Model Selection and Justification

For this project, we will use the Agile Model. Specifically, the XP process is an ideal option for us because of the following reasons. Firstly, the time constraints require this project to be implemented in a reasonably short time frame. The XP process allows the tests to be designed and prepared in parallel with or shortly before the software increment is ready. In this way, we can guarantee that the working software will be developed quickly. This will enable us to ensure we have an implementation prepared by the end of the semester. Secondly, the requirements of the project are not fixed and are exposed to potential changes, so the XP process enables us to respond and adapt to variations faster and better. Thirdly, due to the nature of this project, we are not required to carry out formal and rigorous documentation. Therefore, the agile model is a good plan because it generally favors working products over comprehensive documentation. Lastly, the small and motivated development team of four individuals is an ideal group for the agile model, because in a smaller group, the working efficiency and communication frequency are both higher.

Granted, we do foresee a number of challenges we might encounter using the XP process. For instance, because of the lack of formality, we might come across several inconsistencies and errors in the process. This may be exacerbated by the remote nature of our work on the project due to COVID restrictions (and one of our team members being based in the UK). In this case, we need more frequent and regular communication and meetings so that we can make sure our updates are correct and consistent.

Ultimately, we believe the Agile XP Model is best for our team and our project as it will enable us to work quickly and deliver a viable implementation in a short time frame while providing us with the flexibility to adjust our project as needed.