## CS423 – CSC13003 – Software Testing

## HOMEWORK

### GUI & USABILITY TESTING

## General Information

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

● Design and apply a web-based checklist to conduct GUI testing effectively.

## 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 one screen/one feature** of the system under test.
- **No two members within the same group are allowed to work on the same screen/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.
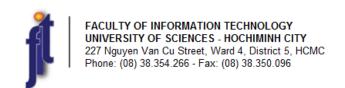
## Requirements

### a. GUI Testing with Checklist

- Use the provided GUI checklist (Excel format) to test at least **one screen**.
- The checklist must include a **minimum of 30 items**. You may customize or extend it as needed.
- Refer to the file titled **"Web checklist"** as a sample.

### b. GUI Testing with AI tools

- Input your **GUI checklist** and **interface screenshots** into a Generative AI tool (e.g., ChatGPT, Gemini, Grok, DeepSeek, Copilot).
- Use the AI-generated feedback to identify any UI issues, inconsistencies, or areas of non-compliance.
- You need to describe:
    - The **tool name**
    - The **prompts used**
    - How you validated or refined the AI-generated results
    - Which test cases came from AI and which were created manually

### c. Usability Testing

- Select one feature and design a **usability survey** with **at least 10 questions**.
- Conduct user feedback collection using tools such as **Five Second Testing**, **Google Forms**, or similar platforms.
- Collect responses from **at least 7 participants**.
- Write a report analyzing the feedback and identifying usability concerns.

d. **Cross-Platform Testing**

- Use **BrowserStack** or similar tools to test **one GUI screen** across **at least 3 different browsers or platforms**.
- Provide a step-by-step report detailing how the task was completed.
- Include final screenshots from each platform in your report.

e. **Bug Reporting**

- Any issues identified (from the checklist or user feedback or AI feedback) must be documented in **Mantis** (the bug tracking tool).
  - Bug ID
  - Summary
  - Steps to Reproduce
  - Actual Result vs Expected Result
  - Screenshot (if possible)
  - Priority and Severity
  - Affected Feature / Version
- Capture screenshots of all reported bugs from Mantis.
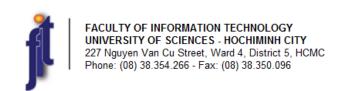- Include these in your final report.

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## Submission Instructions

- **File name Format**:

  StudentID_GUI_USABILITY_SelfAssessedGrades.zip
  (Example: 20127001_HW04_09.zip)

- **The ZIP file must include:**
  - **StudentID_GUI_Checklist.xlsx**
  - **StudentID_GUI_AI.pdf**: your individual report.
  - **StudentID_UsabilityTesting.pdf**: Your individual report.
  - **StudentID_CrossPlatformTesting.pdf**: Your individual report.
  - **StudentID_BugReport.xlsx**: Your detailed bug report of gui, usability, crosss platform.
- **Submission Platform**: Moodle
- **Deadline**: Refer to the submission link on Moodle

## Assessment Criteria

| Criteria | Outcomes (Brief description about what you get/trouble from each requirement) | Grade | Self-Assessed Grade |
|---|---|---|---|
| **1** | **Checklist of one GUI** | **30** | |
| **2** | **AI tools** | **20** | |
| **3** | **User survey and feedback** | **30** | |
| | 2.1 Questions (10) | 10 | |
| | 2.2 Feedback (7) | 10 | |
| | 2.3 Report | 10 | |
| **3** | **BrowserStack** | **30** | |
| **4** | **Bug report** | **30** | |
| | 4.1 Gui | 10 | |
| | 4.2 Usability | 10 | |
| | 4.3 Cross-platform | 10 | |
| | **Total** | **140** | |

## 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.