# Project Management

## Agile approach (Scrum)

The chosen methodology for this project is Scrum; an agile process framework which splits tasks into sprints. The reason for this choice was due to the anticipated need for flexibility throughout the development of this project as it’s expected to have many changes which may deviate from the original requirements from the initial idea. To cope with this, unlike the waterfall model, sprints will be used to separate the phases of the development where in each sprint a backlog is made showing what needs to be done by the next sprint instead of a fixed set of tasks, for this project, these sprints will be 2 weeks long each where the author of this report will act as the product owner, developer, as well as the Scrum master.

These sprints are displayed in the table below:

|  |  |  |
| --- | --- | --- |
| **Sprint start date** | **Sprint** | **Tasks** |
| 19/11/2020  (2 weeks) | 1 | Create the designs for the front end and the back end of the system along with a clear specification. |
| 03/12/2020  (2 weeks) | 2 | Refine the designs and ensure that they meet the requirements given in the specification. |
| 17/12/2020  (2 weeks) | 3 | Implement the designs of the system. |
| 31/12/2020  (2 weeks) | 4 | Implement the core features of the system. |
| 14/01/2020  (2 weeks) | 5 | Implement the remaining features of the system. |
| 28/01/2021  (2 weeks) | 6 | Test the system through automated unit testing and generic testing and obtain user feedback. |
| 11/02/2021  (2 weeks) | 7 | Optimise the system by refactoring and thoroughly document by commenting the code. |

Table 3‑1 Scrum sprints

Although brief, these sprints describe the general tasks to complete, this is to help segment the phases of the project rather than the specific tasks considering that gathering the requirements/tasks to do is a sprint on its own. However, these sprints will be expanded further in detail in a Scrum board using an application known as Trello which also allows the assignment of due dates as well as labels to categorise these tasks.

## Repository (GitHub)

Another key tool to be used in this project is GitHub, with the scale of the project, it’s evident from the research that there will be many changes that the project will undergo, and so there may be times where a rollback to a previous version may be necessary, which is where GitHub comes to use with version control, being able to track all the changes made to each file in the repository. This means that the development of this project will be completely carried out on this repository, which also assists in the organisation of the project overall as the documents pertaining to different categories (This report’s documents for an example) are split into different folders and are easily viewable online.

Furthermore, regarding the previously mentioned sprints, to make sure they were being completed correctly, it was important that progress with the project was being regularly checked, this is done through meetings 1-to-1 and group meetings with the supervisor of the project, which are also [recorded on the GitHub repository](https://github.com/outerme/1808827-FYP#the-minutes-of-meetings) and easily presented on the “README” file.

The abovementioned “README” file will be used as a way of documenting the key points regarding the project, which not only includes the meetings but also the specification. This file may be replicated in subfolders so that they are also described and presented well. When mentioning the documentation, another technique that will be used is issue tracking, GitHub provides a feature to create issues and features (which can also have labels to categorise them) and link them to commits, and so it’s expected to use this when working on the sprints as it’d synergise well with the Trello board.

This then also leads to the commits, where when a change is made, it is recorded and used for documentation, GitHub provides graphs that displays the timeline and frequency of these commits, an example is given below:



Figure 3‑1 Contributions to main branch

This shows that it can also be helpful in determining the productivity as it helps keep track of how much the project is being worked on throughout a period.