

Requirements

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Introduction

To get these requirements conducted interviews with stakeholders, then using this as well as the requirements document we came up with the following: user requirements, functional requirements, non-functional requirements and some constraint requirements. These are all written in plain english in order to make it easy to understand for the customer and stakeholders. However, they contain enough detail to be useful for software developers.

Single Statement of needs:

We will make a cooking game that requires cooks to make a number of recipes requested by a customer. They will need to manage many stations and prepare a number of raw ingredients, stack them on a plate and deliver them to the customer. It is possible to burn ingredients if they are left unattended. If a customer has to wait too long for their order the user will lose points.

User Requirements

ID	Description	Priority
UR_COOKS	Cooks must have the ability to move.	High
UR_CUSTOMERS	Customers must arrive and have a timer which will go down slowly, it dish is not served in time then demand score is decremented	High
UR_GAMEMODES	A scenario game mode where configurable number customers arrive and they have to be served in their time limit, must have some remaining reputation points to complete.	High

UR_STATIONS	Must have areas where cooks are able to chop raw vegetables, cook and flip patties, bake raw ingredients, serving, picking up ingredients and a counter for customers to wait.	High
UR_RECIPES	This recipes for salad, burger, pizza and jacket potatoes	High
UR_SHOP	A menu where after the game is over cooks can invest money into buying other stations and unlocking recipes. Also they will be able to call other cooking staff back from leave	Low
UR_IDLE	Must have an idle mode where the game will play itself when nobody is playing the game	High
UR_ACCESSIBILITY	Game will be played by a lot of different people on a open day, some may be far away from the screen and environment will be noisy	High

Functional Requirements

ID	Description	User Requirements
FR_COOKS_MOVEMENT	The cooks will move up, down, left, right with given the input using a keyboard	UR_COOKS
FR_COOKS_SWITCH	The user will be able to switch cooks by pressing a key	UR_COOKS
FR_COOKS_FLIP	Must have the ability to flip items on the stove. This must be done before patty burns.	UR_COOKS
FR_COOKS_CHOP	Must have the ability to chop items on the a section	UR_COOKS
FR_COOKS_GRAB	Cooks must be able to grab items, and can hold up to 2 items, one in each hand.	UR_COOKS
FR_COOKS_PLACE	Cooks must be able to place items down in the same order they picked them up in.	UR_COOKS
FR_CUSTOMER_ARRIVE	Customers arrive at random time intervals and request a recipe with a dialog box that includes the required ingredients. In scenario they will arrive on there own then in groups	UR_CUSTOMERS
FR_GAMEMODE_1	A scenario game mode where configurable number customers arrive and they have to be served in their time limit, must have some remaining reputation points to complete.	UR_GAMEMODES
FR_GAMEMODE_2	A “endless” game mode where customers will arrive until all reputation points are lost. The number of customers served before all points are lost is the score.	UR_GAMEMODES
FR_COOKING_STATION_1	Must have an area where cooks are able to chop raw vegetables. Vegetables must be cut properly	UR_STATIONS

FR_COOKING_STATION_2	Must have an area where cooks are able to cook and flip patties, this needs to be completed in a time limit otherwise patties will burn and they have to be discarded.	UR_STATIONS
FR_COOKING_STATION_3	This is the baking section where cooks are able to bake raw ingredients	UR_STATIONS
FR_SERVING_STATION	This is an area where cooks can place the made recipes and customers can receive their order	UR_STATIONS
FR_INGREDIENT_STATION	This is an area where cooks can pick up raw ingredients to prepare, these will automatically regenerate and cooks can pick up multiple	UR_STATIONS
FR_COUNTER	This is an area where the customers will wait for their order.	UR_STATIONS
FR_RECIPE_1	This recipe is the salad and contains: chopped lettuce, chopped tomatoes and chopped onions. These must be stacked on a plate.	UR_RECIPES
FR_RECIPE_2	This recipe is the burger and contains: fried patty (must be formed first), a toasted bun. These must be stacked on a plate.	UR_RECIPES
FR_RECIPE_3	This recipe is a pizza and contains: a base, a sauce, a topping all stacked and then cooked.	UR_RECIPES
FR_RECIPE_4	This recipe is a jacket potato containing: a cooked potato and a topping stacked on a plate.	UR_RECIPES
FR_RECIPE_DISPLAY	Recipes will be displayed as pictures of the ingredients to make up the order	UR_RECIPES
FR_SCORE	This is a variable that is initially 3 and when a demand is not met it will decrement	UR_CUSTOMERS
FR_CUSTOMER_WAIT	Customers will wait at a counter until their order is being prepared. If they wait too long there will be a points penalty.	UR_CUSTOMERS
FR_CUSTOMER_DEMAND	When a customer arrives they will request an item and give a time limit. If this isn't completed there will be a points penalty.	UR_CUSTOMER
FR_MONEY	This is a score when a customer is served within the time frame the player will be rewarded some money.	UR_SHOP
FR_SHOP_MENU	This is menu where the player can spend coins on more stations and cooks	UR_SHOP
FR_IDLE_MODE	An option in the game menu where user can choose to not play, this will run a function that plays the game for the user on repeat	UR_IDLE
FR_TIMER	To ensure scenario game mode doesn't go on for too long there will be a timer that should be clear and somewhere.	UR_GAMEMODES

Non-Functional Requirements

ID	Description	User Requirements	Fit Criteria
NFR_MOVE_ACCESSIBLE	The game should have basic controls that are easy to learn. These intuitive and require little training	UR_MOVE, UR_ACCESSIBILITY	All ages and abilities should be able to move
NFR_GAME_SHORT	The game should be short as people will be playing it on the open day	UR_GAMEMODES	Scenario mode < 5 minutes
NFR_CONTROL_RESPONSES	The response time should be real-time and instant.	UR_MOVE	The controls should have instance > 0.01 seconds
NFR_STACKING_ITEMS	The items should be able to be stacked in any order.	UR_RECIPES	Prepped ingredients need to be present
NFR_COOKING_TIME	Chopping and cooking should be completed in reasonable time.	UR_INTERACT	Takes > 5 seconds
NFR_CUSTOMER_DEMAND	Must allow for enough time to complete recipe	UR_CUSTOMER	Demand > 60 seconds
NFR_SWITCH	Switching must be fast and responsive.	UR_SWITCH	Only slight cooldown time 1 second
NFR_WAITING	The game must provide an easy way of seeing recipe requests and time left to complete.	UR_CUSTOMER	Have a bar telling to customers have ordered and how long the cooks have to complete the order.
NFR_AUDIO_CUES	Game should have audio cues to action that a relevant and recognisable	UR_COOKS_INTERACT	Audio will help the game be engaging and confirm action has been performed
NFR_ENGAGEMENT	Games should be fun and make it easy to play.	UR_GAMEMODES	Game should be engaging for all users
NFR_DIFFICULTY	Games should be easy to pick up and play by anyone regardless of how much experience they have.	UR_GAMEMODES	Understandable for people how to play regardless of age, experience and language.
NFR_ACCESSIBILITY	The game will played in busy environment, so needs to be designed with this in mind	UR_ACCESSIBILITY	The game must not rely on sound, colour or text too much