**Assignment ISTQB: ISTQB Foundation Level - Chapter 2 Examination**

Chapter 2 of the ISTQB Foundation Level syllabus covers "Testing Fundamentals". To examine your knowledge and understanding of this chapter, please answer the following questions:

* Explain the difference between verification and validation in software testing.

Verification for requirement/the product right?

Validation for business need/the right product?

* Describe the five fundamental test activities and their purposes.

Planning: defining objective, approach, scope, entry /exit criteria and formulating a test schedule.

Monitoring& control: ongoing check of all test activities to compare the actual with the plan and take actions to meet the objective of testing.

Test analysis: what to test, check what is the testable features in sw.

Tc design: how to test, design TC and identify testware/environment/tools.

Implementation: implement what we designed in the last stage manual TC and automated scripts and create testware/environment/tools

Execution: run the code and compare ER with AR then report the results

Test closure: usually occur in milestones including results and analysis /learned lessons for the future

* What is the purpose of the test planning process? Discuss the key elements that should be included in a test plan.

Explain the concept of the test closure process. What are the typical deliverables of this process?

 Test Summary Report:

 Defect Report:

 Test Metrics and KPIs:

 Lessons Learned Document:

 Archived Test Artifacts:

 Final Sign-Off Document:

* Discuss the differences between static testing and dynamic testing. Provide examples of techniques for each type of testing.

Static: without running the program/start when the requirement be there

Dynamic: must running the code/start after finishing the code

Please provide detailed and well-structured responses to each of these questions, demonstrating your understanding of the key concepts covered in Chapter 2 of the ISTQB Foundation Level syllabus.

**Assignment Automation: Selenium Automation Script**

To assess your skills in writing your first Selenium automation script, please complete the following exercise:

Create an automated test script using Selenium WebDriver to test the login functionality of the Sauce Demo website (https://www.saucedemo.com/). The script should perform the following steps:

-Navigate to the Sauce Demo website.

2-Enter a valid username (e.g., "standard\_user") in the username field.

3-Enter a valid password (e.g., "secret\_sauce") in the password field.

4-Click the "Login" button.

5-Verify that the user is successfully logged in and navigated to the products page.

Implement the script using the programming language of your choice (e.g., Python, Java, C#, etc.) and provide the complete code in the response. Make sure to include any necessary imports, configurations, and assertions to ensure the script is well-structured and functional.

Please note that this is a starting point for your first Selenium automation script. As you progress, you can explore more advanced concepts, such as data-driven testing, page object model, and framework implementation.