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

API TESTING

General Information

Exercise ID:	APITesting
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 API test cases on a real-world project.
- Execute the designed test cases.
- Record actual results, compare them with expected results, and report bugs if applicable.
- Integrate API testing to the CI/CD workflow.
- Use AI tools effectively and responsibly to support test design and reporting.
- Create a professional test report combining human and AI contributions.

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 three (3) significant APIs** of the system under test.
- **No two members within the same group are allowed to work on the same API**.
- 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

Students are asked to work on appropriate API testing tools. Each student must test at least **three (3) APIs**. All test scripts must use **data driven** technique.

The **test cases** and any identified **bugs** must be reported in the tracking tools.

Finnally, **integrate** the designed API test cases into a CI/CD (continuous integration) workflow (e.g. Github Actions, Jenkin…).

Students must also **record videos** of the API testing and the CI/CD integration process, upload to Youtube and provide the links in the report.

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

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

Submission Instructions

- **File Name Format**:
  StudentID_APITesting_SelfAssessedGrades.zip
  (Example: 20127001_APITesting_09.zip)
- The ZIP file must include:
  - **StudentID_APITesting.pdf**: o A PDF report file includes step-by-step explanation and screenshots to show how to apply this testing technique, how to integrate into a CI workflow and a list of useful prompts for their work. The Youtube video must be included in the report. At the end of the report, the student should include a self-assessment section (see the template at the end of this document)
  - **StudentID_TestCases.xlsx**: An Excel file includes final refined test cases.
  - **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.
  - **Data files**
- **Submission Platform**: Moodle
- **Deadline**: Refer to the submission link on Moodle

Assessment Criteria

Criteria	Description	Max Points	Self Assessment
API1	Missing any of the following “report”, “test cases”, “bug report”, “data”, or “video” results in 0 points Report: 1.0 Test cases: 0.5 Bug report: 0.5 Video: 1.0	3.0	0.0

API2	Missing any of the following “report”, “test cases”, “bug report”, “data”, or “video” results in 0 points Report: 1.0 Test cases: 0.5 Bug report: 0.5 Video: 1.0	3.0	0.0
API3	Missing any of the following “report”, “test cases”, “bug report”, “data”, or “video” results in 0 points Report: 1.0 Test cases: 0.5 Bug report: 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.

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

Self-Assessment Template

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