**Test Automation Engineer - Interview Task**

**Objective**

This task assesses your ability to:

* Automate test scenarios covering advanced UI elements such as dropdowns, tables, and date pickers.
* Build a scalable Selenium-based automation framework with Java, Cucumber (Gherkin), and TestNG.
* Handle dynamic elements, AJAX calls, and data-driven testing.
* Generate test execution reports.

**Test Website**

**Practice Test Automation Website:** [**https://practice.expandtesting.com/**](https://practice.expandtesting.com/)

**Task Requirements**

**1. Test Case Creation**

* Define manual test cases for core functionalities
* Convert test cases into Cucumber feature files (Gherkin format)

**2. Automation Framework Development**

* Set up a Selenium-based framework using:
  + Java
  + Selenium WebDriver
  + Cucumber (Gherkin)
  + TestNG
  + Extent Reports/Allure for reporting
  + Log4j for logging
  + Maven/Gradle for dependency management
* Implement Page Object Model (POM) for reusability and maintainability
* Support data-driven testing using CSV/Excel files

**3. Test Scenarios to Automate**

**Test Case 1: Challenging DOM Interaction (https://practice.expandtesting.com/challenging-dom)**

* **Objective**: Automate interactions with a complex DOM structure to validate element accessibility and functionality.
* **Tasks**:
  + Identify and interact with elements lacking unique identifiers.practice.expandtesting.com
  + Validate the functionality of buttons and links within the challenging DOM
  + Ensure accurate data extraction from tables with complex structures

**Test Case 2: Dynamic Data Tables (https://practice.expandtesting.com/tables)**

* **Objective**: Automate operations on dynamic tables, including data extraction, sorting, and validation.
* **Tasks**:
  + Extract and validate data from tables with and without proper identifiers.practice.expandtesting.com
  + Verify sorting functionality and data integrity post-sort
  + Interact with action buttons (e.g., Edit, Delete) within table rows

**Test Case 3: File Upload Functionality (https://practice.expandtesting.com/upload)**

* **Objective**: Automate the process of uploading files and validating successful uploads.
* **Tasks**:
  + Automate file selection and upload processes
  + Validate confirmation messages or indicators post-upload
  + Handle error scenarios, such as unsupported file types or sizes

**Test Case 4: Drag and Drop Feature https://practice.expandtesting.com/drag-and-drop)**

* **Objective**: Automate the drag-and-drop functionality to ensure elements can be moved and placed correctly.
* **Tasks:**
  + Simulate drag-and-drop actions between elements
  + Verify the successful repositioning of elements post-action
  + Handle scenarios where drag-and-drop actions are restricted or produce errors

**4. Test Execution & Reporting**

* Execute test cases using TestNG runner
* Capture screenshots for failed test cases
* Generate Allure/Extent Reports with test execution details

**5. GitHub Submission**

* Push the complete project to GitHub with:
  + A well-structured README.md
  + Instructions to set up and execute the tests
  + Properly structured test framework with clear documentation

**Deliverables**

Candidates must submit:

1. Manual Test Cases (structured document)
2. Cucumber Feature Files (Gherkin scenarios)
3. Complete Automation Framework (GitHub Repository)
4. Test Execution Reports (Extent Reports/Allure)
5. GitHub Repository Link for code review

**Evaluation Criteria**

* **Test Case Coverage** – Covers complex UI elements and edge cases
* **Framework Design** – Follows best practices (POM, reusable methods, modularity)
* **Test Execution & Reporting** – Well-documented results with error handling
* **GitHub Management** – Clean code structure, commits, and documentation

**Time Allocation & Deadline**

Candidates are expected to complete this task within **7 days.**

* This includes **test case creation, automation framework setup, test development, execution, and GitHub submission**.