CS423 – CSC13003 – Software Testing

HOMEWORK

AUTOMATION TESTING

General Information

Exercise ID:	AutomationTesting
Duration:	9 hours
Deadline:	(please see the submission link)
Form:	Individual Assignment
Submission:	Moodle
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Expected Learning Outcome

- Design comprehensive test cases to validate selected functionalities of a real-world website.
- Develop and execute automated test scripts using data-driven techniques to verify website functionality.

Software Under Test

- **Application**: The Toolshop
- **Repository**: https://github.com/testsmith-io/practice-software-testing/
- **Target Version**: /sprint5-with-bugs folder

👉 Students must download this version and **deploy it locally** on their machine.

Scope and Feature Selection

- Students must work **in groups**.
- Each **group member must select and be responsible for testing two features** of the system under test.
- **No two members within the same group are allowed to work on the same features**.
- In the final reports, **each student must submit their own individual report**.
- **At the beginning of each individual report, students must include a clear task allocation section for the entire group**, which shows:
  - Names of all group members
  - Features assigned to each member
- Following that, the individual report should detail the student's own assigned features, including test case design, execution results, and any bugs found.

⚠️ The higher the priority and business impact of the selected features, the more credit will be given in evaluation.

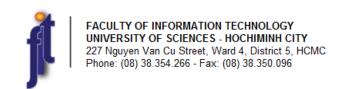## Requirements

a. **Test Case Design**
- Design detailed test cases for **two features** selected from HW2 – Domain Testing.
- Ensure that your test cases include clear input data, expected outputs, and steps for execution.

b. **Automation Implementation**
- Use **Selenium**, **Katalon**, **TestComplete**, or equivalent tools to automate your test cases.
- Your scripts must demonstrate the use of:
  - **Data-driven testing** (e.g., input data from CSV, Excel, or data tables).
  - **Checkpoints/Assertions/Verifications** to validate expected behavior.
- Execute the automated tests using at least **three different browsers**, employing Selenium WebDrivers (or their equivalents) to ensure cross-browser compatibility.

c. **Reporting**
- Write a report explaining:
  - The automation process step by step.
  - Implementation of data-driven techniques.
  - Use of checkpoints/assertions in your scripts.
  - Results of the automated tests.
- Record a **video demonstration** of your automation process, upload it to **YouTube**, and include the link in your report.

   d. **Bug Reporting**
- Log any discovered bugs in **FIT's Mantis** tracking system.
- Capture screenshots of all reported bugs and include them in your report.

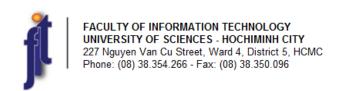## Submission Instructions

- **File name Format**:

  StudentID_AutomationTesting_SelfAssessedGrades.zip
  (Example: 20127001_HW05_09.zip)

- **The ZIP file must include:**
  - **StudentID_report.pdf**
    - Step-by-step explanation of the automation testing process
    - YouTube video link of the recorded demo
    - Bug screenshots from FIT's Mantis
    - Self-assessment (template provided in the assignment document)
  - **StudentID_Testcase.xlsx**: test cases.
  - **StudentID_Data.xlsx**: **Data files** used for input (for data-driven testing).
  - **StudentID_Script: Script files** used for automation.
  - **StudentID_SummaryReport.xlsx**: the incremental update of the **Test Summary Report** (template provided)
  - **StudentID_BugReport.xlsx**: Your detailed bug report.
- **Submission Platform**: Moodle
- **Deadline**: Refer to the submission link on Moodle

Assessment Criteria

No.	Criteria	Grade	Self-Assessed Grade
1	**Name of Feature 1 (missing any of the following: "report", "script" or "video" results in 0 points)**	**50**	
	1.1 Report + Bug	15	
	1.2 Test cases	5	
	1.3 Script files	10	
	1.4 Data files	10	
	1.5 Videos	10	
2	**Name of Feature 2 (missing any of the following: "report", "script" or "video" results in 0 points)**	**30**	

	2.1 Report + Bug	15	
	2.2 Test cases	5	
	2.3 Script files	10	
	2.4 Data files	10	
	2.5 Videos	10	
	Total	**100**	

References

None

Other Regulations

Late submissions will not be accepted

Self-assessment must be included (template provided)

Self-Assessment Template

Students must include their self-assessment based on the rubric in assessment criteria session at the end of their individual report.