SoftEng 761: Advanced Agile and Lean Software Development
Agile Discovery (15% of final grade)
Due: 11:59pm, 8th August 2021 (End of Week 3)

Learning outcomes

The purpose of this assignment is to target the following learning outcomes:

- *Demonstrate* an understanding of Agile values and principles, and the Scrum framework,
- *Predict* and *assess the impact* of Agile and Scrum aspects that will be problematic in your project,
- *Relate* previous software development experience to the anticipated Agile and Scrum practices,
- *Organise* your reflection into a *concise* and *insightful* flow.

The Agile Philosophy, and Applying Scrum

Make sure you carefully read the following lecture content required for this assignment:

- https://softeng761.digitaledu.ac.nz/topics/agile, and
- https://softeng761.digitaledu.ac.nz/topics/scrum_kanban.

This assignment is about developing a deeper understanding of the underlying Agile and Scrum theories. You will need to demonstrate that you not only understand the key aspects behind Agile and Scrum, but that you have reflected and anticipated potential challenges you foresee, in particular how you are going to respect the (i) Agile values (and principles) and (ii) Scrum framework in the context and constraints of a university course (which will have obvious differences to a real-world full-time industry job where you are only focusing on one job at a time).

For this assignment, you don't need to wait until you have your project allocated to your Team; you should be able to complete this assignment without any of the specifics of whatever project that will eventually be allocated to you. Rather, the focus is more holistically focused on the anticipated Scrum framework, and how the prescribed Scrum Guide steps will be played out.

You can contextualise this with respect to your previous software development collaboration efforts. What is it from the Scrum framework (and general Agile values/principles) that will be feasible, work well, or be infeasible or not work well? You have a lot of flexibility here; you can discuss from the point of view of experience in industry, or the point of view of experience with working with others at university. It doesn't matter if that experience involved Agile or not, but hopefully you can relate enough of the

software development process to Agile and Scrum. You can also discuss what you will take away from your understanding of Agile and Scrum, and how will this serve you well in your project. You can also discuss how you anticipate particular aspects of the Agile and Scrum concepts to actually go against (or present challenges/difficulties) in practice when you undertake the project. By anticipating these things, what do you think you need to do to overcome them (or at least reduce their negative impact) to maximise the success of the project? You should talk about Kanban also, and how you will be incorporating it. Are there other Extreme Programming (XP) principles you plan to incorporate/apply? If not, what ones did you consider but opted not to incorporate? If so, which ones are you incorporating, and why them?

Hopefully you can appreciate the spirit of the above prompts. You only have 1.5 pages to write everything. This report can be written less like a research document, and should instead be reflective and demonstrate anything insightful you have realised after studying what Agile and Scrum are all about. This reflection, before you start the project, will hopefully get your predicting the challenges so you can be prepared for your project. The reader needs to be convinced that you have a deep understanding, and that you aren't merely repeating definitions of Agile and Scrum.

For this report, it is OK to use personal language; but this doesn't mean you can be slack and casual. You still need to be professional in your tone, and have tidy formatting.

Marking Rubric

The assignment will be marked out of 15 marks, scaled to 15% of the course:

- Content (12 marks):
  - Demonstrate an understanding of Agile values and principles, and apply them correctly in the context of developing an application (2 marks).
  - Considered following different frameworks, evaluate the pros/cons of their practice in a university environment:
    - Scrum (3 marks),
    - Kanban (2 marks),
    - XP or other (2 marks).
  - Reflection on previous development experiences and their outcomes; compare them meaningfully with how the outcome might have changed if an Agile approach was followed. Discussion should be reflective and insightful (3 marks).
- Writing style (3 marks):
  - Meaningful structure of the report (in terms of how well the paragraphs are written, whether the paragraphs flow well one after another).
  - Grammar, spelling, and punctuation etc.
  - Correct and professional formatting (font size, single column, healthy margins, making use of the page space limits, etc).

Penalties apply for going over the page limits.

Format of report

- 1.5 A4 pages for the entire report. You should be maximising the space you have for these 1.5 pages. If your page is noticeably empty, this won't appear like you maximised the space available to discuss how you see Agile playing out for your project.
- Single column (similar to this handout).
- Healthy margins (similar to this handout).
- Font size: 11 (similar to this handout).

Submission

You will submit your final report via Canvas. Submit the following, in a single PDF file (i.e. combine the cover sheet with the report as a single file):

- A **signed and dated Cover Sheet** stating that you worked on the assignment independently, and that it is your own work. Include your name, ID number, the date, the course and assignment number. You can generate and download this in Canvas, see the Cover Sheet entry, and
- The (1.5 page) report itself.

You must double check that you have uploaded the correct file for marking! This includes that you include both the cover sheet and report as a single PDF file. There will be no exceptions if you accidentally submitted the wrong files, regardless of whether you can prove you did not modify them since the deadline. No exceptions. Get into the habit of downloading them again, and double-checking all is there and correct.

Academic honesty

- The work done on this assignment must be your own work.
- **The final version of each students' reports will be checked using Turnitin.** This will not only compare your report with online and academic databases, but it will also compare between your peers' reports. These reports will be entered and saved into the Turnitin collection, and will therefore be compared against other future submissions. Submissions with suspicious similarity will result in an Investigative Meeting, and will be forwarded to the Disciplinary Committee.
- Penalties for copying will be severe – to avoid being caught copying, don't do it.
- To ensure you are not identified as cheating you should follow these points:
  - Always do individual assignments by yourself.
  - Never show or give another person your code.
  - Keep your workspace private, and do not share your documents with anyone.
  - Never put your work in a public place (e.g. Reddit, public GitHub repository, forums, your website).

  - Never leave your computer unattended. You are responsible for the security of your account.
  - Ensure you always remove your USB flash drive from the computer before you log off.
  - Frequently commit your work to something like GitHub or use Document History in tools like Google Docs. This provides a track record of your work and will allow the teaching team to follow your footsteps as you completed your assignment. If you do not frequently commit or show a track record of your progress, it will look suspicious if you are picked up by Turnitin and don't have such a history to demonstrate your progress.

Late submissions

Late submissions for this assignment will incur the following penalties:

- 10% penalty for zero to 12 hours late,
- 20% penalty for 13 to 24 hours late,
- 100% penalty for over 24 hours late (Canvas dropbox automatically closes).