Release Plan:

# Against the Swarm v1.0 “egg”

## BuzzHiveGames, 7/8/18 (revision 2)

Buzz Tilford, Andrew Kim, Jolene Nguyen, Brandon Pham, Jacob Swanson, Zeyuan Jiang

### High Level Goals:

The Player is able to grow in strength by hiring refugees and researching technology.

The Player gains resource by fighting monster..

The Player must be able to make interesting strategic decisions.

The game can be deployed as a website.

A game length between 45 and 70 minutes.

Be able to run without error (game reacts unpredictable or game values set to NaN).

Prototype Testing

Continuous Integration

**Sprint 1 (32 points. Learning technologies shall take development time)**

As a player, I want to be able to retreat to a new map when the swarm destroys my last town, so that I can continue playing. 3 points

* Function that generates new set of towns

30 min (random positions) Zeyuan Jiang

* Save the existing towns for eventual return

15 min (might need a new storage object) Zeyuan Jiang

* Set the current array of towns to the new array of towns

15 min Zeyuan Jiang

* Reset the Invasion Progress

15 min Zeyuan Jiang

* Set the player’s current position to the town closest to the swarm (4)

15 min Zeyuan Jiang

* Trigger this when invasion progress >= 100

15min Zeyuan Jiang

As a player, I want to be able to gain Follower Resource by protecting refugees as they flee the swarm. 2 points

* Create global variable for Follower Resource (game\_logic.js)

15 min Jolene Nguyen

* Create function that increments this that takes in current towns (more undestroyed towns more resource)

30 min Jolene Nguyen

* Put above function in main loop in index.html (line 22)

15 min Jolene Nguyen

As a player, I want to be able to view a list of items from monsters and the amount of follower resource I have so that I can make decisions about what followers to hire. 2 Points

* Create User Inventory object {meat, scale, claws, fiber, metal, gelatin}

With increment/decrement functions/get/set

30 min Buzz Tilford

* Create table-like display object in html and that shows these six items in 2 differentiable containers

30 min Buzz Tilford

* Add updates to gui.js to update these values

30 min Buzz Tilford

* Create display object for Follower Resource in followers container

30 min Andrew Kim

* Add update to gui.js to update the Follower Resource value(found in game\_logic.js)
* 30 min Zeyuan Jiang

As a player, I want to see technologies available and that I’ve purchased, so I know my status. 5 Points

* Implement Technology object

1 hour Brandon Pham

* Array of technology (3 { enough to test the GUI } )

45 min Brandon Pham

* Basic UI that shows list of available and bought technologies

1 hour Brandon Pham

As a designer, I want the invasion rate to go up if there are more enemies, so that the player has to keep fighting faster. 2 Points

* Change enemy to array of enemies (with one enemy for now)

30 min Jacob Swanson

* Make sure the player can still kill the enemy and it respawn

45 min Jacob Swanson

* Have a function which counts the number of enemies

15 min Jacob Swanson

* Create invasion rate variable in game\_logic.js

15 min Jacob Swanson

* Make a function that check the enemies and increase rate and increases invasion progress

30 min Jacob Swanson

(2) As a player, I want to be able to shift the camera focus between the town and battlefield

* Camera panning during engage/disengage. 2.5 hours Buzz Tilford

(3) As a player, I want to be able to hire followers with a Follower Resource so that I can fight the swarm more effectively, process items, research technology, and mine crystals to send myself, my followers, and refugees into a safer realm.

* Implement Follower.js to include 3 Processors, Fighters, Miners, Researchers, Teleporters 1.5hours Andrew Kim

(8) As both a player and as a designer, I want a group of combatants to be able to fight another group of combatants, so that combat is more interesting.

* Create new fighter.js object.

15 min Zeyuan Jiang

* Replace the player with array of fighters.

1 hour Zeyuan Jiang

* Replace the monster with array of monsters.

1 hour Zeyuan Jiang

* On hover on the monster, show the monster’s information including health bar.

2 hours Zeyuan Jiang

* Create a function that spawns monsters over time.

30 min Zeyuan Jiang

* Update the game logic functions (fight, disengage, rest) function in the game\_logic.js to take into account multiple fighters and enemies. 2 hours Zeyuan Jiang

(1) As a player I want to have new item system

* As a user I want to know how much of each items I have and I want raw goods to be convert to finished goods over if I have the correct followers

15 min Buzz Tilford

(3) As a player I want a tree of technologies so that I can increase the power of followers

* + Design the technologies for implementation

1 hour Buzz Tilford

**Sprint 2 (39 Story Points)**

(5) As a player, I want to be able to reclaim towns, so that I can eventually fight the swarm back to its home realm, kill it, and win the game.

* Create button to reclaim towns; this button is enabled when you push the invasion progress variable beyond a destroyed town. 15
* When you click the button to reclaim towns, the game shifts into a “reclaim mode,” and the game’s timers are stopped until you disengage or kill all of the enemies. 60
* Disable enemy respawning in “reclaim mode.” 15
* Set reclaimed town as the player’s current location, re-enable the timer, and push the invasion progress back by 10. 15

(2) As a player I want to be able to use Follower Resource to hire fighters to join my party, so I can more effectively fight the swarm.

* Make a button that hires fighters. 5
* Add a fighter object to the player’s party. 5
* Reduce the player’s follower\_resource by some number. 5
* Disable the button when there isn’t enough follower\_resource. 10
* Store the cost of fighters in the Follower object. 5

(5) As a player, I want to hire a Magic User with an attack that charges up and does damage in a burst, so that I can overcome enemies with high damage-reduction.

* Make fighters have an attack function and make the Magic User a fighter with an alternate version. 15
* Magic User needs a “charge” variable to store how close it is to attacking and a number that they fire at when they have a full charge. 5
* Magic Users need to lose charge after they attack. 5
* I want monsters to break a Magic User's concentration when they hit so that Magic Users can only cast if they avoid damage. 15
* Make a button that hires Magic Users. 5
* Add a Magic User object to the player’s party. 5
* Reduce the player’s follower\_resource by some number. 5
* Disable the button when there isn’t enough follower\_resource. 10
* Store the cost of magics in the Follower object. 5

(3) As a game designer, I want technologies in the tech-tree to be hidden until the player has researched the prerequisite technologies, so that there is an air of mystery about the tree’s progression. (Brandon Pham)

* When choosing what technologies to display, loop through the player’s prerequisites. If the player has the prerequisite, the technology is displayed. 30
* Get technologies displayed with Vue. 30

(3) As a game designer, I want to be able to lock and unlock various follower types, so that I control the pace of the game for the player.

* Set boolean for each follower type that controls whether the hire button is visible to the player or not. 30
* Write a function that can change that boolean. 10

(8) As a game designer, I want the number of followers that the player can take with them when they retreat to a new world to be limited, so that they have to make decisions about who to take with them and if they will hire more miners/teleporters in the next world.

* Make a variable to count crystals in player inventory object. 5 Jacob
* Make a modal (pop-up) box can be displayed and pauses the rest of the game when displayed. 120 Jacob
* Display all of the followers/fighters in the modal with numbers. 30 Jacob
* Add followers and fighters to your escape party. 15 Jacob
* If you have a valid escape party, you can click teleport. 20 Jacob
* This modal pops up when you leave a world. 15 Jacob
* You lose all the fighters/followers not in your escape party. 10 Jacob

(5) As a player, I want to gain resources over time and from fighting monsters.

* Each round I fight while Under Siege, I want to gain resources (resources are converted and gained based on follower resource), so that I have more resources when the siege breaks through. (All resources gained overtime are incremented here.) 20
  + Buzz Tilford
* I want to gain meat, scales, and claws when I kill enemies. 10
  + Buzz Tilford
* I want to gain fiber, metal, and gelatin on an overtime if I have the correct followers. 10
  + Buzz Tilford
* I want to gain ore overtime based on the number of miners I have. 10
  + Buzz Tilford
* I want to gain crystals overtime based on the amount of ore and number of teleporters I have. 10
  + Buzz Tilford

(8) As a player, I want to be able to see gameplay represented visually, so I can quickly understand and react to the game state. (Andrew Kim) (Total 18 hours)

* Small Icons for followers (Followers, Meat Pounder, Scale Forger, Claw Grinder, Fighter, Pyromancer, Aether Miner, Enchanter) 2 hours
* Small Icons for resources (Meat, Scales, Claws, Fiber, Metal, Gelatin, Aetherium, Telecrystals) 2 hours
* Small Icons for invasion progress bar (Town, Fire, Destroyed Town, Swarm) 1.5 hours
* Knight Sprites (Idle, Attack, Guard, Death animations) 2 hours
* Wizard Sprites (Idle, Charge, Attack, Death, Energy Ball animations) 2 hours
* Buttons (Fight, Guard, Disengage, Rest, Engage) 1.5 hours
* 3 types of Monsters (spider, scalisk, crab) (each with Idle, Attack, Death) 6 hours
* Tab Icons (Flask, Book, Floppy Disk, Gear) 1 hour
* Make the invasion bar look more fluid (30) (Michael)
* Make the invasion bar use vue (1hr) (Michael)

(5) As a player, I want to be able to be able to convert processed items into technologies by clicking options in an on-screen tech-tree so that I can increase the effectiveness of my fighters, my followers, and construct the secret weapon that destroys the swarm.

* Put onclick listener on researched technologies and call a function that attempts to unlock the said technologies. 30
* If the player can pay for it from the player inventory, unlock it and call the operation functions belonging to the unlocked technology. 30

(3) As a player, I want to be able to take an action in combat that shields my Magic Users so that I can charge them up while letting my tougher fighters soak damage so that my Magic Users will be able to attack more reliably.

* Create guard() function with button. 15
* Make guard() like multi-fight function except that fighters do not attack, and all monster attacks go to fighters, not Magic Users, if there are any fighters. 15
* In guard(), Magic Users can still attack. 15

(3) As a designer, I want a Boss Monster to be engaged when a player attempts to reclaim towns, so that reclaiming territory is a challenge. (Michael)

* Make boss monster spawn when wave is pushed back to another town (1hr)
* During boss fight, no other enemies will spawn (15)
* If boss is defeated, then the current town becomes the players location and the wave is pushed back by ten units (15)

(5) As a Designer, I want all my game logic variables and functions to be all in one class so that it will be easier to read the code and also make it possible to save the game if we have time.

(Michael)

* Change game\_logic.js file so that all functions and variables are under game class (30)
* Make sure all functions do not need parameters (10)
* Make sure the rest of the files have their variables changed so that it works (30)

**Sprint 3 (34 points)**

(5) As a player, I want the game’s look to be consistent and professional, so that I maintain awareness of the game state without being distracted.

* Relative scaling Michael
* Background (grassy field) Andrew
* Town Panel Background
* Add Action Button images to the game Jolene
* Add fire effect on town when under siege (Jolene)
* Add bottom UI and style it
* Add a buttons on the bottom right corner and clicking each button will show a different page of stats (1.5 hr) (Michael)
* Select font and make sure text doesn’t wrap
* Get rid of white margin between town and field panels
* Style technology tree (Brandon)
* Resize resources UI (Brandon)
* Add tooltip box when hovering over technologies

(8) As a designer, I want the statistics of the game, monster/fighter/follower be balances, so that players can expect a certain runtime ~1 hour.

(8) As a designer, I want the technologies to modify the other statistics in a game in such a way that provides the player with meaningful choices that each feel like they have an impact so that the player is entertained and keeps playing.

(5) As a designer, I want there to be a way of scoring a player’s run through the game so that they can know their competency and perhaps set goals for future attempts.

(5) As a designer, I want there to be a Monster Tracker object in the game that keeps track of what enemies the player has killed so that I can set up systems that respond to player action incentivizing theme to shift strategies.

* Monster types (boss, warrior, drone…) 0.5 hour
* Make a new Tracker object 0.25 hour
* Store how many you killed each and determine which to spawn next 0.5 hour

(3) As a player, I want their to be a Boss Monster Sprites, so that when I’m fighting a boss monster I know what kind of challenge I’m facing, and I can feel good when I overcome it.

(5) As a game designer, I want the number of followers that the player can take with them when they retreat to a new world to be limited, so that they have to make decisions about who to take with them and if they will hire more miners/teleporters in the next world.

* Display all of the followers/fighters in the modal with numbers. 30 Jacob
* Add followers and fighters to your escape party. 15 Jacob
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Backlog

* (3) JSON Save/Load
* (13) Animating Sprites
* Tutorial
* (8) As a designer, I want there to be a final boss that the player has to survive 5 rounds against before activating the Secret Weapon that ends the game, and I want this final boss to always reduce the player to 1, 2, or 3 badly damaged fighters in those rounds, but never eliminate the player, so that the player believes they had just enough skill to beat the game and is ecstatic about overcoming the near-loss.
* (8) As a designer I want a name generator that randomly generates names in such a way that a group of names will have a common feature and will be relatable so that characters and cities are linguistically related to their realm so that each Realm has a sense of place.