ITCS371 Introduction to Software Engineering
Faculty of Information and Communication Technology

Project Phase 3, Semester 1/2023

Score: 7 points

Due date of submission:
Sunday, November 19, 2023 @ 23:59 via GitHub

Presentation (Q&A) date:
Section 1: Friday, November 24, 2023 (Afternoon)
Section 2: Wednesday, November 22, 2023 (Morning)
Section 3: Thursday, November 23, 2023 (Morning)

Project description:

This final project phase is about putting things into action and testing. We'll use a mock-up prototype to show that our analysis, design, and work are right and in sync. We'll also make tests to check that everything works correctly. Students should show they understand how to use the software tools, like data flow diagrams and prototypes, for their project.

The expected outputs and scores

Item	Minimum expectation	Score (%)
1. Revision of the deliverables presented in the previous phases	At least 1 change from your previous phases that improves your analysis and design	10
2. Mock-up prototype (actual implementation or Code.org)	A prototype representing 2 processes exists.	40
3. Test cases	Functional test cases for 2 implemented processes	40
4. Quality of your presentation (recorded video)		10
Total		**100 %**

Detailed description

1. **Revision of the previous phase deliverables accompanied by a list of modifications and their justifications.**

You can revise the work that you delivered in the first phase according to feedback from the instructors. You may also revise it because you want to improve and make the analysis and design corresponding to your detailed design in the 2nd phase. You then need to provide a list of changes with an explanation in a text file named *"RevisionLog.md"*.

For example, you can provide the following text in the file if you add a new use case called "Check National ID Card".

Revision Log

1. Added *Check National ID Card* use case: This use case has been added because it fulfills the registration process.

2. **Mock-up prototype**

Choose two primary processes from Level 1, such as those with multiple sub-processes or vital to the business, for a mock-up prototype. Ensure the prototype aligns with the detailed design and looks clean; interfaces with blank spaces won't work. The prototype should function correctly, accept user inputs, and display expected outcomes. It should also be ready for testing. You can use various methods for this, like Java app, web apps, or platforms such as App Lab from code.org (https://code.org/educate/applab) for your implementation. You can factor in assumed inputs, like bank approvals. This prototype will be vital for the testing phase.

3. **Test cases**

You must develop test cases based on the testing techniques discussed in the class to test your mock-up prototype of two main processes corresponding to the selection in (2). A test case must include at least the following:

1) Test ID
2) Test Name
3) Test Procedure (steps to test)
4) Expected Result

The test procedure should include the steps to perform on the prototype (click this button, then fill in this information, etc.) and specify what data or results or actions it should present or handle (expected result).

The overall evaluation criteria

Your delivered outputs will be marked based on the following criteria

1. **Completeness of your analysis, implementation, and testing**: The detailed analysis is represented in DFD, the implementation is runnable, and the test is completed.
2. **Correctness of your work**: For example, the diagrams must conform to the rules and convey the correct meaning, and the tests must be correctly designed.

3. **Consistency:** The analysis and diagrams must be consistent, for example, actors and processes should match with the business description and requirement specification, and both internal and hierarchical consistency of DFD must be maintained.
4. **The quality of deliverables:** for example, readability, spelling, and grammar.
5. **The quality of responses in Q&A sessions**

Submission and presentation instructions

GitHub

1. We will use GitHub as our main medium to conduct the project as in the first and the second phase.
2. You can use issues in GitHub to ask and communicate with the instructors. However, note that the verbal feedback from the instructors can be delivered during office hours.

Submission on GitHub

1. The only work from commits **before** the deadline will be marked. For example, if a commit after the deadline has been found, the project will be rolled back to the eligible commit before the deadline for grading.
2. Files in your GitHub repository must be clearly identified which part of the project that the files are contributing to. For example, a file name should be meaningful e.g., project description, use case, and DFD Level 1.
3. All deliverables must be uploaded to your GitHub repository under a folder named **"phase-3"**. The work that does not contain in the repository will not be graded. For example, if you add your correction to an issue, the work will not be graded.
4. All deliverables must be viewable via the GitHub website. Note that you can use any tools to draw diagrams but make sure that you upload a viewable version to your GitHub repository.

Presentation:

Again, you must submit the presentation as a VDO recording. The instructors will look at your presentation before the presentation day. The presentation day will be mainly a Q&A session. The presentation instructions are as follows.

1. The length of your VDO recording is 10 minutes. The content after 10 minutes will be ignored.
2. The VDO recording of your presentation must cover all deliverables of your project and give a summary of your project and each deliverable.
    a. DFD Level 0
    b. DFD Level 1 and Level 2 of the two implemented processes
    c. A mockup prototype with a demo showing the two implemented processes
    d. Execution of the functional test cases of the two implemented processes
3. **The mock-up prototype must be presented in the VDO.**
4. You must narrate the VDO to explain each of the deliverables.
5. The VDO recording must also include your talking heads in the frame to see who is presenting, for example,

   a. https://www.youtube.com/watch?v=T82_rTuy7Cw
   b. https://www.youtube.com/watch?v=Bq3F43URr8A
6. You can use the work that you have committed on your GitHub repository in the presentation. Do not need to use slides (if you want).
7. The link (i.e. URL) to your VDO record must exist in the file named "VDO_URL_Phase2_<group name>.txt" in your GitHub repository **before the deadline**.
8. You may upload your VDO to Google Drive, YouTube, or any video hosting services and generate a link to share your VDO.
9. **Make sure that the instructors can access the VDO record.**
10. The Q&A session on the presentation day is 10 to 15 minutes.
11. All members of your group must participate in the VDO presentation.
12. All members of your group must present on the presentation day.

Your score will be deducted if you do as following:

1. Not showing up in the presentation video = -30% (individual)
2. Late showing up in the presentation day = -20% (individual)
3. Not showing up in the presentation day = -30% (individual)
4. *** Only the work that is submitted before the deadline is graded. Having no work submitted before that means a ZERO score ***
5. *** All required items must exist in the GitHub repository in order to be graded, otherwise your project phase 3 score will be ZERO ***
6. Failure to follow the instructions will make you lose points.
7. Any issues/problems/obstacles in progressing your project must be informed before each deadline.
8. Any issues/problems that happen outside the rules stated above will be considered by all instructors. The decision and the penalty from the instructors are final.
9. In the case of plagiarism, the project phase 3 score of the plagiarizing group will be ZERO.
