**Test Automation Framework Activity - Technical Prerequisites and Submission Guidelines**

Thank you for your interest in the Senior Developer in Test position here at HMCTS. As part of our interview process. We appreciate your time and effort in completing this activity, which will help us assess your technical skills in test automation.

Before you proceed with the activity, please ensure that you meet the following technical prerequisites:

* **Proficiency in a Programming Language:**
  + Strong command of at least one programming language commonly used in test automation, such as Java, Python, C#, or JavaScript.
* **Familiarity with Test Automation Frameworks:**
  + Well-versed in at least one test automation framework, such as Selenium WebDriver, Playwright, Cypress, TestNG, JUnit, NUnit, PyTest, or Jasmine.
* **Web Application Testing Proficiency:**
  + Solid understanding of web application testing concepts, including interacting with web elements, performing actions like button clicks and form filling, and verifying expected outcomes.
* **Version Control Skills:**
  + Proficiency in using version control systems such as Git to manage your code.
  + Ensure you have a Git client installed and are familiar with basic Git commands.
* **Development Environment Setup:**
  + Have your development environment configured with the necessary tools, including an integrated development environment (IDE), code editor, and relevant plugins or extensions for your chosen programming language.
* **Documentation and Submission Guidelines:**
  + The deadline for submitting the completed activity is by **Friday 8th March 2024**.
  + Package your code and any supporting files in a ZIP file or share a repository link if applicable.
  + Provide clear instructions on how to submit your code, including any specific steps or guidelines.
* **Interview Preparation:**
  + Be prepared to present your code, explain your design choices, and discuss any challenges you encountered during the interview.
  + Think about potential improvements you would make given additional time to work on the activity.

If you have any questions or need further clarification on the technical prerequisites or submission guidelines, please feel free to reach out to us.

We look forward to receiving your completed Test Automation Framework Activity and discussing your approach during the interview. Best of luck!

Activity: Implement Test Automation Framework

Objective:

Implement a test automation framework for a simple web application of your choice that tests the login functionality.

Instructions:

1. Use any programming language and test automation framework of your choice (see prerequisites above).
2. Create a new test project/repository.
3. Set up the necessary dependencies and configurations for the test framework.
4. Write test cases to automate the login functionality of a web application.
5. The test cases should cover both positive and negative scenarios.
6. Include test data setup and teardown steps as necessary.
7. Utilise appropriate design patterns and best practices for test automation.
8. Implement logging and reporting mechanisms to track test execution and results.
9. Handle any necessary waits, assertions, and exception handling in your tests.
10. Use version control to manage your code changes.

Deliverables:

1. The source code of the test automation framework.
2. A README file with instructions on how to set up and run the tests.

A brief explanation of your design choices and any additional improvements you would make if given more time.