CS 407 team 7

Project Name: T.O.W.E.R.S.

Project Owners: Ryan DeSalvio, Nicolas Bratton, Garrett Kizior, Keith Droll

**Sprint 2 Planning Document**

GitHub repository: <https://github.com/kdroll/cs407>

Work Hours:

|  |  |
| --- | --- |
| **Developer** | **Number of Hours** |
| Ryan DeSalvio | 40 |
| Nicolas Bratton | 40 |
| Garrett Kizior | 40 |
| Keith Droll | 40 |

**Sprint Overview:**

This sprint our team will focus on adding more content (menus, turrets, enemies and their animations) as well as refining content from the previous sprint (user interaction, text displays, enemy AI and animations). Most of the time will be adding more bulk content to the game to allow for refinement and optimization in the third sprint.

The scrum master is Ryan DeSalvio. Our scrum schedule is a meeting every Monday and Thursday at 3:30pm.

Our risks and challenges include making sure we continue our GitHub best practices (branches, merging, committing often, etc) and encouraging collaboration for pain points we will experience in development. Another challenge will be to ensure all of our code works well with everyone else’s, as there are many different systems at play in our project.

User Story #1

As a developer, I would like to incorporate a start menu that allows for starting games, and viewing credits

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| # | Task Description | Estimate Time(hrs) | Owner |
| 1 | Make a menu that responds to user input | 8 | Nicolas Bratton |
| 2 | Have the menu appear when the game is first started, and allow the main menu to be accessed from the start menu | 4 | Nicolas Bratton |
| 3 | Have a start game button that starts the game at round 1 | 5 | Nicolas Bratton |
| 4 | Have a credits button that shows game credits | 4 | Nicolas Bratton |

**Acceptance Criteria:** User is able to start up the game from an executable and click on a “New Game” option or an “Credits” option. The “New Game” option starts a new game while the “Credits” option starts a credit roll for the game.

User Story #2

As a user, I would like to buy turrets, and ammunition

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| # | Task Description | Estimate Time(hrs) | Owner |
| 1 | Add user prompt for buying turret ammunition | 4 | Ryan Desalvio |
| 2 | Implement a menu for choosing what turret to buy | 7 | Ryan Desalvio |
| 2 | Turret type, current ammunition, and ammunition cost should be displayed when cursor is over a existing turret | 4 | Keith Droll |

**Acceptance Criteria:** User is able to go in the turret edit mode and hover over a placed turret and add ammunition as well as bringing up a menu to select which turret the user would like to place.

User Story #3

As a user, I would like to know what my current health, current currency count, and round number is

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| # | Task Description | Estimate Time(hrs) | Owner |
| 1 | Improve UI for current health, current currency and round number | 5 | Garrett Kizior |

**Acceptance Criteria:** User is able to tell while playing the game what their current health, current currency count, and round number is by just looking at on screen UI.

User Story #4

As a user, I would like to view an end-game statistics screen

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| # | Task Description | Estimate Time(hrs) | Owner |
| 1 | Make a screen that displays at the end of game | 5 | Garrett Kizior |
| 2 | Display enemies destroyed, time elapsed, rounds completed, total currency earned | 6 | Garrett Kizior |

**Acceptance Criteria:** Upon the end of the game, the user is taken to an end game statistics screen where various statistics are shown to the player.

User Story #5

As a user, I would like to see events for player and base death

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| # | Task Description | Estimate Time(hrs) | Owner |
| 1 | When a player dies, start a respawn timer, after the time is up respawn the player at death position | 1 | Ryan Desalvio |
| 2 | When the base is defeated, the base should explode | 1 | Ryan Desalvio |

**Acceptance Criteria:** When the user is killed in the game, the user must wait for a timer to finish before they respawn again and the user can see the base explode when the base health reaches zero.

User Story #6

As a user, I would like to pause the game

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| # | Task Description | Estimate Time(hrs) | Owner |
| 1 | Make a menu that freezes time in-game | 6 | Nicolas Bratton |
| 2 | Menu should include resume game option | 3 | Nicolas Bratton |
| 3 | Menu should include go back to main menu option, abandoning the game in progress | 3 | Nicolas Bratton |

**Acceptance Criteria:** User is able to hit a button and the game will pause bringing up a menu with options to resume the game and an option to go back to the main menu.

User Story #7

As a user, I would like to have multiple turrets with different abilities that can automatically shoot and target enemies

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| --- | --- | --- | --- |
| # | Task Description | Estimate Time(hrs) | Owner |
| 1 | Make an Explosive Turret that shoots explosive rounds | 9 | Keith Droll |
| 2 | Make an Anti-Air turret that only attacks air enemies | 9 | Keith Droll |
| 3 | Make an Freeze tower that slows enemies within its radius | 9 | Keith Droll |
| 4 | Make an Health tower that heals player in its radius | 9 | Keith Droll |

**Acceptance Criteria:** User is able to select different turrets from a menu and place the turrets they select in the game. The turrets are different and have different abilities which affect enemies in different ways depending on the type of turrets.

User Story #8

As a developer, I would like to like to include animations for character/enemy attack

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| # | Task Description | Estimate Time(hrs) | Owner |
| 1 | Make an golem enemy | 4 | Ryan Desalvio |
| 2 | Make an troll enemy | 4 | Ryan Desalvio |
| 3 | Make an air-type enemy | 6 | Ryan Desalvio |
| 4 | Complete animations for golem enemy | 3 | Ryan Desalvio |
| 5 | Complete animations for troll enemy | 3 | Ryan Desalvio |
| 6 | Complete animations for air-type enemy | 3 | Ryan Desalvio |

**Acceptance Criteria:** User will be able to see different animations for the different enemies they are facing and the different guns that the user will be able to use

User Story #9

As a developer, I would like to mutate the enemy’s attributes (health, speed, strength) each round based on enemy performance

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| # | Task Description | Estimate Time(hrs) | Owner |
| 1 | Record enemies that perform the best each round | 4 | Garrett Kizior |
| 2 | Randomly alter best performing enemy’s attributes | 5 | Garrett Kizior |
| 3 | Outline a character’s silhouette with meaningful colors based on mutated attribute | 5 | Garrett Kizior |

**Acceptance Criteria:** The enemies in the game are mutated as time goes on based on performance and the user can see these changes have been applied by a colored outline around the enemies.

User Story #10

As a developer, I would like for the game world to accommodate enemy spawning and have an intuitive feel

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| --- | --- | --- | --- |
| # | Task Description | Estimate Time(hrs) | Owner |
| 1 | Increase spawn locations | 4 | Garrett Kizior |
| 2 | Spawn enemies out of sight in a random, yet cohesive manner | 6 | Garrett Kizior |
| 3 | Refine map layout to resemble a crater | 4 | Ryan Desalvio |

**Acceptance Criteria:** The enemies spawn in the map, out of sight of the player, and the map layout is refined to resemble a crater.

User Story #10

As a user, I would like for music to play as I proceed through the game.

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| --- | --- | --- | --- |
| # | Task Description | Estimate Time(hrs) | Owner |
| 1 | Find (or compose) music that matches the theme of the game (eg. Futuristic, fast-paced) | 4 | Nicolas Bratton |
| 2 | Implement music into the game, playing the music only when a game is in progress | 3 | Nicolas Bratton |

**Acceptance Criteria:** Music will play while the game is in progress, and will not play while at the main menu or during the credits.