**Deliverables**

1. Documentation Explaining Test Approach, Test Cases Covered, and Assumptions Made

Test Approach:

As part of a technical assessment, I automated the testing of the "Learning Resources" page of the TVOLearn application. The objective was to verify the seamless navigation and functionality of various sections, tabs, and sub-tabs within the page. The automation framework utilized Selenium WebDriver with TestNG for structuring the tests, and ExtentReports for detailed logging and reporting. The focus was on ensuring that users could navigate through the sections without issues and that the content displayed was correct and accessible.

Test Cases Covered:

1. Navigating to <https://tvolearn.com/>

- Verified the navigation to https://tvolearn.com/

2. Navigating to the 'Learning Resources (K-12)' Dropdown:

- Verified the visibility and functionality of the dropdown.

- Selected "Grade 2" from the dropdown.

3. Scrolling and Clicking 'Learn Forward in the Curriculum':

- Ensured the page scrolls to the 'Learn Forward in the Curriculum' section.

- Clicked on the 'Mathematics' tab and validated the navigation.

4. Helpful Tips Section:

- Clicked on the 'helpful tips' link.

- Waited for the 'helpful tips' page to load.

5. View Curriculum Link:

- Clicked on the 'View Curriculum' link and switched to the new tab.

- Validated the content and closed the tab.

6. Idello.org Link:

- Clicked on the 'idello.org' link and switched to the new tab.

- Validated the content and closed the tab.

7. Learning Activities Tab Navigation:

- Validated the navigation to the 'Learning Activities' tab.

8. Sub-tab Validations:

-Validated the content under the 'Number' sub-tab.

- Validated the 'Algebra' sub-tab.

- Validated the 'Data' sub-tab.

- Validated the 'Spatial Sense' sub-tab.

- Validated the 'Financial Literacy' sub-tab.

9. Resources for Learning Tab:

- Validated the navigation and content of the 'Resources for Learning' tab.

10. Apply the Learning Tab:

- Validated the navigation and content of the 'Apply the Learning' tab.

11. Vocabulary Tab:

- Validated the navigation and content of the 'Vocabulary' tab.

12. Looking for a Different Subject Section:

- Validated the 'Science & Technology' link and 'View Resources' button.

- Validated the 'Language' link and 'View Resources' button.

- Validated the 'Social Studies' link and 'View Resources' button.

- Validated the 'The Arts' link and 'View Resources' button.

10. Stay Connected Section:

- Scrolled to the 'Stay Connected' section.

- Entered an email address and clicked the 'Subscribe' button.

- Validated the subscription confirmation message.

Assumptions Made:

1. The web elements such as links, buttons, and sections are identified correctly using locators (e.g., XPath, link text).
2. The application is stable and the content of the tabs and sub-tabs does not change frequently.
3. The test is being executed on a personal laptop, hence the environment might not be as consistent as a dedicated test environment.
4. Any network latency or slow response times from the server are minimal and do not significantly impact the test execution.
5. The automated tests are run on a machine with the required dependencies and tools installed correctly.

**Summary Outlining Test Approach, Covered Test Cases, Execution Results, and Assumptions**

Summary:

Test Approach:

As part of a technical assessment, I automated the testing of the TVOLearn application, focusing on the “Learning Resources” page. The automation tests were implemented using Selenium WebDriver with TestNG and ExtentReports for detailed reporting. The goal was to ensure that each section, tab, and sub-tab functions correctly and that the content is accessible and accurate for users.

Test Cases Covered:

1. Navigated to <https://tvolearn.com/>

2. Navigated to the 'Learning Resources (K-12)' dropdown and selected Grade 2.

3. Scrolled and interacted with the 'Learn Forward in the Curriculum' section.

4. Validated the 'helpful tips' link.

5. Validated the ‘View Curriculum' content.

6. Validated the 'idello.org' link content.

7. Navigated to 'Learning Activities'

8. Validated the 'Number', 'Algebra', 'Data', 'Spatial Sense', and 'Financial Literacy' sub-tabs.

9. Validated the 'Resources for Learning' tab content.

10. Validated the 'Apply the Learning' tab content.

11. Validated the 'Vocabulary' tab.

12. Navigated to the “Looking for a Different Subject?” section.

- Validated the 'Science & Technology' link and 'View Resources' button.

- Validated the 'Language' link and 'View Resources' button.

- Validated the 'Social Studies' link and 'View Resources' button.

- Validated the 'The Arts' link and 'View Resources' button.

10. Validated the 'Stay Connected' section by subscribing with an email address.

Execution Results:

Successes:

- Navigated to 'Learning Resources (K-12)' and selected Grade 2.

- Interacted with the 'Learn Forward in the Curriculum' section.

- Successfully validated the 'helpful tips' and 'View Curriculum' content.

- Validated the 'idello.org' link content.

- Navigated to 'Learning Activities' and validated the 'Number' sub-tab content.

- Validated navigation and content of 'Resources for Learning', 'Apply the Learning' and

‘Vocabulary’ tabs.

- Navigated to the ‘Looking for a Different Subject?’ section.

- Successfully subscribed using the 'Stay Connected' section.

Failures:

- Failed to validate the 'Algebra', 'Data', 'Spatial Sense', and 'Financial Literacy' sub-tabs due to

visibility and clickability issues.

- Failed to validate subject links and 'View Resources' buttons for 'Science & Technology',

'Language', 'Social Studies', and 'The Arts' under the 'Vocabulary' tab due to similar visibility

and clickability issues.

Assumptions:

1. The elements are correctly identified using locators.
2. The test environment is my personal laptop, and thus may not be as consistent as a dedicated test environment.
3. Minimal network latency or server response time issues.
4. The automated tests are run on a machine with the required dependencies and tools installed correctly.