

# Requirements

*Group 3*  
*Assessment 1*

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**Single Statement of Need:** *The system shall allow a user to interact and control cooks to prepare and deliver dishes on virtual customers' demands.*

*"You are to build a single-player game that requires managing the staff around a kitchen, who will be preparing various dishes requested by customers coming into the Piazza Restaurant."*

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## Introduction

By following the initial brief set out for us, we've managed to set fundamental requirements that were necessary to provide for our game. After a meeting with our customer, we further understood what would be required to implement into the project.

Each user and software requirement has been recorded in the following tables with a unique but comprehensible ID that relates to the requirement. This was needed as we can refer to our requirements directly without confusion.

With each requirement, we made sure to write a fitting and clear description to best explain its purpose and why it must be implemented as part of our game. The selection was a group process as we would each submit a requirement and decide together if it meets our brief and is needed for the game.

For the user requirements, we made sure to avoid any confusing technical terms and focused on what the players would be able to carry out and interact with in the game.

Our functional requirements focus on what the game must do to follow the brief and meet our customer's expectations. These are the technical actions that the system will take in order to meet the user requirements.

The non-functional requirements focus on the quality of our game and the user's experience. In order to avoid potential issues in the future, we've specified a fit criteria to achieve for the game to hold our systems to a specific standard and provide an estimation on player's experience interacting with the game.

## User Requirements

ID	Description	Priority
UR_SENARIO_MODE	The game should run until all customer demands have been met, or the player has lost all reputation points.	Shall
UR_CONTROL_SYSTEM	The game shall allow the cooks to move between stations by clicking or pressing direction keys and switch between cooks by pressing a key.	Shall
UR_ITEMS	Each cook should be able to interact with and carry items retrieved from the pantry. These should be transferable to cooking stations.	Shall
UR_DEMANDS	Each customer shall give a demand, which will require a recipe to be made	Shall
UR_NUMBER_OF_CUSTOMERS	The game shall support a fixed number of 5 customers in this initial version	Shall
UR_COOKS	The game shall let the player control 2 cook characters, one at a time. Cooks should be locked out for certain of time when they are used up	Shall
UR_RECIPES	The game shall have recipes for salads and burgers, initially.	Shall
UR_REPUTATION_POINTS	The game shall have 3 reputation points that act as lives for the player.	May
UR_COOKING_STATIONS	The game shall have a fixed number of stations to prepare & cook the ingredients for the customer.	Shall
UR_ITEM_STATION	Users should have a station to leave their item	Shall
UR_PANTRY_STATION	The game shall have a pantry for the cooks to collect ingredients from.	Shall
UR_COUNTER	The Finished meals may be brought to the counter to be served to customers	Shall
UR_UX	The game shall offer a pleasant user experience.	May
UR_TOOLTIP	A user shall be shown a prompt to indicate how to play the game (which controls do what).	May
UR_PLATFORM	The game should be run at least two platforms Windows, linux, mac (pick 2)	Shall
UR_TUTORIAL	The game should have tutorial to guide players	Shall
UR_LEADERBOARD	There should be multiple leaderboards for different difficulties	Shall

UR_AESTHETICS	The game should not be 3D and violence is not allowed	Shall
UR_ACCESSIBILITY	There should be two different menus, one for main menu and in-game menu	Shall
UR_RESOLUTION	The game should work on both laptop and larger resolution.	Shall
UR_FRAMERATE	The game should perform at 60fps or higher	Shall

### Functional Requirements

ID	Description	User Requirement
FR_COOK_CONTROLLER	The system shall allow the user to control and switch the cooks.	UR_COOKS
FR_SETTINGS_MENU	The system shall allow the user to change attributes of the game through a settings menu.	UR_ACCESSIBILITY
FR_COOK_ACTIONS	The system shall allow the user to set actions for the cooks by means of interactions between customers or stations.	UR_COOKS
FR_DEMANDS	A demand should appear on screen up until it has expired / has been accepted.	UR_DEMANDS
FR_SALAD	The system will allow the user to combine cut lettuce, tomatoes and onions to make a salad	UR_RECIPES
FR_BURGER	The system will be allow the user to combine fried patties and toasted buns to make a burger	UR_RECIPES
FR_CUTTING	The system should take swap items processed at a cutting station for their chopped version	UR_COOKING_STATIONS
FR_FRYING	The system should be able to let users use the frying station to fry ingredients as part of the cooking process	UR_COOKING_STATIONS
FR_RESTART_MENU	The system shall give the user the ability to restart or exit the game when necessary.	UR_ACCESSIBILITY
FR_MAIN_MENU	The user shall be greeted by a main menu when they run the program which will allow them to access other sub-menus and play the game.	UR_ACCESSIBILITY
FR_HIGH_SCORE	The user shall be able to see and compare the high score(s).	UR_LEADERBOARD
FR_PREPARE_STAGE	The user should take control of the staff member at	UR_RECIPES

ID	Description	User Requirement
	certain points in time. If they failed, they have to repeat the step	
FR_REPUTATION_DECREMENT	The reputation should decrement if the player failed to satisfy customers` demand in certain time	UR_RPUTATION_POINTS
FR_ITEM_DESCRIPTION	Each item will be described in text to avoid confusion of the design	UR_ITEMS

### Non-Functional Requirements

ID	Description	User Requirements	Fit Criteria
NFR_OPERABILITY	The system shall be operable by any new player	UR_UX	90% of new players should be able to play the game without any external help
NFR_DOCUMENTATION	The system shall be accompanied by detailed instructions on how to set up and play the game.	UR_UX	99% of players should be able to access these instructions and understand how to play
NFR_TOOLTIP	The user shall be able to understand how to play the game based on the tooltips, which will contain no technical jargon	UR_TOOLTIP	95% of users will understand the gameplay based off of tooltips
NFR_RESPONSIVENESS	The game shall respond quickly to user input	UR_FRAMERATE, UR_UX	The game will respond within <1/60 seconds to user input
NFR_TIMER_PRECISION	The in-game timer should be precise	UR_DEMAND_EXPIRY	The timer error margin should be <1%
NFR_AVAILABILITY	The game should be playable for the majority of the time it is open	UR_UX	The game should be in the playable state for > 95% of the time it is open
NFR_PLATFORM_AVAILABILITY	The game should be playable on the systems of most players	UR_PLATFORM	The game should be able to run on > 95% of computers