Method Selection and Planning

Team 21:

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a)

The software engineering method used by the team to develop the Pirate Game was the scrum agile method. We implemented this method as it prioritizes the need of the customer and bases the product around their needs. The scrum method involves:

- splitting the work into sprint cycles and completing a goal in the stage of developing the product at the end of each cycle.

- keeping of the developments made by holding scrum meetings and updating each other on what we've managed to complete.

- continuing this process until the product is complete.

This method suited the product the team was building as it was based on a brief with specific customer requirements where customer meetings could be held in order to ensure the product matched what the customer had in mind. In addition, it is extremely flexible as the planning process is split into several changes that can easily be changed. The steps taken while following this method are:

- reading the description and requirements for the game which is known as the product backlog.

- Setting a goal based on the requirements and discussing how to develop the game based on these requirements.

- Scheduling a meeting with the customer in order to ask questions relating to the product in order to better understand how to develop the game based on the requirements given.

- Splitting the work into sprint cycles of two weeks and creating a Backlog list of tasks that need to be completed.

- Creating a Gantt chart to keep track of the tasks to complete during each sprint cycle.

- Holding scrum meetings at the end of each cycle where members of the team would update each other on the progress they made, any issues that arose and discuss what they would try to complete before the next meeting.

The collaboration tools used by the team includes:

Tools	Justification	Alternatives considered
GitHub	We used GitHub as a File sharing tool and collaboration workspace to upload our code onto. This allows team members to easily access and edit each other's work.	
Discord	We used discord as a tool for remote communication and used it to hold our sprint meetings. It was effective as all members could attend and were able to share their screens.	Slack, WhatsApp.
Overleaf	Overleaf is a Writing tool that allowed us to write in LaTeX markup. This allowed us to have a consistent style in our deliverables.	Google Docs.

b)

Our teams approach to organization consisted of appointing people to different roles such as:

- The team leader, who organized the scrum meetings and ensured all members attended. They would also make sure that members worked on their tasks in between meetings.

- The Secretary who took notes of what occurred during the scrum meetings and took notes of the customer meetings in order to list the requirements and specifications of the game.

- The Librarian who oversaw version control and organized the documents and added them onto the website.

Developing the code for the game and working on the documentation was split equally between the team. Each deliverable had a main person working on it as well as a shadow to ensure that the main person was working on the deliverable. The shadow also helped proofread and research the topic of the deliverable. This type of approach was taken as this is a large project with many different components and not all group members can simultaneously work on a single part.

C)

The table displays the tasks with the start and finish dates as well as the priority with 5 being the highest priority:

TASK	START	END	Priority
Documentation			
Website	12/11/21	01/02/22	4
Requirements	12/11/21	31/01/22	2
Architecture	12/11/21	01/02/22	2
Method selection and planning	12/11/21	01/02/22	2
Risk assessment and mitigation	12/11/21	31/01/22	2
Implementation	12/11/21	31/01/22	5
Requirements			
Team building and reading assessment brief	12/11/21	15/11/21	3
Write-up requirements	12/11/21	10/12/21	3
Discuss requirements	26/11/21	26/11/21	2
Meeting with Customer	02/12/21	02/12/21	4
Review existing systems/games	03/12/21	03/12/21	3
Design			
Learn how to use libGDX	03/11/21	15/12/21	4
Decide on structure and in-game mechanics	17/12/21	28/12/21	4

Design art style	24/01/22	26/01/22	3
Implementation			
Create game screens	19/01/22	30/01/22	5
Implement movement	19/01/22	30/01/22	5
Implement camera	19/01/22	30/01/22	4
Implement combat	25/01/22	30/01/22	4
Testing and verification			
Test movement and Camera	30/01/22	01/02/22	4
Test combat	30/01/22	01/02/22	4
Make sure Implementation matches documentation	30/01/22	01/02/22	3

The plan evolved during the project due to:

- New features we wanted to implement such as art and sound.
- Harder tasks needing to be split into smaller simpler tasks.
- Reviewing and editing the documentation due to changes made in the implementation

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