Methodology

The methodology I will use needs to be chosen, and altered, according to the specifics of this project. So to summarise, this project will be developed in its entirety by 1 developer, this project will require a front-end and a back-end, this separation allows different parts of the project to be completed separately, this project will also require a database. Also as the solo developer, I do not have a complete understanding of all of the technology that might be required. The last part of note is that the stakeholders of the app being its potential users, student and staff of the University of Portsmouth, as well as the graduation team for the University if they take an interest. Importantly, since this app is designed solely for graduation day, it is hard to get accurate feedback from the stakeholders as no one knows how it will actually be used on the day, until graduation day happens.

The work will be completed more efficiently if tasks related by how they are implemented are completed sequentially. For example, the database queries will be written more efficiently if written closer together in time due to the knowledge of the query language being fresh in my mind. Since there is only 1 developer, this means that we should try to use a methodology that allows us to focus on certain groups of tasks instead of implementing all of the project at once.

Since feedback is difficult to attain, but not impossible, for instance if a meeting with the graduation team is able to happen, we still need to allow flexibility within our methodology so that such feedback gain can still be acted upon.

So we need a methodology that allows us to update our requirements and design as we go along, whether from receiving feedback or from an improved understanding of the technology that is being used. The methodology must also allow us to work on related components of multiple features sequentially instead of demanding that a feature be completed before work can be started on another. For example, implementing the back-end of both the location sharing feature and the profile settings feature before going and implementing the front-end of either.

I considered Kanban, however with Kanban I would be required to write down all related tasks that would need implementing before I start the first task in a group. This means that as I complete the tasks, and so my knowledge of the areas grows, if I decide that I need to redesign a part of the system, I would then also need to redo the Kanban board as with even just a small redesign, the tasks would likely change. This will waste time, I believe it to be a better approach to keep future tasks in a group vague so that I can adapt easily to changes. I admit that in a group environment, this thinking ahead is required to keep all team members working in the same direction, and a Kanban board can then be an excellent way to do this. However, since I am working by myself, I would not gain this teamwork benefit and so Kanban is not suitable for this project.

I believe the most effective way to do this would be to use a modification of the Scrum software methodology. Scrum has teams complete work on related features in time-bounded sprints. Within a sprint I will choose part of the project to work on and I will aim to complete all tasks that fall under that part of the project. Examples of different sprint topics are as follows, the back-end of the project, the UI, the map interaction. I will modify Scrum by implementing sprints of varying time. Since not all of my topics will take a similar amount of time to complete, I will vary the length of my sprints accordingly. This approach allows me to iteratively build my project efficiently and alter the requirements and design at any point without causing major delays.