Requirements

Cohort 2 Team 5

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Introduction

After receiving the brief, we conducted an interview with our stakeholders to help us clarify the requirements of our game suitably. We wanted these requirements to be agreed upon by our stakeholder in order to create a game that aligned with their vision for the game. To start with, we identified our constraints when building the game which helped us to make our project appear more achievable. Subsequently, we discussed within our team and identified key points in our game. This informed our user requirements, as they were based off of the attributes we wanted the user to experience within the game. In turn, these user requirements became the basis for our other requirement tables - functional and non-functional requirements.

We did research into the different types of requirements, which helped us create succinct, clear requirements that act as criteria for our game to meet. Research also helped us create requirements that rely upon each other, so that each user requirement directly links to a functionality/non-functional requirement. To show this more clearly we added subheadings in the tables to directly show links to the user requirements. This ensures that all of our user requirements will be met. We also created unique IDs with intuitive names so that we can easily identify each of the requirements and understand their context.

Initially in the user requirements table we also wanted to involve a priority column, to help us ascertain the precedence for each requirement. This, we hope, will make it easier for us to track our progress in developing the game. In future we may come up with new requirements, so we left space for the new requirements and will keep them documented clearly to help manage the project.

Constraint requirements

- We have no money to invest in this project, so we are limited to our own abilities/
- We have a limited amount of time, so are constrained by the modules structure time-wise.
- Must have rights to use any code we haven't written ourselves - comply with the law.
- Must be able to use on a laptop, not on a website.
- Must be coded using java 17.

User Requirements

ID	Description	Priority
UR_EX	The system shall offer a pleasant user experience and a keen takeaway about university life	shall
UR_INSTRUCTIONS	User should be able to understand how to play the game easily	should
UR_CONNECTION	Game should be available to play without connection to the internet	may
UR_PLAY	User should be able to move in the game	shall
UR_PAUSE	User should be able to pause, start and restart the game	should
UR_PROGRESS	User should be able to see their progress/status in the game	should
UR_COMPLETED	Users should receive feedback/know when they have completed/failed the game and what score they receive.	should
UR_ABILITY	User should be able to play easily, regardless of skill level	shall
UR_EVENTS	The user should be able to interact and identify with different types of events	shall
UR_INCLUSIVE	User should be intuitive and able to see and read the visuals clearly	shall

System Requirements

Functional Requirements table

ID	Description	User Requirements
FR_TUTORIAL	The system shall provide a tutorial available before the start of the game.	UR_INSTRUCTIONS
FR_INPUT	The system shall tell the user how to interact with the game.	UR_INSTRUCTIONS
FR_LAPTOP	The system shall provide compatibility with a laptop device.	UR_DEVICE
FR_TIMER	The system shall provide a timer which is visible to the user throughout gameplay	UR_PROGRESS
FR_SCORE	The system shall provide the final score at the end of the gameplay.	UR_COMPLETED
FR_STATE	The system shall tell the user whether they have completed/failed the game	UR_COMPLETED
FR_SEE	The system shall be visually easy to understand for the user during the game.	UR_INCLUSIVE
FR_AUDIO	The system shall provide audio feedback for the user to help navigate game	UR_INCLUSIVE
FR_OFFLINE	The system shall provide that the game is available offline	UR_CONNECTION
FR_TRIGGER_EVENTS	The system shall provide both hidden and unhidden events for the user to interact with for gameplay	UR_EVENTS
FR_MOVE	The system should allow the user to move through the maze with user input	UR_PLAY

FR_PAUSE	The system would be able to pause the game at any point and be able to resume	UR_PAUSE

Non Functional Requirements table:

- Qualities a system must have.
- Constraints on functional requirements.
- Often critical to a system's success.

ID	Description	User Requirements	Fit Criteria
NFR_Usability	The system must be simple to use for all users. Controls and objectives should be understandable.	UR_Instructions	Use standard controls (WASD) for movement.
NFR_Difficulty	The game should be reasonably challenging (time limit) but not excessively difficult for all players.	UR_Ability	Multiple difficulty levels should be added and can be changed by the player.
NFR_Availability	The system must be accessible at all times regardless of internet connection.	UR_Connection	No internet access required.
NFR_Performance	The system must respond to user input immediately.	UR_EX	Immediately after pressing a button.
NFR_Replayability	The system must be replayable for all players.	UR_EX	Varying experiences with each playthrough.
NFR_Accessability	All players should be able to see all visuals clearly	UR_Inclusivity	Visuals must be legible for all users.
NFR_Compatability	The system must be compatible with the user's computer.	UR_Device	Must function on all users computers.