

# Requirement Testing

P ( performance requirements), E (external interface requirements), F (functional requirements), and N (non-functional requirements).

ID	Requirement	Fit criteria	Pass/Fail	Tests that satisfy this requirement
P1	The game must run on Windows 10 in Java.	P1.1 - The computer boots into Windows 10.	Pass	5.1
		P1.2 - Java is installed on the computer.	Pass	5.1
		P1.3 - The source code is written in Java.	Pass	N/A
P2	The game must run smoothly on the university computers.	P2.1 - The game runs at a minimum of 30 frames per second at all times.	Fail	Cannot say with confidence if this is the case, but never during testing was a low framerate noticeable.
E1	The user must be able interact with the system using an input system available to university computers.	E1.1 - The user can navigate the menus.	Pass	See UI black-box tests 6.x, 7.x, 8.x
		E1.2 - User is able to move their character.	Pass	10.3
E2	The system must provide feedback to the user.	E2.1 - There must be some visual output from the system.	Pass	5.1 the DesktopLauncher takes the user to the menu.
F1	The game must be split up into different stages which each have a few waves of zombies.	F1.1 - The game returns you to the stage select screen once you complete a stage.	Pass	9.7
		F1.2 - Zombies are spawned at the start of each wave.	Pass	Zombies must have been spawned for test 9.8 to pass.

F2	The game must get progressively more difficult.	F2.1 - More zombies are spawned in later waves and stages.	Pass	9.8
		F2.2 - More difficult zombie types are spawned	Pass	9.8

		at later waves and stages.		
F3	There must be three different player types the user can choose to play as with different abilities.	F3.1 - The different player types have different stats. e.g. run speed, hit points.	Pass	2.3.1, 2.3.2
		F3.2 - The different player types have special abilities. e.g weapons, armour.	Fail	There are no special abilities or weapons. Only the stats change between player types.
F4	There must be at least 3 zombie types (based on societies) with different abilities.	F4.1 - The different zombie types have different stats. e.g. run speed, hit point.	Pass	9.12
		F4.2 - The different zombie types have special abilities. e.g weapons, armour.	Fail	Currently zombie do not have special abilities just stats but requirement F4 has still been satisfied by F4.1 and F4.3.
		F4.3 - Each zombie type must reference a university society.	Pass	9.12
F5	There must be a mini game, completely different from the main game.	F5.1 - The mini-game has a different objective to the main game.	Pass	7.10, 9.17
		F5.2 - It is playable from the main menu.	Pass	

F6	There must be five different power-ups which are sometimes dropped when a wave is completed.	F6.1 - One power-up is dropped at the end of every wave.	Pass	9.9
		F6.2 - When a power-up is dropped it is selected randomly from all the power-up.	Fail	Difficult to test whether something is random.
F7	There must be two bosses. One half way through the game and one at the end.	F7.1 - The third and sixth stage finish with a boss.	Pass	7.4-7.7.6, 7.11-7.13
F8	The game must be able to be saved and then reloaded at any time.	F8.1 - The game state is encoded into text to be stored in a plain text file.	Fail	There is currently no saving/loading mechanic.
		F8.2 - Loading a game save returns the game to the exact state it was in when it was saved.	Fail	
F9	The zombies must seek out the player and do damage when they are within range.	F9.1 - The player loses a number of hit points depending on the zombie type.	Fail	Zombie types implementing by adjusting Zombie's speed and health attributes
		F9.2 - The player loses the hit points every second the zombie is within a distance of 20 from the player.	Pass	3.1.x are concerned with a zombie doing damage to a player depending on the range. 3.2.x test the cooldown time on the zombies attack. All tests pass.
F10	The player should do damage to a zombie when they are in range and the user attacks in the correction direction.	F10.1 - The zombie loses a number of hit points depending on the weapon the player is using.	Fail	There are currently no weapons in the game. The player can only use their fists.
		F10.2 - The zombie loses the hit points when the user clicks in the direction of the zombie as long as it is within the range of the weapon. Range represented as a sector.	Pass	2.2x test the players attack method on a zombie, all tests pass. 10.2 ensures that the left mouse button causes the player to attack.

N1	The game must be easy to learn to play.	N1.1 - There is a controls option in the user manual.	Pass	N/A
		N1.2 - The game starts with a tutorial mission.	Fail	There is no tutorial mission but the game in its current state is very simple.
N2	The user must clear all stages and bosses in order to complete the game.	N2.1 - Once a stage is completed the next stage is available to play.	Pass	9.1 and 9.3
		N2.2 - Once the final stage is completed the game is completed.	Pass	9.2
N3	The different zombie types and player sprites should all be distinguishable from each other.	N3.1 - All sprites are different in design. They have different colours and features.	Pass	Zombies are distinguishable from each other as shown by the passing of test 9.12
N4	The game should guide the user through the story.	N4.1 - There are text prompts to give the user story information.	Pass	7.4, 7.5, 7.6
N6	The game could have an 8-bit aesthetic.		Pass	N/A

The table above is based on the Updated Requirements in Assessment 2. [1]

Link to Updated Requirement Specification: