

UNIVERSITY OF YORK
DEPARTMENT OF COMPUTER SCIENCE

ENG1

Group 8

Report - Method Selection & Planning

Group Members:

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4. Method selection and planning [10 marks]:

a) Give an outline and justification of the team's software engineering methods, and identify any development or collaboration tools that the team has used to support the project or the team working. Justify the fitness of the selected tools with the team's software engineering methods and discuss alternatives considered. (3 marks, ≤ 2 pages).

Due to the timeline of the project, we would need more time to complete continuous cycles of development we, therefore, decided from the beginning to use a waterfall methodology. This worked well for us, as we got all of the user requirements at the very beginning, without much need for continuous feedback from the customers, allowing development to be done all at once without requiring major changes.

At the start of the project, we decided to use WhatsApp for team communication. It seemed like a good option due to its ease of access to everyone, however, we decided that it would be better for us to have an option that was accessible on computers as well. We opted for Discord, which allowed us to communicate clearly as we could make separate text channels for different areas of the project, and pin important messages such as links to websites we are using. This kept conversations relevant so that multiple people weren't talking about different parts of the project in the same channel. Discord also has a voice chat and video call option, allowing us to organize group meetings as well.

In order to collaborate with each other on the write-up of the project, we used Google Docs. This allowed everyone easy access to the important documents, such as the user requirements that we gathered at the beginning of the project. This is important because in waterfall we are creating the project with just the user requirements gathered at the start, and these must therefore be accessible easily to everyone. We also used Google Docs for our logbook, which helped us to keep track of all meetings we had, and the purposes of these meetings. It also allowed us to keep everyone up to date, as those who missed the meetings could see what was discussed and what progress was being made.

For organization and project management, we originally used Trello. Trello allowed us to track what tasks needed to be completed, and who was responsible for each task. We could put priorities on each task, and organize them into groups. We eventually decided to change to Monday, as it was capable of performing the same job that Trello did for us, however, we could also add completion dates and deadlines to each task, and add diagrams/charts to visualize which stage of the task we were at.

To collaborate together on code we used GitHub. GitHub allowed easy documenting of the work and meant that it was much easier for everyone to access and work on the code. It also allowed us to track versions so that if we had an issue with one of the versions, we could revert to an earlier one to help in resolving the issue or just revert to a version that did not contain the bug.

We used the LucidChart app to create diagrams for our project, such as our UML diagrams and our Entity Component Diagram. It was easy for multiple people to work on it simultaneously, and was easy to lay it out in a way that was simple to understand. Also, as

we did not have prior experience with this app, it was important for it to be simple to use and learn. This was much better than using software such as Word, where only one person could work on it at a time, and creating diagrams is much more difficult as there is less flexibility with the placement of shapes.

Overall, with each app/software that we used, it was important that it was easy to learn and easy to understand, as many people would be using them for the first time, and time was limited to learn how to use them. They all worked well with a waterfall methodology, capable of working without continuous testing and updating of requirements.

b) Outline the team's approach to team organisation, and explain why the chosen approach is appropriate for both the team and the project (2 marks, ≤ 1 page).

Unlike the agile methodology required, we as a team did not have the opportunity to have frequent meetings because of the hectic school schedule, and this is one of the many reasons why waterfall was a better approach for us.

The project had well-defined requirements and a clear end goal, thus we all agreed to use a linear method of software development which follows specific steps and provides a structured process. The waterfall approach also allowed us to work on each step at a time which helped us to stay organised without getting distracted.

A Logbook that we use to keep track of our meetings and critical decisions helped us to manage the process easily. This ensures that the team is on track and that all the information is recorded and easily accessible.

Other than that, at the beginning of the development process, the team established roles for each member which were the secretary, meeting chair, librarian, and report editor. These roles helped to ensure that each team member had a specific set of responsibilities and that the team was well-organised and efficient.

Furthermore, the project was divided into parts and assigned to members to ensure everyone is participating and the development process is running smoothly since each part of the assessment has a responsible person.

In addition to these, we first decided to use Trello as our main organiser tool, however; we could not set up specific deadlines nor had different diagrams/charts to see the workflow, thus we changed our organiser to Monday.

Overall, the chosen approach range of tools to support communication, collaboration, organisation, and project management, which helped to ensure that the game was developed efficiently and effectively.

c) Give a systematic plan for the project. Your plan should lay out the key tasks, their starting and finishing dates, as well as task priorities and dependencies. Provide weekly snapshots of the plan on your team's website and discuss how the plan evolved throughout the duration of the project (5 marks, ≤ 2 pages).

We started off with deciding our group name and logo, followed by assigning the roles in the team (the secretary, meeting chair, librarian, and report editor.) in the first week. Then we had to prepare a list of questions for the customer meeting then we also ended up thinking about the requirements as well. Furthermore, we created a demo of the game for the customer meeting in the third week which differentiated us from the other teams.

After the meeting, we had a general idea of the requirements and the project. After that, we listed out all the tasks of the assessment into Trello and around the last week of November we started to discuss how to divide up the tasks, then finalised assigning the tasks on 9/12/2022, and started to work on our parts individually.

Tasks	Starting Date	End Date	Priorities	Dependencies
Planning out the project, the roles, setting deadlines, dividing the project into steps	16/11/2022	9/12/2022	Critical	The Project
Creating a demo for customer meeting	16/11/2022	22/11/2022	Low	Requirements and Customer Meeting
Creating class diagram	30/11/2022	30/11/2022 (but kept updating it until the implementation is done)	High	Implementation
Deciding/assigning the tasks	23/11/2022	09/12/2022	High	The Project
Everyone started to work on their sections, and write the report	9/12/2022	30/12/2023	High	The Report and the Project
Submitted the project	31/12/2023	31/12/2023	High	N/A

[*Detailed weekly snapshots of the plan are on github. wiki.](#)

Throughout the Christmas break, we kept working on our tasks and checked up on each other through discord. The initial plan was to complete the vast majority of our work before the Spring Term got started, however we had a slight delay on that and ended up completing our tasks in the last week of January.

The roles were assigned as:

Implementation	Jack	Will
Requirements	Sarah	Matt
Architecture	Asude	Kate
Method Selection	Asude	Will
Risk Assessment	Sarah	Kate

Other than that we did not change the plan majorly except moving our planning and schedules from Trello to Monday since it allowed us to be more specific about dates.

Links to organising tools:

[Trello](#)

[Monday](#)