**Test Approach**

**Scope and Objective**

**System under test:** Buggy Cars Rating (<https://buggy.justtestit.org/>)

Objective for this project is to find and list as many critical bugs as possible and to automate 5 main functionalities to ensure the product is meeting good quality standards. The approach will be mainly exploratory testing, the scripts will be designed under a modular based framework. Tests will be executed from the IDE but ideally a CI/CD would be set up where the tests are executed in a pipeline.

**What to Test**

Given the objective of this project is to automate 5 main functionalities, testing will fall under those functionalities

1. User registration
2. Login/ Logout
3. User profile changes \*
4. Overall rating page navigation \*\*
5. Popular make page navigation \*\*\*

\* The tests for user profile changes have been added in the same test file as Login/Logout as a user will always need to be logged in to be able to edit their profile.

\*\*,\*\*\* Due to the sheer amount of critical bugs in this application, automating other functionalities such as viewing comments and viewing individual models is not feasible at this point in time hence functionality 4 and 5 are basic navigation tests.

**Test Breakdown (High Level)**

| Functionality | Test | Test Details | Expected Result |
| --- | --- | --- | --- |
| User registration | Register new user | New user fills out all the required fields and clicks ‘Register’ button | User is able to successfully register. ‘Registration is successful’ message is displayed |
|  | Register existing user | Existing user registers again by filling out required fields and clicking ‘Register’ button | User is unable to register. ‘UsernameExistsException: User already exists’ is displayed |
| Login/ Logout | Successful Login | User fills out username and password fields with valid data and clicks ‘Login’ button | User is able to login successfully |
|  | Unsuccessful Login | User fills out username and password fields with invalid data and clicks ‘Login’ button | User is not able to sign in. Login error message is shown |
|  | Logout User | After logging in, User logs out by click the ‘Logout’ button | User is able to logout successfully |
| User profile changes | Edit Profile | User is able to navigate to the profile page after logging in, fill out the input fields with valid data and click the ‘Save’ button | User has successfully edited their profile |
| Overall rating page navigation | Search for car make | User is able to navigate to the ‘Overall Ratings’ page and search for a car make | User can successfully search for car make |
| Popular Make page navigation | Validate popular make | User is able to navigate to the ‘Popular Make’ page and confirm the popular make name | User can validate the popular make name |

**Tools Used**

* Selenium Java 4.8.3
* Junit Jupiter 5.9.1