Requirements   Group 12 - T12

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Introduction

To get these requirements we 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. If a dish is not served in time then the demand score is decremented.	High
UR_GAMEMODES	This entails two game modes: a scenario gamemode with a set amount of customers to serve in a limited time, and an endless gamemode where you play until you run out of points.	High
UR_STATIONS	These are areas where cooks can chop raw vegetables, cook and flip patties, bake raw ingredients, serve, pick up ingredients and a counter for customers to wait.	High
UR_RECIPES	This includes recipes for salad, burger, pizza and jacket potatoes.	High
UR_SHOP	A menu where cooks can invest money into buying new stations and recipes after the game is over. They will also be able to call other cooking staff back from leave.	Low
UR_IDLE	An idle mode where the game will play itself if nobody is playing.	High
UR_ACCESSIBILITY	The game will be played by a lot of different people on an open-day, some may be far away from the screen and the environment will be noisy; as such, it should be accessible to all.	High

Functional Requirements

ID	Description	User Requirements
FR_COOKS_MOVEMENT	The cooks will move up, down, left and right with the given 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 at the relevant station..	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 the scenario they will arrive on their own, then later in groups.	UR_CUSTOMERS
FR_GAMEMODE_1	A scenario game mode where a configurable number of customers arrive who must be served in the time limit. Requires reputation points to complete.	UR_GAMEMODES
FR_GAMEMODE_2	An "endless" game mode where customers will arrive until all reputation points are lost. The number of customers served before all points are lost serves as 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 must be done within a time limit otherwise the patties will burn and end up 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 complete dishes and customers can receive their order.	UR_STATIONS
FR_INGRIDENT_STATION	This is an area where cooks can pick up raw ingredients to prepare. These will automatically be replenished and cooks can pick up multiple at once.	UR_STATIONS
FR_COUNTER	This is an area where the customers will wait for their order.	UR_STATIONS
FR_RECIPE_1	This recipe for salads contains chopped lettuce, chopped tomatoes and chopped onions. They must be stacked on a plate.	UR_RECIPES
FR_RECIPE_2	This recipe for burgers contains a fried patty (must be formed first) and a toasted bun. These must be stacked on a plate.	UR_RECIPES

FR_RECIPE_3	This recipe for pizzas contains a base, a sauce and a topping, all stacked and then cooked.	UR_RECIPES
FR_RECIPE_4	This recipe for jacket potatoes contains a cooked potato and a topping, both 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	A variable that initially starts at 3. When a customer's demand is not met, it will decrease.	UR_CUSTOMERS
FR_CUSTOMER_WAIT	Customers will wait at a counter while their order is being prepared. If they wait too long then there will be a point 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 within the time limit then there will be a point penalty.	UR_CUSTOMER
FR_MONEY	One of the score metrics. If a customer is served within the time frame, the player will be rewarded with some money.	UR_SHOP
FR_SHOP_MENU	A menu where the player can spend money on more stations and cooks.	UR_SHOP
FR_IDLE_MODE	An option in the game menu where the user can choose to not play. Enabling it will force the game into the above described idle mode.	UR_IDLE
FR_TIMER	To ensure the scenario game mode doesn't go on for too long, there will be a clear timer that the user can always see for time management	UR_GAMEMODES

Non-Functional Requirements

ID	Description	User Requirements	Fit Criteria
NFR_MOVE_ACCESSIBLE	The game should have basic controls that are intuitive and easy to learn.	UR_MOVE, UR_ACCESSIBILITY	People of 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_RESPONDS	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 the 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 the time left to complete.	UR_CUSTOMER	Have a bar telling which customers have ordered and the remaining time per order
NFR_AUDIO_CUES	The game should have audio cues on actions that are relevant and recognisable.	UR_COOKS_INTER ACT	Audio will make the game more engaging and serve as additional confirmation.
NFR_ENGAMENT	It should be fun and easy to play.	UR_GAMEMODES	The game should be engaging for all users
NFR_DIFFICULTY	The game should be easy to pick up and play by anyone regardless of how much experience they have.	UR_GAMEMODES	Ensure people can understand how to play regardless of age, experience and language.
NFR_ACCESSIBILIT Y	The game must be designed with the fact that it'll be played in a busy environment.	UR_ACCESSIBILITY	The game must not rely on one identifier too much, such as sound, colour or text.