**Introduction:**

This project gives a clear understanding of Selenium IDE, an extension for web browsers that easily automates web application testing. People can use Selenium IDE to create a record of their website interactions and play them back again which is why it stands out for people with any level of QA experience.

This project aimed to look at how Selenium IDE works by performing its tasks. We proceeded first by adding the extension, setting it up according to our web application’s needs and finally started working with practical test cases that we ran and improved throughout the process.

Throughout the whole process, team members collaborated well, discussing ideas and solving difficulties together. We tried to make execution of the test more accurate, quick and reliable by implementing control flow commands (if, else-if, else), assertions and reusable steps. Besides, we matched the outcomes of the tests to what was expected to confirm their accuracy.

Thanks to this initiative, we understood more about the basics of test automation and also noticed how Selenium IDE simplifies testing procedures, saves time and covers more tests. After that, you will find a report that covers all steps of the project, starting with installation, moving to developing test cases, executing them and finally checking the results and describing our approach and takeaways.

**Screenshots:**

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**Description of the Web Application Being Tested:**

The application we are testing is called OrangeHRM which is an open-source Human Resource Management system meant to simplify and automate HR work within a company. Employee information is handled, as well as time tracking, approval of leaves, recruitment processes, the onboarding of workers, review of work performance and time-sheet handling. With role-based access, the application ensures HR managers, employees and HR administrators go to the sections they are responsible for. Employees can submit leave requests, check the calendars for holidays, alter their details and see their schedules, while HR is responsible for approving days off and creating various reports. Web browsers can be used to access the system because its user interface is simple and fast. Because of this, Selenium IDE can be used to test OrangeHRM’s features and user interface, as testers can mimic actions such as signing in, filling in forms, exploring the system’s parts and checking its content.

**Functional Requirements and Linked Test Cases:**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Test Case ID | Functional Requirement | Test Case Description |
| 1 | TC3 | Verify login with valid credentials | Login with valid username and password and verify dashboard loads |
| 2 | TC4 | Verify login with invalid credentials | Attempt login with incorrect credentials and verify error message |
| 3 | TC1 | Verify application title after login | Check if the homepage title matches expected value after login |
| 4 | TC2 | Search for existing employee | Search for a specific employee in the employee list |
| 5 | TC6 | Add a new employee | Add a new employee record and verify it appears in the list |
| 6 | TC5 | Logout functionality | Log out of the application and ensure user is redirected to login page |
| 7 | TC8 | Post a status update in Buzz | Post a new status message in the Buzz section |
| 8 | TC9 | Verify posted Buzz status | Verify that the posted Buzz message is visible and accurate |
| 9 | TC10 | Check most liked Buzz post | Identify and confirm the most liked post in the Buzz section |
| 10 | TC11 | Verify application title on other pages | Verify that titles on other navigated pages are correct |
| 11 | TC12 | Add new nationality | Add a new nationality under Admin and confirm addition |
| 12 | TC13 | Check for existing nationality before adding | Check if nationality already exists before attempting to add |
| 13 | TC14 | Check attendance status | Verify attendance status by checking punch in/out details |
| 14 | TC15 | Verify email field value | Validate if the entered email in personal details is correct |
| 15 | TC7 | Navigate to Buzz page and verify title | Navigate to Buzz page and confirm the page title is displayed |

**ScreenShots of Test Cases**

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**TC\_2:**

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**Conclusion:**

As a group, participating in this project helped us discover the role of Selenium along with its automation abilities for tests. After running our test cases on the web application, we understood how automated testing plays a role within actual software development.

During the project, we checked various areas such as logging in, using both valid and invalid login information and exploring titles and searching for employees. We took care of things such as adding employees and their nationality, seeing how everyone was in attendance and even posting updates in Buzz. Every test lets us apply commands like click, type, verify and assert and use logic like if/else to enhance our tests.

Running the tests in Selenium IDE assured us that the system was well built. Another major benefit was realizing that testing using automation is much more efficient than the manual way. We figured out how to look for and make use of the proper locators, check that the data is correct and respond to different users’ actions.

All in all, this project improved our abilities, not only with Selenium but also by teaching us to collaborate, solve problems and consider what real testers do. We really enjoyed it and what we learned here will help us with future challenges.