

Final requirements listing

Colour coding:

Green = Met

Red = Not met

These requirements are a combination of work from Dicy Cat, NP Studios and Krojan Horse.

USER REQUIREMENTS				
ID	DESCRIPTION		PRIORITY	
UR_FIRETRUCKS_UNIQUE_SPEC	Each Fire Engine must have a unique spec		SHALL	
UR_FIRETRUCKS_REFILL	Fire Engines need to return to the Fire Station to refill		SHALL	
UR_FIRETRUCK_REPAIR	Fire Engines need to return to the Fire Station to repair		SHALL	
UR_ET_UNIQUE_SPEC	Each ET fortress must have a unique spec		SHALL	
UR_ET_IMPROVEMENT	Over time the ET fortresses improve and they become harder to flood		SHALL	
UR_FIRETRUCK_MIN_START	The game should start with four Fire Engines with different specs that are all playable in the game until they are destroyed.		SHALL	
UR_ET_MIN_START	There should be at least six different ET fortresses based (possibly loosely) on real locations in York		SHALL	
UR_WIN_CONDITION	The game is won when all ET fortresses have been flooded		SHALL	
UR_LOSS_CONDITION	The game is lost when all Fire Engines have been destroyed		SHALL	
UR_ET_DESTROYES_STATION	After a fixed amount of time following the first attack to an ET fortress, ETs figure out where the Fire Engines are coming from and destroy the Fire Station. From that point onwards, your Fire Engines cannot be repaired or refilled		SHALL	
UR_MINIGAME	There should be an embedded mini-game, completely different in style from the main game, but aligned to the theme of the main game		SHOULD	
UR_INSTRUCTIONS	The game should have a function at the beginning of the game to explain how it works		SHOULD	
UR_GAME_TIMER	The game's length should be decided keeping in mind the target audience i.e. open days attenders, and is based on the timer that is triggered following the first attack to an ET		SHALL	
UR_INTUITIVE	The game should cater to different levels of ability and be unambiguous and intuitive to complete		SHALL	
UR_PATROLS	The user shall meet patrols when moving around the map.		SHALL	
UR_FORTRESS_ATTACK	The user shall be attacked by the fortresses when they're in range.		SHALL	
UR_POWERUPS	The user shall be able to collect power ups that provide temporary buffs		SHALL	
UR_DIFFICULTY	The user shall be able to select a difficulty when playing the game, with each difficulty having its own level of challenge		SHALL	
UR_SAVE_STATES	The user shall be able to save the game and reload it later, resuming play		SHALL	

SYSTEM REQUIREMENTS				
FUNCTIONAL REQUIREMENTS				
ID	DESCRIPTION		USER REQUIREMENTS	

		Health Point drop by more than 1 shall lead		
		to Fire-engines able to		
SFR_ALLOWED_TO_REPAIR		return to the station and repair	UR_FIRETRUCK_REFILL	
		Water Tank points dropping by 1 shall lead		
SFR_ALLOWED_TO_REFILL		to Fire-Engines able to refill	UR_FIRETRUCK_REPAIR	
SFR_REFILL_FIRETRUCK		Fire engine refills once the minigame is complete	UR_FIRETRUCK_REFILL	
SFR_REFILL_CONSTANT		The refill rate shall be constant	UR_FIRETRUCK_REFILL	
SFR_REPAIR_CONSTANT		The repair rate shall be constant	UR_FIRETRUCK_REPAIR	

		The fire engines shall be able to move even		
SFR_MOVE_WHILE_EMPTY		with empty water tank	UR_FIRETRUCK_REFILL	
		The fire engines shall be able to move with 0<		
SFR_MOVE_WHILE_DAMAGED		HP < 100%.	UR_FIRETRUCK_REPAIR	
		The ET fortresses shall improve by a constant		
SFR_ET_IMPROVE_CONSTANT		amount of HP and damage.	UR_ET_IMPROVEMENT	
		The ET fortresses shall increase in HP and		
SFR_ET_IMPROVE_		damage dealt over time.	UR_ET_IMPROVEMENT	
		The health bar of the fire engine that is being		
SFR_HEALTH_BAR		used should be visible at all times. It should be		
		visual rather than jargon to be understandable		
		to all audiences.	UR_FIRETRUCKS_REPAIR	
		The amount of water currently contained in the		
SFR_WATER_SUPPLY_BAR		tank of the fire engine that is being used should		
		be visible at all times. Again, similar to the		
		the health bar should be visual and avoid		
		jargon.	UR_FIRETRUCKS_REFILL	
		The locations of the fortresses cannot be		
SFR_ET_LOCATIONS_NOT_CHANGEABLE		changed by the user	UR_ET_MIN_START	
		The user will have four unique fire trucks during		
SFR_FIRETRUCKS_STATS		the game to switch between.	UR_FIRETRUCKS_MIN_START	
		The user will have four trucks (lives) to		
SFR_FIRETRUCKS_SELECTION		complete the game	UR_FIRETRUCKS_MIN_START	
		The user cannot repair trucks that have already		
SFR_DESTROYED_TRUCKS		been completely destroyed	UR_LOSS_CONDITION	
		The minigame should start when the truck is in		
SFR_MINIGAME		the firestation, lacking water. The user cannot	UR_MINIGAME	
		progress until the have won the minigame.		
		The ET fortresses should take increasingly more		
		time to flood and defeat.	UR_ET_IMPROVEMENT	
		The order with which		
		the player will encounter ETs of different		
SFR_TIME_TO_DEFEAT_ET		difficulties, however, is random i.e. it is based		
		on the player's movements.		
		The ETs cannot be stopped from destroying the		
SFR_ETS_DESTROY_STATION		Fire Station	UR_ET_DESTROYS_STATION	

SFR_IMPLEMENT_PATROLS	Patrols should attack as they move around on a set path.	UR_PATROLS
SFR_FORTRESS_AIM	The fortress projectiles must aim towards it's target	UR_FORTRESS_ATTACK

		NON-FUNCTIONAL REQUIREMENTS					
ID	DESCRIPTION				USER REQUIREMENTS		FIT CRITERIA
	At the beginning of the game,						Instructions should cover all features of
	the user should be prompted with the						the game and how
SNFR_INSTRUCTIONS	choice to read the game instructions				UR_INSTRUCTIONS		they work
SNFR_TARGET_AUDIENCE	The game should have the features that				UR_TARGET_AUDIENCE		Game should be

	make it playable by a wide variety of users,			easy, fast-paced,	
	including users with no previous gaming experience			entertaining and	
				fun enough to be	
	The bullets patterns should present			Game should be	
	different levels of difficulties e.g. bullets			based on easy-to-	
	shot in a straight line, bullets shot in a			understand rules,	
	circular pattern, combination of both, etc.			fast-paced and with	
	Moreover, the movements of the fire truck			relatively wide	
	should be basic and easy to learn, without hidden commands or functionalities			range of bullets' patterns difficulties	
SNFR_JARGON	All user-facing messages shall be in plain English and will not use technical video-games jargon		UR_TARGET_AUDIENCE	N.A.	
SNFR_MOBILE	The game (style, movement, map visualisation) should be designed with the aim of developing a mobile version		UR_MOBILE	N.A.	

CONSTRAINT REQUIREMENTS				
ID	DESCRIPTION	RISKS	ALTERNATIVES	ENVIRONMENTAL ASSUMPTIONS
SCR_RUNNABLE	Game shall be runnable on every computer i.e. low-end computer	User's computer not able to support game	N.A.	User's computer can run the game
SCR_CONTROLLER	The game should be playable both with keyboards and controller	User does not have controller	Use keyboard instead	User possesses a keyboard
SCR_NO_BUDGET	The project's budget is 0	Some technologies, software, libraries might have a price to be accessed and used	Ask for University's financial support or change the technology used	All technology used is free and accessible
SCR_CLIENT_MEETING	The team should not assume that the client is available every week for meeting, and time between meeting request and date of meeting might vary	Client is never available for meeting and/or client response time is delayed	We can contact the client by email to specify certain functions the game should include.	Client will be available at least once a week to ask questions about the game

SCR_GROUP_MEETING S	The team should be able to regularly meet up to agree on design decisions and collate work done.	Group members are not able to attend.	Set up a voice chat channel to allow for all members to discuss development when they are free for a voice chat.	Each group member has a viable way to voice chat.
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