Requirements

Cohort 1 Group 8

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Eliciting Requirements

The project began with a detailed review of the initial brief, which involved summarising the brief into note form, where key requirements were highlighted and gaps in information were identified for further inquiry. For instance, the brief did not highlight the target demographic or difficulty of the game, two aspects for which clarification was vital.

We then arranged and recorded a meeting with the project stakeholder, aimed at addressing the identified gaps and open ended aspects of the brief. This meeting was also instrumental in gathering additional requirements such as the target platforms, save system requirements, sound requirements and customisation requirements. Clarifying that the game does not need to support mobile devices was crucial to developing our plans going forward.

With all of this gathered, we researched ways to best structure our requirements. After researching the various methods for structuring requirements, we decided on making tables, splitting requirements into user, functional and non-functional requirements. This structure allows us to display our requirements in a simplistic, yet efficient manner. It also displays priority of implementation, all of which will act as a great aid for converting our requirements into class diagrams when we begin to plan out our system's architecture.

User Requirements

ID	Description	Priority
UR_PLAYER_MOVEMENT	The game should be single player and allow the player direct control over the avatar	Shall
UR_PLAYER_INTERACT	The player should be able to interact with nearby objects/structures	Shall
UR_TIME_CYCLE	The game should take place over 7 days, each taking 16 in-game hours, ending on the 7th day (Sunday). Each day ends on going to sleep.	Shall
UR_GAME_TIME	Each run of the game should take between 5-10 minutes	Should
UR_RESOURCES	The player should have time and energy as resources that have to be managed. Running out of these will prevent the player from doing further activities.	Shall
UR_SETTING	The main character is a computer science student in the final week before their exams.	Should
UR_STUDY	The player can choose to study. This should be done at least once a day to pass. Studying more will lead to a higher final grade	Shall
UR_STUDY_CATCHUP	If the player doesn't study on a day, they can catch up by stuying more than once on another day, but this can only be done once per game.	Should
UR_RECREATION	The player can choose to perform recreational activities by interacting with them. This is important to do in order to succeed at the game.	Shall
UR_REST	The player rests automatically at the end of each day, replenishing energy.	Should
UR_MAP	The game will contain a map on which the player can move.	Shall
UR_STUDY_PLACE	The game should contain at least 1 place to study.	Shall
UR_REST_PLACE	The game should have at least 1 place to sleep	Shall
UR_RECREATION_PLACE	The game should have at least 3 places to perform recreational activities.	Shall
UR_EAT_PLACE	The game should have at least 1 place to eat	Should
UR_SCORE	Passing exams is winning the game. Passing with a higher grade is equal to a better score.	Shall
UR_STUDY_VARIETY	Studying in different places leads to higher exam grade	May
UR_OVERSTUDY	Overstudying will have negative repercussions	Should
UR_EATING	The player should be able to eat, which should restore energy. But eating at irregular intervals will have negative effects.	Should
UR_ENERGY	Activities should consume energy	Shall
UR_CUSTOMISATION	There should be 2-3 options for different character appearances	Should
UR_TIME_PROGRESS	Performing a given activity should progress time forwards a given amount, depending on the activity	Shall
UR_DIFFICULTY	The game should be straightforward; anyone should be able to 'beat' the game, but very high scores should be hard to attain.	Should
UR_PLATFORM	The game should be playable on any relatively new desktop or laptop.	Shall
UR_SCREEN	The game should work maximised, with multiple options for screen sizes	Shall
UR_SIMPLICITY	The game should be simple and approachable; it should not overwhelm the player with too much information eg. extra resource types.	Should
UR_TARGET_AUDIENCE	The game targets university students and those finishing school	Should
UR_FAMILY_FRIENDLY	The game should be family friendly - it may contain activities such as going to the pub, but nothing inappropriate.	Shall

UR_DISABILITIES	The game must be aware of/be playable for those with disabilities, whether visual or cognitive. Hence it should not purely use colour as an identifier, or have text too small.	Shall
UR_DEVIATION	The game may deviate slightly from real life (but must still be grounded to reality). For example, new modules could be made up.	May
UR_SOUND	Sound effects or music could be added to the game.	May
UR_LICENSES	Any sound or assets must be appropriately licensed.	Shall
UR_INTUITIVE	The game should be intuitive, especially for new players - it could provide hints, controls etc.	Should
UR_MINIGAMES	The game's gameplay loop could consist of various minigames associated with each activity	May

Functional Requirements

ID	Description	User Requirements
FR_PLAYER_COUNT	The game should be single-player.	UR_PLAYER_MOVEMENT
FR_MOVEMENT	The user should be allowed to control their avatar with either arrow keys or WASD movement.	UR_PLAYER_MOVEMENT
FR_INTERACT	The player should be able to hit an interact button, left click, e or similar to interact with nearby objects	UR_PLAYER_INTERACT
FR_TIME_CYCLE	When the player sleeps, the day will advance.	UR_TIME_CYCLE
FR_GAME_END	At the end of the 7th day, the game will end.	UR_TIME_CYCLE
FR_RESOURCES	When the player runs out of time and/or energy, they will be unable to perform any more activities that day.	UR_RESOURCES
FR_STUDY	The player can choose to study as an activity	UR_STUDY
FR_STUDY_REQUIREMENT	Studying should be done at least once a day to pass	UR_STUDY
FR_STUDY_EXCESS	Studying more will lead to a better final grade/score	UR_STUDY
FR_STUDY_CATCHUP	Once per game, the player can skip a day of studying by studying twice on another day, which will still allow them to pass.	UR_STUDY_CATCHUP
FR_RECREATION	The player can choose to perform recreational activities.	UR_RECREATION
FR_RECREATION_REQUIREMENT	Not performing recreational activities will hinder the player's ability to study effectively - making the game harder.	UR_RECREATION
FR_REST	When time runs out in a day, the player will automatically rest, advancing to the next day.	UR_REST
FR_ENERGY_RESET	Starting a day will replenish the player's energy bar.	UR_REST
FR_MAP	The game will have a main map. The player can move on this map to perform activities.	UR_MAP
FR_STUDY_PLACE	The player will be able to study in at least 1 location	UR_STUDY_PLACE
FR_REST_PLACE	The player will be able to rest/sleep in at least 1 location	UR_REST_PLACE
FR_RECREATION_PLACE	The player will be able to perform recreational activities in at least 3 location	UR_RECREATION_PLACE
FR_EAT_PLACE	The player will be able to eat in at least 1 location	UR_EAT_PLACE
FR_SCORE	The game will display the player's score in the form of a final grade at the	UR_SCORE

	end of the game.	
FR_STUDY_VARIETY	If the player studies in different places, their final score will increase	UR_STUDY_VARIETY
FR_OVERSTUDY	If the player overstudies, the game will become harder to play and the player's energy will drain faster.	UR_OVERSTUDY
FR_EATING	Eating will drain time but restore energy	UR_EATING
FR_IRREGULAR_EATING	Eating at irregular times (not 1 per morning, afternoon and evening), will make the game harder to play.	UR_EATING
FR_ENERGY	The game should deplete the user's 'energy bar' every time they enter and complete an activity. Simply entering an activity and not completing it may also incur energy drain.	UR_ENERGY
FR_TIME	The game should fast forward time whenever a user completes an activity.	UR_TIME_PROGRESS
FR_CUSTOMISATION_MENU	The game should provide a menu in which the user can select the main character's appearance from multiple options, and this appearance is carried through the rest of the playthrough.	UR_CUSTOMISATION
FR_SKINS	There should be multiple skins created for the user to choose from	UR_CUSTOMISATION
FR_SCREEN_SIZE	The game should support a variety of screen sizes and work maximised	UR_SCREEN
FR_PLATFORM	The game should be playable on any relatively new desktop or laptop.	UR_PLATFORM
FR_DISABILITIES	The game must be aware of/be playable for those with disabilities. Hence it should not purely use colour as an identifier, or have text too small.	UR_DISABILITIES
FR_SOUND	The game could have sound effects.	UR_SOUND
FR_MINIGAMES	The game could have minigames for each activity.	UR_MINIGAMES

Non-Functional Requirements

ID	Description	User Requirements	Fit Criteria
NFR_GAME_TIME	Each run of the game should take between 5-10 minutes.	UR_GAME_TIME	Playing a run without any breaks with knowledge of the game's systems should not take any longer than 15 minutes in most cases,
NFR_SETTING	The player controls a student in their final week before exams. The game's setting is a university campus / town.	UR_SETTING	The setting should not deviate too far from what is expected in real life.
NFR_SIMPLICITY	The game should be simple and approachable to new users	UR_SIMPLICITY	The game should be simple to understand, even for someone who has never played it before.
NFR_DIFFICULTY	The game should be straightforward - yet difficult to get very high scores, rewarding players of all skill layers	UR_DIFFICULTY	The game should not discourage anyone from playing; it should be accessible for players of all skill levels
NFR_TARGET_AUDIENCE	The target audience of the game will be students - those in university and finishing school.	UR_TARGET_AUDIENCE	The game should be approachable for anyone in this demographic.
NFR_FAMILY_FRIENDLY	The game should be family friendly.	UR_FAMILY_FRIENDLY	The game may contain activities such as going to the pub, but nothing inappropriate
NFR_DEVIATION	The game may deviate slightly from real life (but must still be grounded to reality).	UR_DEVIATION	Any overarching themes of the game must be grounded in reality, but there may be some creative liberty taken.