

Updated Requirements

Module	SEPR
Year	2019/20
Assessment	4
Team	York Fire Marshalls
Members	Samuel Whitehead, Andrew Connor, Alex Dawson, Finn Jackson, Fred Dodd, Phuong Kha

The following document contains the new requirements that are required for assessment 4. These have then been formatted into a table, splitting each requirement into the separate categories User, Functional and Non Functional. Each of these have been added for the continuity of the testing of the project, and because of this, have been formatted in the same way that the previous groups had done. Each of these requirements have also been added to the updated traceability matrix and new test cases have been created to ensure that each requirement is met without any issues. Here are the new requirements that have been given to us.- Implement five special power ups that Fire Engines can obtain on the journey (e.g. granting temporary immunity, repairing damages/refilling their tanks without returning to the Fire Station)

- Implement support for different levels of difficulty in the game (e.g. easy, normal, hard)
- Implement facilities that allow players to save the state of the game at any point and resume a saved game later

User Requirements

<i>ID</i>	<i>Description</i>	<i>Priority</i>
CREATE_POWER	The user should encounter power ups throughout the map	SHALL
POWER_PICKUP	The user should be able to pick up power ups throughout the map	SHALL
USER_DIFFICULTY	The user should be able to pick the difficulty of the game from the menu	SHALL
USER_SAVE	The user should be able to pause the game and save the current state of the game	SHALL
USER_LOAD	The user should be able to load the previously saved game	SHALL

Functional Requirements

<i>ID</i>	<i>Description</i>	<i>User Requirement</i>
SPAWN_POWER_FUNC	Power up sprites will randomly spawn across the map	CREATE_POWER
POWER_TYPE_FUNC	Power up sprites will have one of 5 types consisting of water refill, health refill, shield effect, sword effect and range increase.	CREATEhealth_POWER

POWER_PICKUP_FUNC	Power ups will be picked up by driving the firetruck over them	POWER_PICKUP
POWER_EFFECT_FUNC	Once picked up, the powerup will have whichever of the 5 effects on the firetruck that was picked up	POWER_PICKUP
WATER_REFILL_FUNC	Once picked up the water refill powerup, the maximum amount of water will be added to the firetruck	POWER_PICKUP
HEALTH_REFILL_FUNC	Once picked up the health refill powerup, the maximum amount of health will be added to the firetruck	POWER_PICKUP
SHIELD_EFFECT_FUNC	Once picked up the shield effect powerup will allow for immunity from damage for a period of time	POWER_PICKUP
SWORD_EFFECT_FUNC	Once picked up the shield effect powerup will allow the firetruck to damage the enemy automatically when in range for a period of time	POWER_PICKUP
RANGE_EFFECT_FUNC	Once picked up the range increase effect will increase the range for a period of time	POWER_PICKUP
DIFFICULTY_FUNC	The difficulty of the game is decided by the options chosen by the user	USER_DIFFICULTY
SAVE_FUNC	Allow for the games state to be saved onto a file	USER_SAVE
LOAD_FUNC	Allow for a previous games state to be loaded into the game	USER_LOAD

Non Functional Requirements

ID	Description	User requirement	Fit criteria
LOAD_CONTINUITY	Games which are loaded should be in the exact same state as when the game was saved	USER_LOAD	The location of all sprites and their variables should be exactly the same in the loaded game as it was when saved.

