FACULTY OF INFORMATION TECHNOLOGY
UNIVERSITY OF SCIENCES - HOCHIMINH CITY
227 Nguyen Van Cu Street, Ward 4, District 5, HCMC
Phone: (08) 38.354.266 - Fax: (08) 38.350.096

CS423 – CSC13003 – Software Testing

HOMEWORK

PERFORMANCE TESTING

General Information

Exercise ID:	PerformanceTesting
Duration:	9 hours
Deadline:	(please see the submission link)
Form:	Individual Assignment
Submission:	Moodle
Lecturer:	Dr. Lam Quang Vu
	Dr. Tran Duy Hoang
	MSc. Tran Thi Bich Hanh
TA:	MSc. Truong Phuoc Loc
	MSc. Ho Tuan Thanh
Contact:	lqvu@fit.hcmus.edu.vn
	tdhoang@fit.hcmus.edu.vn
	ttbhanh@fit.hcmus.edu.vn
	tploc@fit.hcmus.edu.vn
	htthanh@fit.hcmus.edu.vn

Expected Learning Outcome

By completing this assignment, students will be able to:

- Design performance test cases to test some functions of a real website.
- Understand and apply various kinds of performance testing techniques: load testing, stress testing, spike testing, volume testing, endurance testing…
- Execute the designed test cases on a real application.
- Record actual results, compare them with expected results, and report bugs if applicable.
- Use AI tools effectively and responsibly to support test design and reporting.
- Create a professional test report combining human and AI contributions.

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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 at least one (1) significant SUT scenario** of the system under test.
- **No two members within the same group are allowed to work on the same feature**.
- 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

Each student is asked to apply JMeter or other performance testing tools to conduct **3 test scripts** (using the **recording feature**) for a number of performance testing techniques (**load, stress, spike, volume, endurance**… testing) on at least **one (1) significant SUT scenario**.

All test scripts must use **data driven** techniques and generate **3 types of report viewers** (table, graph…).

Students must **write reports** including the server/PC configuration hosting the website, the performance testing techniques you applied, the expected and actual result (in response time or other metric) and step-by-step instructions for conducting the tests.

Students must also **record videos** of the performance testing process, upload to Youtube and provide the links in the report.

Any identified **bugs** must be reported in the tracking tools.

Students are encouraged to leverage **AI / LLM Tools** to support their work.

Submission Instructions

- **File Name Format**:
  StudentID_PerformanceTesting_SelfAssessedGrades.zip
  (Example: 20127001_PerformanceTesting_09.zip)
- The ZIP file must include:
  - **StudentID_PerformanceTesting.pdf**: A PDF report file includes step-by-step explanation how to apply this testing technique and a list of useful prompts for their work. The Youtube video link should be included in the report. At the end of the report, the student should include your self-assessment (see the template at the end of this document)
  - **StudentID_TestCases.xlsx**: An Excel file includes final refined test cases.
  - **Folder StudentID_Scripts:** The folder should include script files and date files.
  - **StudentID_BugReport.xlsx**: Your detailed bug report. Or **StudentID_BugReport.pdf** includes the screenshots of all discovered bugs that are reported in the bug tracking tool.
- **Submission Platform**: Moodle
- **Deadline**: Refer to the submission link on Moodle

Assessment Criteria

Criteria	Description	Max Points	Self Assessment
Load testing	Missing any of the following “report”, “script”, or “video” results in 0 points Report: 1.0 TestCases, BugReport: 0.5 Script, Data: 0.5 Video: 1.0	3.0	0.0

Stress testing	Missing any of the following “report”, “script”, or “video” results in 0 points Report: 1.0 TestCases, BugReport: 0.5 Script, Data: 0.5 Video: 1.0	3.0	0.0
Spike testing	Missing any of the following “report”, “script”, or “video” results in 0 points Report: 1.0 TestCases, BugReport: 0.5 Script, Data: 0.5 Video: 1.0	3.0	0.0
Use of AI Tools	Prompt transparency, critical validation, added value	1.0	0.0
Total		**10.0**	**0.0**

References

None.

Other regulations

Late submission is not permitted.

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Self-Assessment Template

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