ASSIGNMENT 2

MODULE: CPT202

WEIGHT: 50%

LECTURER: Soon Phei Tin

DUE DATE: 27 May 2022, Week 14

DELIVERABLES: Individual Final Reflective Report

SUBMISSION ARRANGEMENTS:
Each member in the group must submit one individual final reflective report in PDF format via Learning Mall by the above deadline. Any additional material, in particular code, should be submitted in a single zip file and the report should clearly explain the contents of the zip file. Software code must also be synchronized to a Git repository and documented in the report. The report should clearly explain how to access the source code. Note that files in proprietary or non-standard file formats may not be readable and so are likely to be ignored.

TITLE: Software Engineering Group Project Individual Report

This assignment is the second associated with this module and contributes 50% to the overall module marks.

Marks will be awarded to each individual report.

LEARNING OUTCOMES ADDRESSED:
 A. Work as part of a development team demonstrating effective communication and interpersonal skills to design and develop a software system.
 B. Demonstrate an understanding of the software development process including the principal methods and issues involved in deploying systems to meet business goals.
 C. Specify the requirements of a software system.
 D. Understand the role of properly written documentation in the process of software development.
 E. Recognize the legal, social, ethical, and professional issues involved in the development and deployment of a software system.

INSTRUCTIONS

The report must describe the final solution to the software development problem completed by the group. The report should be factual and can assume that the reader is familiar with the previously submitted documents and presentations. The report should be around 15 pages. It must in particular address the following, based on the work executed:

• An introduction providing an overview of the report's contents and cover, as necessary, refinements and modifications of the requirements. Provide justifications for any changes or your insights into problems. Also state clearly what your solution to the problem does and justify that your approach shows overall major progress towards addressing the problem. Discuss your personal perspective on the aims of the project, the benefits the project might offer and to whom if it were successfully carried out, and the main benefits that pursuing the project would offer the team members.

• Multiple sections detailing your work on the project, including **all sprints** of the project. The sections and their contents depend on the Scrum ceremonies, and your contribution to the project. You are expected to provide sample Scrum ceremonies related to your task assignments. The sample Scrum ceremonies includes Sprint Backlogs, the related PBIs, and the capacity allocation. You should describe the overall software system as designed and implemented, and the testing and evaluation of the implemented solution. Your report should also highlight where you have considered or been influenced by legal, social, ethical and professional issues.

• Use suitable diagrams, based on appropriate standards such as UML, that clearly expose the static structure of the system (e.g. class and component diagrams or ER diagrams) and its dynamic behaviour (e.g. sequence or other interaction diagrams, use cases) on various detail levels (from the high-level architecture to the detailed design). Core implementation tasks may be described using pseudo code, activity or state machine diagrams. The complete code implemented to solve the problem must be provided in a Git repository and the access to the repository must be provided.

• For testing, explain the approaches used to ensure good quality code has been developed. Clearly describe how the software has been tested from a user's as well as a developer's perspective. Include test reports and discuss what of the system is working and where issues still exist.

• A discussion of how changes in the project plan and execution have been handled and if the project execution progressed as initially expected, an evaluation of how successful the project was and whether the results could be used to continue the work, and suggestions for improving the approach to solving the problem and the project management. Write this from your personal perspective focusing on specific issues relating to the requirements gathering, design, implementation, testing, evaluation, management you have been involved in or feel particularly strongly about but relate this to the overall project.

• Reflect on your contribution to the project, how you approached these tasks and how you interacted with other members, both in sharing your results and in organising the team's

activities. Also consider how your personal experience of the project compared to your expectations and experience before you started the project, how well your existing skills were utilised and what new skills you have learnt.

- Complete your report with a clear set of conclusions and a statement on future work. Discuss what lessons you learnt from executing the project about your discipline, project management and teamwork. Consider how and where you might apply this in the future.

MARKING SCHEME (50% of the module)

This assignment is grade based on 100 marks.

A. Overall quality of the solution to the software development problem
- Does the report clearly state the functionalities implemented by the software and shows that the individual understood the problem and produced an appropriate solution?
- Does the software seem reasonable given the overall system and effort available?
- What is the quality of the software architecture, detailed design, implementation, testing, reported as suitable for the chosen development methodology and the fact that this is the final report on delivering the solution (see assessment criteria in the coursework description)?
- Is there evidence that the work has been implemented as a team showing efforts of how to integrate the various work components?

Score: /25

B. Justification and evaluation
- Did the member provide appropriate justifications for their design and implementation decisions and clearly state any choices and assumptions that were made?
- Did the member identify strengths and limitations of their complete software system with clear acceptance criteria and suitable evidence?
- Did the member identify the potential risk of the software development?
- Did the member consider legal, social, ethical and professional issues to justify their choices and evaluate their results?
- Is there a discussion of an initial business plan/case as suitable for the project context?
- Is there a discussion of how well the software meets the requirements and executes the intended functionality with clear evidence?
- Are the suggestions for future work concrete, practical and reasonable and do they arise from the evaluation?

Score: /30

C. Report writing
- Does the report provide a coherent and detailed view of the software, focusing on the major challenges and issues of the particular project?
- Does the report provide relevant Scrum artifacts that describe the individual contribution?
- Is there a discussion of how well the software meets the requirements and executes the intended functionality with clear evidence?

- Did the report provide evidence of testing and evaluation with a clear statement of what the system is capable of, and what not?
- Did the demonstration provide sufficient evidence that all the functionalities claimed to be implemented are present?
- Was the software demonstrated suitably showing its main functionalities, strengths and weaknesses?
- Was the report logical in structure and content?
- Is the report clearly structured and well presented (writing style, grammar and use of figures)?
- Is there evidence that the team and individual is using relevant literature and other resources with clear references?

Score: /25

D. Learning and Professional Development

- Discussion of key learning experience is provided
- Examples have been provided to illustrate each of the learning experiences
- A clear understanding is provided of how knowledge and skills obtained through undertaking a team project are likely to contribute to the student's professional development

Score: /20