **Success Rate** | **Time** |
|  | [LatestReleasedFilmTest](file:///C:\Users\maurogiannopoulos\IdeaProjects\xm_project\target\site\surefire-report.html#Api.LatestReleasedFilmTest) | 1 | 0 | 0 | 0 | 100% | 8.255 s |
|  | [PeopleSchemaValidationTest](file:///C:\Users\maurogiannopoulos\IdeaProjects\xm_project\target\site\surefire-report.html#Api.PeopleSchemaValidationTest) | 1 | 0 | 0 | 0 | 100% | 1.793 s |
|  | [TallestCharacterNewerFilmTest](file:///C:\Users\maurogiannopoulos\IdeaProjects\xm_project\target\site\surefire-report.html#Api.TallestCharacterNewerFilmTest) | 1 | 0 | 0 | 0 | 100% | 36.56 s |
|  | [TallestCharacterStarWarsEverTest](file:///C:\Users\maurogiannopoulos\IdeaProjects\xm_project\target\site\surefire-report.html#Api.TallestCharacterStarWarsEverTest) | 1 | 0 | 0 | 0 | 100% | 141.2 s |

Main

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **-** | **Class** | **Tests** | **Errors** | **Failures** | **Skipped** | **Success Rate** | **Time** |
|  | [CalendarActionsTest](file:///C:\Users\maurogiannopoulos\IdeaProjects\xm_project\target\site\surefire-report.html#Main.CalendarActionsTest) | 3 | 0 | 0 | 0 | 100% | 60.92 s |
|  | [EconomicCalendarTest](file:///C:\Users\maurogiannopoulos\IdeaProjects\xm_project\target\site\surefire-report.html#Main.EconomicCalendarTest) | 3 | 0 | 0 | 0 | 100% | 31.53 s |
|  | [MainPageTest](file:///C:\Users\maurogiannopoulos\IdeaProjects\xm_project\target\site\surefire-report.html#Main.MainPageTest) | 3 | 0 | 0 | 0 | 100% | 20.60 s |
|  | [ResearchAndEducationTest](file:///C:\Users\maurogiannopoulos\IdeaProjects\xm_project\target\site\surefire-report.html#Main.ResearchAndEducationTest) | 3 | 0 | 0 | 0 | 100% | 19.75 s |

Videos

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **-** | **Class** | **Tests** | **Errors** | **Failures** | **Skipped** | **Success Rate** | **Time** |
|  | [EducationalVideoTest](file:///C:\Users\maurogiannopoulos\IdeaProjects\xm_project\target\site\surefire-report.html#Videos.EducationalVideoTest) | 3 | 0 | 0 | 0 | 100% | 49.25 s |

**Test Cases**

[[Summary](file:///C:\Users\maurogiannopoulos\IdeaProjects\xm_project\target\site\surefire-report.html#Summary)] [[Package List](file:///C:\Users\maurogiannopoulos\IdeaProjects\xm_project\target\site\surefire-report.html#Package_List)] [[Test Cases](file:///C:\Users\maurogiannopoulos\IdeaProjects\xm_project\target\site\surefire-report.html#Test_Cases)]

LatestReleasedFilmTest

|  |  |  |
| --- | --- | --- |
|  | latestReleaseTest1 | 8.240 s |

PeopleSchemaValidationTest

|  |  |  |
| --- | --- | --- |
|  | PeopleSchemaValidationTest4 | 1.790 s |

TallestCharacterNewerFilmTest

|  |  |  |
| --- | --- | --- |
|  | TallestCharacterNewerFilmTest2 | 36.56 s |

TallestCharacterStarWarsEverTest

|  |  |  |
| --- | --- | --- |
|  | TallestCharacterStarWarsEverTest3 | 141.2 s |

CalendarActionsTest

|  |  |  |
| --- | --- | --- |
|  | CalendarActionsTestCase4(String)[1] | 22.27 s |
|  | CalendarActionsTestCase4(String)[2] | 19.11 s |
|  | CalendarActionsTestCase4(String)[3] | 19.51 s |

EconomicCalendarTest

|  |  |  |
| --- | --- | --- |
|  | EconomicCalendarTestCase3(String)[1] | 11.30 s |
|  | EconomicCalendarTestCase3(String)[2] | 11.38 s |
|  | EconomicCalendarTestCase3(String)[3] | 8.846 s |

MainPageTest

|  |  |  |
| --- | --- | --- |
|  | MainPageTestCase1(String)[1] | 6.488 s |
|  | MainPageTestCase1(String)[2] | 6.446 s |
|  | MainPageTestCase1(String)[3] | 7.660 s |

ResearchAndEducationTest

|  |  |  |
| --- | --- | --- |
|  | ResearchAndEducationTestCase2(String)[1] | 6.551 s |
|  | ResearchAndEducationTestCase2(String)[2] | 6.549 s |
|  | ResearchAndEducationTestCase2(String)[3] | 6.649 s |

EducationalVideoTest

|  |  |  |
| --- | --- | --- |
|  | EducationalVideoTestCase5(String)[1] | 17.15 s |
|  | EducationalVideoTestCase5(String)[2] | 15.57 s |
|  | EducationalVideoTestCase5(String)[3] | 16.53 s |