

## User Requirements Table

UR ID	Description	Priority
UR_DISPLAY	The game should display to the user over a screen of varying sizes and should be accommodating for visual impairments.	Shall
UR_MAP	The game should have a university maze style map which the player must navigate to escape - this could resemble the UOY campus to appeal to stakeholders.	Shall
UR_PLAYER_CONTROL	The user should be able to control the player using an input system (mouse and keyboard).	Shall
UR_GAME_COMPLETION	The user should be able to complete the game - winning or losing.	Shall
UR_EVENTS	The player should be able to trigger events in the game that can increase difficulty, allow them to overcome challenges or be a hidden surprise.	Shall
UR_SYSTEM	The system should work well on multiple devices.	Should
UR_STYLE	The game should be a top down 2D style maze game, themed around escaping from university - user group ought to be considered.	Shall
UR_TIME_LIMIT	The game should have a limited duration.	Shall
UR_MENUS	The user should have access to several menu screens within the game that allow them to access key changeable variables - they must be easy to navigate.	Shall
UR_UI	There should be a pleasant and understandable UI.	Should
UR_SCORE	The player should have a points based score that can increase or decrease depending on speed of completion and interactions with events.	Shall
UR_ACHIEVEMENTS	The player must be able to earn achievements during the game that can affect their final score.	Shall
UR_HUD	The user must be able to see the timer, health bar, hotbar and events counter during play.	Shall
UR_LEADERBOARD	The user should be able to view a leaderboard with the name and score of the top 5 scores.	Shall

## Functional Requirements Table

ID	Description	UR ID
FR_RESIZE	The window will resize to fit the screen size of the user's device.	UR_DISPLAY
FR_COLLISION	The player character will collide with the sections of the map - limiting their movement.	UR_MAP
FR_MAP_LIMIT	The map will have an "end" which the play cannot move over.	UR_MAP
FR_KEYBOARD_CONTROL	The player must be able to move up, down, left and right with the keys WASD, and the player character must alter its sprite in situ with this movement.	UR_PLAYER_CONTROL

FR_MOUSE_CONTROL	The player must be able to use the buttons on their mouse to interact with the game and it must implement some functionality in the design.	UR_PLAYER_CONTROL
FR_WINLOSE	The user must be able to find a way to complete the game within the constraints of the game.	UR_GAME_COMPLETION
FR_WINLOSESCREEN	Upon the user completing the game, or the player running out of time, the game should display a screen or image to inform the user of their success or failure.	UR_GAME_COMPLETION
FR_KEYCARD	The user must require a keycard to access new areas of the map.	UR_EVENTS
FR_STUDENT_CROWD	If the player interacts with the bell icon, this must trigger a crowd of students moving towards the player, slowing them down	UR_EVENTS
FR_SLOWDOWN	If the player interacts with the 'rotten' pizza icon, their speed decreases by 50% and there is a slight green overlay, making game play more difficult	UR_EVENTS
FR_FLIP_MAP	If the player interacts with the beer icon, the map is flipped, making game play more difficult	UR_EVENTS
FR_TWO_DEANS	When the player interacts with the failed test paper icon, a second dean starts chasing the player	UR_EVENTS
FR_SPEED_BOOST	When the player interacts with the 'normal' pizza icon, they gain a temporary speed boost	UR_EVENTS
FR_SHIELD	When the player interacts with the shield icon, they equip the shield and can use it to defend against the dean	UR_EVENTS
FR_HEART	When the player interacts with the heart icon, their health is boosted	UR_EVENTS
FR_HIDDEN_GOOSE_EVENT	If the player gives the dean bird food, it will follow the player along with several goslings, without attacking them, however this will decrease the player's final score by 25 as it will make game play a lot easier	UR_EVENTS
FR_STATUE	When the player interacts with the long boi statue, they are teleported closer to the exit	UR_EVENTS
FR_AIR_HORN	When the player interacts with the air horn icon, they equip the air horn and can use it to temporarily stop the dean chasing them	UR_EVENTS
FR_ALL_HIDDEN_EVENTS	The player gets an achievement that boosts their final score by 15 points when they interact with all the hidden events	UR_ACHIEVEMENTS
FR_SWIMMING	When the player interacts with water, they get a swimming achievement. This does not affect the score	UR_ACHIEVEMENTS
FR_SPEEDY_FINISH	If the player finishes the game in under 2.5 minutes, they get an achievement that boosts their final score by 50 points	UR_ACHIEVEMENTS
FR_VISUALS	The game should resemble a university, with a cartoonish, pixelated style that is appealing to younger users	UR_STYLE
FR_TIMER	There should be a timer that limits the length of the game, this should be visible at all times when a game is in effect, it should limit the game to last 5 minutes	UR_TIME_LIMIT
FR_MAIN_MENU	There should be a main menu when the game is first opened which allows a player to access all other menus of the game, as well as a way to initiate a sequence of the game - a "PLAY" button	UR_MENU
FR_SETTINGS	There should be a settings menu where the user can alter key variables within the game - such as game volume, music, player sounds. There should also be a return button to the main menu	UR_MENU

FR_PAUSE	When the player pauses the game the pause menu should appear. This should stop the timer countdown, as well as offer the player the option to return to the main menu, as well as the option to return to the game	UR_MENU
FR_RETURN	The player should be able to return to the previous menu from the menu they're in now.	UR_MENU
FR_SCORE	There should be a constantly displayed score which is based on the player's timer, as well as interactions that a player completes within the game	UR_SCORE
FR_HOTBAR	The player should be able to collect items and store them in an inventory style hotbar. The hotbar should be visible at the top of the screen	UR_HUD
FR_TIMER	The timer must start when game play starts and must be visible to the player.	UR_HUD
FR_ACTIVE_CHALLENGE	There should be a block of text that describes to the player what they should be trying to do - so the player does not get confused	UR_UI
FR_DEAN	There should be a dean that chases and attacks the player	UR_EVENTS
FR_HEALTH_BAR	There should be a visible health bar that decreases when the player is attacked by the goose and increases when the player interacts with the heart health boost	UR_HUD

## Non-Functional Requirements Table

ID	Description	UR ID	Fit Criteria
NFR_NAVIGATION	The map should be easily traversed.	UR_MAP	It should not take the player more than 2.5 minutes to cross the entire map.
NFR_MAP_LOAD	The time to load from one "map" in the game main maze to side rooms etc should be quick.	UR_MAP	It should not take more than a second to load in and out from maps.
NFR_PLAYER_RESPONSE	The player's character should respond quickly to user inputs.	UR_PLAYER_CONTROL	The player's character should respond to an input in <1ms.
NFR_INTUITIVE	The game should be easy for someone new to learn.	UR_PLAYER_CONTROL	The game controls should be easy for someone to learn within the first 2 minutes of gameplay
NFR_FEEDBACK	The game should provide feedback if the player completes an action	UR_PLAYER_CONTROL	And audible feedback shall inform the player they have completed an action
NFR_GAME_END	The game should finish within a set time	UR_GAME_COMPLETION	The game should last < 5mins
NFR_MENU_USE	Menus should be usable	UR_MENU	The font on the menus should be readable
NFR_MENU_TO_GAME	The switch from the menu screen to the actual game should be quick	UR_MENU	Should move from menus to game < 3 seconds
NFR_INTER-MENU	Moving from menu to menu should not be slow, allowing the player to navigate easily	UR_MENU	From one menu to another should take < 1 second
NFR_PAUSE_MENU	Once in the game the player can pause the game - but should be able to do this	UR_MENU	The switch from game to pause menu should take less than a second

	quickly		
NFR_GAMESPEED	The game should run smoothly at all points	UR_DISPLAY	The game should run at >60fps 90% of the time
NFR_CONSISTENT_GAMESPEED	The game should run consistently even if there are many objects	UR_DISPLAY	The game should run at >30 fps at all times
NFR_GAMEPLAY	The game shall not crash or freeze during gameplay	UR_DISPLAY	The game will only crash or freeze a maximum of 1 in every hundred plays of the game
NFR_ACCESSIBILITY	The game should have options for those who are colourblind	UR_DISPLAY	Deuteranomaly, Protanomaly filters should be added at a minimum
NFR_OS_VERAION_S	The game should run on multiple operating systems	UR_SYSTEM	The game should run on Windows, Linux and MAC OS
NFR_GAME_SIZE	The game shall not be too large to inhibit gameplay	UR_SYSTEM	The game shouldn't exceed 500MB during gameplay