Requirements

Group 27 - BlackCat Studios

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Before we had the initial meeting with our customer Tommy Yuan, as a team we looked at the Piazza Panic brief and suggested questions (most of which were based on the brief) that would be important to ask in the meeting [link]. We also researched requirements via the VLE lectures and websites., We took an approach that assumed that the customer would not have much technical knowledge of game development so tried to keep these questions simple with minimal technical jargon. Subsets of these questions were assigned to different members of the team, so that each person had an input during the meeting. For requirements such as UR_GAMEPLAY_TYPE we presented several options he might be interested in. We, alongside our customer, decided to take the game real time in this instance after negotiation.

At the start of the meeting, we got the customer's permission to audio record their responses to our questions. These responses were also added to our question document.

From this, we extracted the user's requirements and outlined them in the following table, as demonstrated in the Requirements Engineering lecture on the VLE. These have been further broken down into system requirements - functional and non-functional. Each requirement has been given an ID so that they can be referenced in other documents and throughout the development process. Formatting of the table is similar to others we found online.

Single Statement of Need (SSON)
Cooking game available to play to all visitors to the University of York, inspired by "Overcooked".

User Requirements

ID	Description	Priority
UR_GAME_LENGTH	The scenario mode for the game in assessment 1 should be 5-6 minutes long; the player plays a single game	MUST
UR_SYSTEM_COMPATIBILITY	The game needs to run on different computer operating systems	MUST
UR_DIFFICULTY	The game needs to be easy enough to be played by "below-average" users	MUST
UR_GAME_ENDS	The game needs to show an animation or a message to show that the game has ended or the player has won. Game must show how long the player was playing the game	MUST
UR_SCREEN_SHOWS_CHARACTERS	The game must show the customers and chefs on the screen, as well as all the stations and pantries available; we can decide on the themes and customisation of characters	MUST
UR_SCREEN_SHOWS_BACKGROUND	The game must have a suitable background, whether that be the kitchen by itself, or an entire restaurant - our choosing	MUST
UR_SCREEN_CAMERA	It is up to us whether we want to use an orthographic or perspective camera and stationary or dynamic camera	MUST
UR_SCREEN_COMPATIBILITY	The game should adapt to different sized screens	MUST
UR_GAME_CONTROLS	The game should have controls that are easy to use. Should be comfortable for the users	MUST
UR_GAMEPLAY	Assessment 1 The game must consist of 2 cooks preparing food for a set number of 5 customers which will wait indefinitely for their food and arrive one by one. There must be a counter to order food from with the following recipes: salads, burgers. The kitchen should also have cooking stations to prepare the food including cutting, baking, frying and serving. There must also be a pantry for all the ingredients where the chefs can collect from.	MUST
UR_GAMEPLAY_TYPE	The game should be real time, but open to new approaches	SHOULD
UR_ACCESSIBILITY	The game should be distinguishable by shape (i.e. characters and processes) so that it is accessible for colour blindness	SHOULD
UR_SOUND	The game could have music and sound effects to make it more exciting	COULD
UR_SETTINGS	The game should have the option to be muted	SHOULD
UR_LEADERBOARD	The game could have a leaderboard and high score functionality	COULD
UR_PAUSE_MENU	The game could have the possibility to be paused	COULD

Functional Requirements

ID	Description	User Requirements

FR_SYSTEM_COMPATIBILITY	The system must work when ran on Mac/Windows/Linux systems	UR_SYSTEM_COMPATIBILITY
FR_START_GAME	The scenario mode should start when the user presses some form of play button	UR_GAMEPLAY
FR_GAME_END	The user should be alerted when a game has ended (all customers have received food) and shown how quickly they completed a scenario	UR_GAME_END
FR_INSTRUCTIONS	The user will see a displayed text of instructions before the game starts and possibly instructions in game at the beginning of the scenario	UR_CONTROLS
FR_SETTINGS	The user will be able to access settings in game easily through buttons just outside the user's point of focus; e.g. the user can switch off the music in the top left hand corner of the game	UR_SOUND UR_SETTINGS
FR_PAUSE_MENU_BUTTON	The game should have a button on-screen or a key on the keyboard that when pressed pauses the game and makes the game wait indefinitely until the user is ready	UR_PAUSE_MENU
FR_PAUSE_MENU_RESTART	The game should be started immediately after the screen is clicked during the pause menu. An instruction should be displayed on-screen to inform the user	UR_PAUSE_MENU
FR_GAME_CONTROLS	The game controls should be easy to use and familiar with the player.	UR_GAME_CONTROLS
FR_PICK_UP_ITEM	When the user interacts with an item on a surface, their character should pick it up	UR_GAME_CONTROLS
FR_GAME_SCENARIO_PC	The game should respond to the user's moves and instructions by providing feedback through player characters (chefs) by showing their movement and the tasks that they complete and customers that they serve	UR_SCREEN_SHOWS_CHARACTERS
FR_BACKGROUND_SCREEN	The background should be displayed at the start of the scenario	UR_SCREEN_SHOWS_BACKGROUND
FR_SCREEN_SIZE_ADAPTABILITY	The game should adapt to the screen size that it is running on	UR_SCREEN_COMPATABILITY
FR_SWITCH_COOK	The player must have a way of changing cooks.	UR_GAME_CONTROLS
FR_PANTRY	There should be a pantry	UR_GAMEPLAY
FR_LEADERBOARD	When the game is complete, display a leaderboard showing the results of all previous users	UR_LEADERBOARD

Non-functional Requirements

ID	Description	User Requirements	Fit Criteria
NFR_GAME_LENGTH	The scenario mode should be completable within 5-6 minutes	UR_GAME_LENGTH	80% of players should be able to complete a game in 5-6 minutes

NFR_GAME_SCENARIO_NPC	The scenario should show the customers entering the restaurant, finding a seat, ordering food, having the food and leaving the restaurant.	UR_SCREEN_SHOWS_CHARACTERS, UR_SCREEN_SHOWS_BACKGROUND	Players should be able to see the actions done by the customers which are also NPCs. The NPCs should not buffer or have their performance affected throughout the game.
NFR_RECIPES	Recipes should be understandable and reasonable to prepare. Need recipes for salad and burgers	UR_GAME_DIFFICULTY UR_GAMEPLAY	All players should be able to prepare each item of food
NFR_COOK_SWITCH	Switching cooks should happen in <1s It must be impossible to switch from a cook to a customer	UR_GAMEPLAY, UR_GAMEPLAY_TYPE	90% of the time when the player switches cook, this should be done in < 1s Must never be able to switch to a customer
NFR_BACKGROUND	Once the background is displayed, it will have no issues with rendering.	UR_SCREEN_SHOWS-BACKGROUND	Background screen should run efficiently 100% of the time
NFR_EASE_OF_USE	The game should be easily playable by people who have never seen it before; instructions will be shown before the game starts, and possibly during gameplay	UR_DIFFICULTY	All players should be able to complete a scenario-mode game
NFR_TEXT	All text should be in plain English and easy to understand for someone who is not used to playing video games	UR_DIFFICULTY	All players should understand all displayed messages
NFR_COLOUR_BLINDNESS	The game could have options that make it accessible for people with colorblindness	UR_ACCESSIBILITY	70% of players should be able to see different aspects of the game with no difficulty
NFR_ACCESS_TIME	The game should be quick to start	UR_GAME_LENGTH	Should take <10s to start a game
NFR_LEADERBOARD	The game could display a leaderboard after someone has completed it	UR_GAME_END	If included, should be displayed <5s after game ends so that the user can move on
NFR_PAUSE_MENU	The game should not crash and it should wait on the pause menu indefinitely until the user is ready to begin again. When the game restarts, there should be no effect on performance.	UR_PAUSE_MENU	Game should wait on the pause menu and not be affected or crash indefinitely. Game performance should not be affected when restarting the game
NFR_CAMERA	The game camera should have the ability to show the whole playable area and all characters in the game	UR_SCREEN_CAMERA	Game camera should have the capacity to show 100% of the playable area and 100% of the characters
NFR_CAMERA_ANGLE	The camera angle should be a top-down isometric view of the playable area and characters	UR_SCREEN_CAMERA	Top-down, isometric camera view