Requirements

Team Name: Team Ⅳ

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Introduction to Requirements

Requirements were elicited via a meeting with the client. We asked specific and broad questions on their vision for the game, and condensed it down to a set of requirements. In this meeting any initial conflict in ideas were discussed and a solution agreed upon, and any future ideas were discussed in a small conversation.

The requirements are divided into three categories, each presented in a table below. This document presents the key User, Functional, and Non-Functional requirements to provide a clear understanding of what the system should achieve and to guide the creation of a smooth, engaging user experience.

- User Requirements is a list of functionalities that the user should be able to complete/interact with in the finished product. Each requirement is given an identifier (UR_Name), a short description of what the user can do and the priority. The table is ordered with the highest priority at the top.

- Functional Requirements describe the technical tasks we have to undertake in order to ensure the User Requirements are met. Each requirement has an identifier (FR_Name), a short description of what needs to be implemented and the list of User Requirements it will assist in implementing. Once again, ordered with highest impact at the top.

- Non-Functional Requirements are the non technical parts that have to be maintained in order to ensure all the user requirements are met. The table gives each requirement an identifier (NFR_Name), a short description of what needs to be met, which User Requirements it relates to, and how we will measure success in this requirement. Ordered with the most significant at the top.

User Requirements		
ID	**Description**	**Priority**
UR_MAP	The map will be a top-down, premade university-themed maze.	Shall
UR_MOVEMENT	The user will be able to move the player through the maze using the keyboard	Shall
UR_EVENTS	The user will be able to interact with events that will help or hinder their escape	Shall
UR_LEGALITY	All assets used will be legally sourced and credited	Shall
UR_LEGALITY	All assets used will be legally sourced	Shall
UR_ESCAPE	The game will end when the player escapes the maze and tell the user how well they did	Shall
UR_SCORE	The user's final score will be affected by how efficiently they play	Shall
UR_TIME	If the player fails to escape within the time limit, a game over screen will appear. The user can pause at any time.	Shall
UR_AUDIENCE	The game will be casual and tailored for 16 to 22 year olds	Shall
UR_UX	The game will be visually appealing to the user	Should
UR_STORY	The game will have an interesting story	Should
UR_HARDWARE	The user will be able to play the game on fullscreen on a desktop with any hardware	Should
UR_AUDIO	There will be music and sound effects in the game	May
UR_SETTINGS	The user will be able to change settings (such as sounds, controls, UI elements etc)	May

Functional requirements

ID	Description	User Requirements
FR_INPUT	The system will record the user's keyboard / mouse input	UR_MOVEMENT
FR_MOVEMENT	The player will move up, left, down and right when the user presses the WASD keys respectively	UR_MOVEMENT
FR_COLLISION	The player will not be able to move through walls and certain objects in the maze	UR_MOVEMENT UR_MAP
FR_MAPGEN	The level will be generated at the start of the game	UR_MAP
FR_POSITIVE_EVENT	There will be at least one item that the user can visually see, that provides a benefit to the player when interacted with	UR_EVENTS
FR_NEGATIVE_EVENT	There will be at least one item that the user can visually see, that hinders the player when interacted with	UR_EVENTS
FR_HIDDEN_EVENT	There will be at least one hidden event that will either help or hinder the player when triggered	UR_EVENTS
FR_EXIT	There will be an exit that will end the game and display a victory screen when interacted with	UR_ESCAPE
FR_STATS	The player's final score and statistics will be displayed on the victory screen, explaining how the score was calculated	UR_ESCAPE UR_SCORE
FR_TIME	The time remaining to escape the maze will be displayed at the top of the screen, and this will decrement in real time	UR_TIME
FR_GAME_OVER	A game over screen will appear when the user runs out of time	UR_TIME
FR_EASTER_EGGS	There will be easter eggs in the game	UR_STORY
FR_MUSIC	Background music will play in the main menu, cutscene, maze and game over screens.	UR_AUDIO
FR_INTERACTABLE_SOUND_EFFECTS	Sound effects will play when the user interacts with certain objects or buttons	UR_AUDIO

Functional requirements		
FR_PASSIVE_SOUND_EFFECTS	Sound effects will play passively from certain objects	UR_AUDIO
FR_SETTINGS_MENU	There will be a settings menu that the user can open	UR_SETTINGS
FR_AUDIO_SETTINGS	The user will be able to adjust the volume of sound effects and music	UR_SETTINGS
FR_FULLSCREEN	The user will be able to select a fullscreen mode	UR_SETTINGS UR_HARDWARE

Non-functional requirements			
ID	**Description**	**User Requirements**	**Fit Criteria**
NFR_LEGALITY	All assets should be legally sourced and credited	UR_LEGALITY	All third party assets and libraries used will be listed along with their licensing, and must be legally acquired
NFR_FAMILY_FRIENDLY	Everything in the game is family friendly and age appropriate.	UR_AUDIENCE	No violence or combat. Nothing 18+.
NFR_DIFFICULTY	The game should be easy enough for a casual audience to be able to play it	UR_AUDIENCE	90% of users should be able to reach the exit within 5 attempts
NFR_HARDWARE	The game will be available on a desktop with any hardware and without expensive peripherals	UR_HARDWARE	The game will be able to run on a university computer at at least 30 frames per second