

## Change Tracker

Change ID	Change Description	Requirement	Change Builder	Status	Branch	GitHub Pull Request
1	Refactoring to allow testing	*	-	DONE	refactor	<a href="https://github.com/Luceapuce/SEPR-Assessment-Four/pull/3">https://github.com/Luceapuce/SEPR-Assessment-Four/pull/3</a>
2	UNIT TESTS	*	Bruno	DONE	unit_testing	<a href="https://github.com/Luceapuce/SEPR-Assessment-Four/pull/26">https://github.com/Luceapuce/SEPR-Assessment-Four/pull/26</a>
3	Give each fortress different specs - health and damage	UR_ET_UNIQUE_SPEC	Cassie	DONE	wfortress_respec	<a href="https://github.com/Luceapuce/SEPR-Assessment-Four/pull/4">https://github.com/Luceapuce/SEPR-Assessment-Four/pull/4</a>
4	Change win condition so that you have to defeat 6 fortresses to win	UR_WIN_CONDITION	Lucy	DONE	fortress_respec	<a href="https://github.com/Luceapuce/SEPR-Assessment-Four/pull/4">https://github.com/Luceapuce/SEPR-Assessment-Four/pull/4</a>
5	Fix health and water bar - they only render when selected	SFR_HEALTH_BAR SFR_WATER_SUPPLY_BAR	Lucy, Bethany and Bruno	DONE	refactor	<a href="https://github.com/Luceapuce/SEPR-Assessment-Four/pull/3">https://github.com/Luceapuce/SEPR-Assessment-Four/pull/3</a>
6	Add city walls around map	SNFR_SIMPLE	Alasdair	DONE	map_edits	<a href="https://github.com/Luceapuce/SEPR-Assessment-Four/pull/6">https://github.com/Luceapuce/SEPR-Assessment-Four/pull/6</a>
7	Fix warping at edge of map	SNFR_SIMPLE	Lucy	DONE	misc	<a href="https://github.com/Luceapuce/SEPR-Assessment-Four/pull/5">https://github.com/Luceapuce/SEPR-Assessment-Four/pull/5</a>

8	Implement 5 power-ups along the roads	UR_POWER_UPS, SFR_POWER_UPS	Alasdair and Bethany	DONE	powerups	<a href="https://github.com/Luceapuce/SEPR-Assessment-Four/pull/12">https://github.com/Luceapuce/SEPR-Assessment-Four/pull/12</a>
9	Implement easy, medium and hard gameplays (replace firetruck selection buttons with these buttons)	UR_DIFFICULTY_LEVEL, SFR_DIFFICULTY	Bruno	DONE	difficulty	<a href="https://github.com/Luceapuce/SEPR-Assessment-Four/pull/13">https://github.com/Luceapuce/SEPR-Assessment-Four/pull/13</a>
10	Fix collisions with new fortresses that don't work	SFR_BUILDINGS	Alasdair	DONE	map_edits	<a href="https://github.com/Luceapuce/SEPR-Assessment-Four/pull/6">https://github.com/Luceapuce/SEPR-Assessment-Four/pull/6</a>
11	Implement saving functionality and add load button to home screen	UR_SAVING, SNFR_SAVING	Lucy	DONE	saving	<a href="https://github.com/Luceapuce/SEPR-Assessment-Four/pull/14">https://github.com/Luceapuce/SEPR-Assessment-Four/pull/14</a>
12	Make fortresses improve over time by HP and damage	UR_ET_IMPROVEMENT, SFR_ET_IMPROVE_CONSTANT, SFR_ET_IMPROVE	Cassie	DONE	fortress_respec	<a href="https://github.com/Luceapuce/SEPR-Assessment-Four/pull/4">https://github.com/Luceapuce/SEPR-Assessment-Four/pull/4</a>
13	Change dead texture for fire station	UR_ET_DESTROYS_STATION	Alasdair	DONE	map_edits	<a href="https://github.com/Luceapuce/SEPR-Assessment-Four/pull/6">https://github.com/Luceapuce/SEPR-Assessment-Four/pull/6</a>
14	Fix high score functionality	UR_HIGHSCORE, SNFR_HIGHSCORES	Lucy	DONE	highscore	<a href="https://github.com/Luceapuce/SEPR-Assessment-Four/pull/7">https://github.com/Luceapuce/SEPR-Assessment-Four/pull/7</a>

15	Fix dead fortress textures	SFR_FORTRESS_DESTROY	Alasdair	DONE	map_edits	<a href="https://github.com/Luceapuce/SEPR-Assessment-Four/pull/6">https://github.com/Luceapuce/SEPR-Assessment-Four/pull/6</a>
16	Add controls screen to the home page	UR_INSTRUCTIONS, SNFR_INSTRUCTIONS	Jordan	DONE	controls_screen	<a href="https://github.com/Luceapuce/SEPR-Assessment-Four/pull/11">https://github.com/Luceapuce/SEPR-Assessment-Four/pull/11</a>
17	Resize game window	SNFR_SIMPLE	Lucy	DONE	saving	<a href="https://github.com/Luceapuce/SEPR-Assessment-Four/pull/14">https://github.com/Luceapuce/SEPR-Assessment-Four/pull/14</a>
18	Change fire truck attack to be triggered by pressing the space key	SFR_FORTRESS_DESTROY	Lucy	DONE	firetruck_attack	<a href="https://github.com/Luceapuce/SEPR-Assessment-Four/pull/8">https://github.com/Luceapuce/SEPR-Assessment-Four/pull/8</a>
19	Add minimap in	SNFR_SIMPLE	Bethany	DONE	minimap_and_resize	<a href="https://github.com/Luceapuce/SEPR-Assessment-Four/pull/9">https://github.com/Luceapuce/SEPR-Assessment-Four/pull/9</a>
20	Improve patrols spawning - limit how many can spawn and slow them down	UR_PATROL	Bruno	DONE	difficulty	<a href="https://github.com/Luceapuce/SEPR-Assessment-Four/pull/13">https://github.com/Luceapuce/SEPR-Assessment-Four/pull/13</a>
21	Make the fortress attack projectile aim at you	SFR_FORTRESS_ATTACK	Lucy	DONE	fortress_respec	<a href="https://github.com/Luceapuce/SEPR-Assessment-Four/pull/4">https://github.com/Luceapuce/SEPR-Assessment-Four/pull/4</a>
22	New Minigame assets	UR_MINIGAME	Alasdair	DONE	Minigame_improvements	<a href="https://github.com/Luceapuce/SEPR-Assessment-Four/pull/12">https://github.com/Luceapuce/SEPR-Assessment-Four/pull/12</a>

23	Improve minigame - make it more embedded	UR_MINIGAME	Bethany and Alasdair	DONE	minigame_improvements	<a href="https://github.com/Luceapuce/SEPR-Assessment-Four/pull/12">https://github.com/Luceapuce/SEPR-Assessment-Four/pull/12</a>
24	Balance the scores from the minigame to get each power up - reduce the amount of goose jumps needed	UR_POWER_UPS, SFR_POWER_UPS	Bethany	DONE	more_minigame	<a href="https://github.com/Luceapuce/SEPR-Assessment-Four/pull/17">https://github.com/Luceapuce/SEPR-Assessment-Four/pull/17</a>
25	Scale how long the powerup lasts with difficulty	UR_POWER_UPS, SFR_POWER_UPS	Bethany	DONE	more_powerups	<a href="https://github.com/Luceapuce/SEPR-Assessment-Four/pull/16">https://github.com/Luceapuce/SEPR-Assessment-Four/pull/16</a>
26	Multiple box spawn locations	UR_POWER_UPS, SFR_POWER_UPS	Bethany	DONE	more_powerups	<a href="https://github.com/Luceapuce/SEPR-Assessment-Four/pull/16">https://github.com/Luceapuce/SEPR-Assessment-Four/pull/16</a>
27	Hide and show the minimap with the t key	SNFR_SIMPLE	Bethany	DONE	more_minimap	<a href="https://github.com/Luceapuce/SEPR-Assessment-Four/pull/18">https://github.com/Luceapuce/SEPR-Assessment-Four/pull/18</a>
28	Add powerup stuff to minimap	UR_POWER_UPS, SFR_POWER_UPS	Bethany	DONE	more_minimap	<a href="https://github.com/Luceapuce/SEPR-Assessment-Four/pull/18">https://github.com/Luceapuce/SEPR-Assessment-Four/pull/18</a>
29	Fix borked buildings above the spaceship	SNFR_SIMPLE	Alasdair	DONE	more_map_edits	<a href="https://github.com/Luceapuce/SEPR-Assessment-Four/pull/20">https://github.com/Luceapuce/SEPR-Assessment-Four/pull/20</a>

30	Fix the icons of power-ups so that they are disposed of when the fire truck dies	UR_POWER_UPS, SFR_POWER_UPS	Bethany	DONE	more_powerups	<a href="https://github.com/Luceapuce/SEPR-Assessment-Four/pull/16">https://github.com/Luceapuce/SEPR-Assessment-Four/pull/16</a>
31	Stop fire trucks from being able to kill the patrols and make sure not too many patrols spawn	UR_PATROL, SFR_PATROL_HEALTH	Bruno	DONE	more_patrols	<a href="https://github.com/Luceapuce/SEPR-Assessment-Four/pull/19">https://github.com/Luceapuce/SEPR-Assessment-Four/pull/19</a>
32	Fix the collision with the fire station	SFR_BUILDINGS	Alasdair	DONE	more_map_edits	<a href="https://github.com/Luceapuce/SEPR-Assessment-Four/pull/20">https://github.com/Luceapuce/SEPR-Assessment-Four/pull/20</a>
33	Fix spikes on the minigame - sometimes they spawn in the wrong place and sometimes they get cut off at the bottom	UR_MINIGAME	Alasdair	DONE	more_map_edits	<a href="https://github.com/Luceapuce/SEPR-Assessment-Four/pull/20">https://github.com/Luceapuce/SEPR-Assessment-Four/pull/20</a>
34	Add a screen before the minigame explaining scores for powerups	UR_POWER_UPS, UR_SIMPLE	Bethany	DONE	more_minigame	<a href="https://github.com/Luceapuce/SEPR-Assessment-Four/pull/23">https://github.com/Luceapuce/SEPR-Assessment-Four/pull/23</a>

### Testing Problems:

1. FireTruck class - for icons we used kroy.maingamescreen which means it can't be tested. Solution - have them in the class instead to get rid of using kroy.maingamescreen
2. FireStation class - constructor calls kroy.maingamescreen as well. Solution - just put the coordinate in there instead of getting the spawn coordinate from kroy.maingamescreen

### Other:

1. Fix the remove icons method in StatusIcon
2. Fix the score in minigame - better if it doesn't start as negative if possible
3. Fix other icons for powerups (i think i can't remember?)
4. Make minigame easier and make sure spikes render properly