3.2 Requirements Analysis

Epic #1

As a human player, I want my character to be able to obtain items so that I can then use them to my advantage.

User Stories:

As a human player, I want a shop available to purchase items from periodically so that I can improve my character.
AC:
Given I am playing Loop Mania
When my character completes 1, 3, 6, 10, 15... cycles
Then a pop-up for the Hero's Castle should appear
And I can navigate this to purchase and sell items.

As a human player, I want to purchase equipment from the Hero's Castle so that I can use it to my advantage.
AC:
Given I am playing Loop Mania
And my character is at the Hero's Castle
Then I should see a menu of purchasable items
When I click on an item
Then a pop-up should appear to confirm my purchase
When I select yes
Then that item should be added to my unequipped inventory
And the gold I used to purchase should be removed from my gold stash.

As a human player, I want my character to obtain items from defeated enemies.
AC:
Given I am playing Loop Mania
And my character is battling a slug
When my character kills the slug
Then my character should receive 10 gold, 5 experience, and on rare occasions a random basic item.

Given I am playing Loop Mania
And my character is battling a zombie
When my character kills the zombie
Then my character should receive 20 gold, 15 experience, and on rare occasions a random basic item.

Given I am playing Loop Mania
And my character is battling a vampire
When my character kills the vampire
Then my character should receive 30 gold, 25 experience, and on rare occasions a random basic item.

As a human player, I want my character to obtain gold from selling unwanted items and cards.
AC:

Given I am playing Loop Mania
And my character is at the Hero's Castle
When I hover over an item
Then I should see how much that item will sell for
When I click on an item
Then a pop-up should appear to confirm I wish to sell that item
When I click yes
Then my character should receive gold in return for the item I sold.

As a human player, I want my character to obtain gold that has spawned on tiles.

AC:
Given I am playing Loop Mania
When my character moves to a tile with gold
Then my character should pick it up automatically
And its value should be added to my character's gold stash

Epic #2

As a player, I want to battle enemies so that I can have a more challenging experience.

User Stories:
As a player, I want enemies to become progressively more difficult to battle so that I continue to be challenged.
Given I am playing Loop Mania
When my character completes a cycle
Then enemies health increases by 10%

As a player, I want to have limited health so that I have to battle strategically.
AC:
Given I am playing Loop Mania
And my character is in a battle
When my character is dealt a total of 200 damage
Then my character will die
And the game will be lost.

As a player, I want to battle slugs so that I can have some short battles.

AC:
Given I am playing Loop Mania
When my character moves within 1 tile of a slug
Then my character is within its battle radius
And it will commence a battle with my character
When my character automatically attacks the slug
Then my character will do damage according to the equipped weapon
When my character does a total of 50 damage
Then my character has successfully killed the slug.

Given I am playing Loop Mania
And my character is currently in a battle with a slug
Then the slug will do 5 damage per second to my character

Given I am playing Loop Mania

Then slugs should spawn randomly on path tiles

Given I am playing Loop Mania
When a slug commences a battle with my character
Then it will move towards my character at a rate of 1 tile per second

As a player, I want to battle zombies so that I can have medium difficulty battles.

Given I am playing Loop Mania
When my character moves within 2 tiles of a zombie
Then my character is within its battle radius
And it will commence a battle with my character
When my character automatically attacks the zombie
Then my character will do damage according to my equipped weapon
When my character does a total of 100 damage
Then my character has successfully killed the zombie.

Given I am playing Loop Mania
And my character is currently in a battle with a zombie
Then the zombie will do 10 damage per second to my character.

Given I am playing Loop Mania
When my character completes a cycle of the path
Then a zombie should spawn from each Zombie Pit.

Given I am playing Loop Mania
When a zombie commences a battle with my character
Then it will move towards my character at a rate of 0.5 tiles per second

Given I am playing Loop Mania
And my character is in a battle with a zombie
And my character is accompanied by an allied soldier
Then the zombie has a random chance of a critical bite attack on the allied soldier
When the allied soldier is attacked with a critical bite
Then the allied soldier will be transformed into a zombie
And the allied soldier's health and stats will be identical to a new zombie
And the allied soldier will battle my character alongside the zombie

As a player, I want to battle vampires so that I can have some challenging battles.

Given I am playing Loop Mania
When my character moves within 3 tiles of a vampire
Then my character is within its battle radius
And it will commence a battle with my character
When my character automatically attacks the vampire
Then my character will do damage according to my equipped weapon
When my character deso a total of 150 damage
Then my character has successfully killed the vampire.

Given I am playing Loop Mania
And my character is currently in a battle with a vampire
Then the vampire will do 20 damage per second to my character.

Given I am playing Loop Mania

When my character completes 5 cycles of the path
Then a vampire should spawn from each Vampire Castle

Given I am playing Loop Mania
And my character is in a battle with a vampire
When I have a stake equipped
And attack the vampire
Then my character's attacks will do even more damage

Given I am playing Loop Mania
And my character is in a battle with a vampire
Then the vampire has a random chance of attacking with a critical bite
When my character is attacked with a critical bite
Then my character will receive a random amount of additional damage from that attack

Given I am playing Loop Mania
And my character is within the campfire battle radius
Then if my character is within the battle radius of any vampires
Then they will either run away until they are outside the campfire battle radius (2 tiles)
Or they will only get as close as they can whilst still outside the campfire battle radius

Given I am playing Loop Mania
When a vampire commences a battle with my character
Then it will move towards my character at a rate of 2 tiles per second

As a player, I want to battle multiple enemies at once so that I can be challenged and motivated to obtain better equipment and items.

Given I am playing Loop Mania
When my character moves within the battle radius of multiple enemies
Then each enemy will move toward my character and commence a battle with my character
And my character will receive a total damage per second equal to the total damage output of the enemies.

Given I am playing Loop Mania
When my character moves within the battle radius of an enemy
Then my character is within its battle radius
And it will commence a battle with my character
And if the battle is within 3 tiles of a zombie
Then the battle is within its support radius
And the zombie will join the battle against my character

Given I am playing Loop Mania
When my character moves within the battle radius of an enemy
Then my character is within its battle radius
And it will commence a battle with my character
And if the battle is within 4 tiles of a vampire
Then the battle is within its support radius
And the vampire will join the battle against my character

Given I am playing Loop Mania
When my character moves within the battle radius of an enemy
Then my character is within its battle radius
And it will commence a battle with my character

And if the battle is within 1 tile of a slug
Then the battle is within its support radius
And the slug will join the battle against my character

Epic #3

As a player, I want to be able to use cards and equipment so that I can improve my chances of winning

User Stories:
As a player, I want to be able to use cards to place buildings around the path so that my character can benefit from their abilities.
AC:
Given I am playing Loop Mania
When I am on the main screen
Then I should see all my cards on the right-hand panel
Given I have cards
When I hover over a card
Then I should see a brief description
When I select the card I want to use
Then I will be prompted to choose a valid tile to use it on
When I select the tile I want to use it on
Then the building corresponding to that card should spawn on that tile
And I should receive the benefits corresponding to that building.

As a player, I want to be able to place towers so that my character can be aided in their battles.
AC:
Given I am playing Loop Mania
And I have a tower card
When I select the tower card
Then I will be prompted to choose a non-path tile adjacent to the path to place it on
When I select the tile I want to use it on
Then a tower will spawn on that tile
And will have a shooting radius of 3 tiles.

Given I am playing Loop Mania
And my character is in a battle within the shooting radius of a tower
Then the tower will attack enemies within the battle at a rate of 10 damage per second per enemy

As a player, I want to be able to place villages so that my character can regain health throughout the game.
Given I am playing Loop Mania
And I have a village card
When i select the village card
Then I will be prompted to choose a path tile to place it on
When I select the tile I want to use it on
Then a village will spawn on that tile
And when my character and my allied soldiers are on that tile they will regain 100 health.

As a player, I want to be able to place barracks so that my character can be aided by an allied soldier.

Given I am playing Loop Mania
And I have a barracks card
When I select the barracks card
Then I will be prompted to choose a path tile to place it on
When I select the tile I want to use it on
Then a barracks will spawn on that tile
When my character passes through that tile
And they are currently accompanied by less than three allied soldiers
Then they will be joined by a(nother) allied soldier.

As a player, I want to be able to place traps so that I have more ways to damage enemies.
Given I am playing Loop Mania
And I have a trap card
When I select the trap card
Then I will be prompted to choose a path tile to place it on
When I select the tile I want to use it on
Then a trap will spawn on that tile
When an enemy passes through that tile
Then it will receive 50 damage
And the trap will be destroyed (removed from the tile).

As a player, I want to be able to place campfires so that I can deter vampires and deal more damage.
Given I am playing Loop Mania
And I have a campfire card
When I select the campfire card
Then I will be prompted to choose a path tile to place it on
When I select the tile I want to use it on
Then a campfire will spawn on that tile
When my character is within 2 tiles of the campfire
Then my character is within the campfire battle radius
And my character and allied soldiers will deal double damage to enemies
And vampires will retreat until they are outside the campfire battle radius

Epic #4

As a player, I want to be able to move items between inventories so that I can improve my character and chances of winning the game.

User Stories:
As a player, I want to be able to move equipment between equipped and unequipped inventories so that I can improve my character as I want to.
AC:
Given I am playing Loop Mania
When I click and drag on an item in my unequipped inventory and move it into my equipped inventory
And I have less than 10 cards in my equipped inventory
Then my character should be able to use the newly equipped item and benefit from its functionality

Given I am playing Loop Mania
When I click and drag on an item in my equipped inventory and move it into my unequipped inventory

And I have less than 10 cards in my unequipped inventory
Then my character should no longer be able to use the newly unequipped item and no longer benefit from its functionality

As a player, I want to be able to equip a weapon so that I can improve my attacks.
Given I am playing Loop Mania
When I click and drag a weapon from one of my inventories to my weapon slot
Then that weapon will then be equipped and used in battle

As a player, I want to be able to equip armour so that I can defend my character.
Given I am playing Loop Mania
When I click and drag armour from one of my inventories to my armour slot
Then that armour will then be equipped
And enemy attacks will halve in damage

As a player, I want to be able to equip a shield so that I can defend my character.
Given I am playing Loop Mania
When I click and drag a shield from one of my inventories to my shield slot
Then that shield will then be equipped
And critical vampire attacks will have a 60% lower chance of occurring

As a player, I want to be able to equip a helmet so that I can defend my character.
Given I am playing Loop Mania
When I click and drag a helmet from one of my inventories to my helmet slot
Then that helmet will then be equipped
And enemy attacks will be reduced by 5 damage
And my character's damage inflicted will also be reduced by 5

As a player, I want to be able to use a health potion so that I can refill my health.
Given I am playing Loop Mania
When I select a health potion from either of my inventories
Then I should see a pop-up confirming if I want to use the health potion
When I select yes
Then my character's health should completely refill
And the health potion should be removed from my inventory

Given I am playing Loop Mania
When I select and drag a health potion from either of my inventories onto a path tile
Then that potion will be dropped on that tile
And automatically used by my character when they pass through that tile

Epic #5

As a player, I want to gain additional gold and experience when I lose equipment, so that I am still rewarded for finding another piece of equipment.

User Stories:
As a player, I want to gain gold and experience when I lose an item so that I am still rewarded for defeating an enemy.
Given I am playing Loop Mania
When I already have 10 items in my unequipped inventory
And I pick up another one
Then the oldest item in my inventory should be destroyed

And my character should receive an amount of gold that is 50% the value of the item and a random amount of experience between 0-50% of current level.

As a player, I want to gain gold and experience when I lose a card so that I am still rewarded for defeating an enemy.
Given I am playing Loop Mania
When I already have 10 cards in my card inventory
And I pick up another one
Then the oldest card in my inventory should be destroyed
And my character should receive an amount of gold that is 50% of the value of the card, a random amount of experience between 0-50% of current level, and on rare occasions a random basic item

Epic #6

As a player, I want to be able to pause, save, exit, and perform other basic actions so that I can keep my progress.

As a player, I want to be able to pause and unpause the game easily so that I can continue going about my life without losing progress.
Given I am playing Loop Mania
And the game is currently unpaused
When I press the spacebar
Then the game should be paused.
When I press the spacebar again
Then the game should be unpaused.

As a player, I want to be able to save the game so that I can continue going about my life without losing progress.
Given I am playing Loop Mania
When I press escape or click on the menu icon
Then I will be taken to the menu
When I click save
Then I will be prompted to either save over an existing file or create a new file
When I select either option
Then I will be asked to name the save
When I click confirm
Then the game will be saved successfully

As a player, I want to be able to exit the game so that I can continue going about my life.
Given I am playing Loop Mania
When I press escape or click on the menu icon
Then I will be taken to the menu
When I click exit
Then a pop-up will appear to let me know unsaved progress will be lost
When I click exit
Then the game will shut down

Epic #7

As a player, I want to be able to choose from different game modes, so that I can experience the game in different lights and play depending on my mood.

User Stories:
As a player, I want a standard game mode so that I can play easily and without having to learn new tactics.
AC:
Given i am playing Loop Mania
When i clicked on new game and it brings me to the start menu
And I choose to play standard mode.
Then the game is opened with no distinguishing effects

As a player, I want a survival game mode so that I can play a more challenging version of the game.
Given i am playing Loop Mania
When i clicked on new game and it brings me to the start menu
And I choose to play survival mode.
Then in the game, I can only purchase 1 health potion each time the Character shops at the Hero's Castle in the game.

As a player, I want a berserker game mode so that I can play a more restrictive and challenging version of the game.
Given i am playing Loop Mania
When i clicked on new game and it brings me to the start menu
And I choose to play Berserker mode.
Then in the game, I cannot purchase more than 1 piece of protective gear (protective gear includes armour, helmets, and shields) each time I shop at the Hero's Castle.

Epic #8

As a player, I want to be able to win the game, so that I get a sense of achievement and am motivated to play it.

AC:
Given I am playing Loop Mania
When I have completed some specified combination of goals: (collect 10000 gold or gain 100000 EP) and survive 10 loops of the game.
Then the game is won
And a pop-up should appear to show this

Epic #9

As a player, I want my equipped items to deteriorate so that I have an additional challenge.

As a player, I want my swords to deteriorate with use so that I have an additional challenge to think about.
Given I am playing Loop Mania
And have a sword equipped
When I attack
Then the sword deteriorates by 1 point

When the sword deteriorates by a total of 100 points
Then it will "break" as shown by a pop-up
And it will be removed from the equipped weapon slot.

As a player, I want stakes to deteriorate with use so that I have an additional challenge to think about.
Given I am playing Loop Mania
And have a stake equipped
When I attack
Then the stake deteriorates by 1 point
When the stake deteriorates by a total of 100 points
Then it will "break" as shown by a pop-up
And it will be removed from the equipped weapon slot.

As a player, I want staff to deteriorate with use so that I have an additional challenge to think about.
Given I am playing Loop Mania
And have a staff equipped
When I attack
Then the staff deteriorates by 1 point
When the staff deteriorates by a total of 100 points
Then it will "break" as shown by a pop-up
And it will be removed from the equipped weapon slot.

As a player, I want armour to deteriorate with use so that I have an additional challenge to think about.
Given I am playing Loop Mania
And have armour equipped
When I batlle
Then the armour deteriorates by 1 point per enemy fought
When the armour deteriorates by a total of 100 points
Then it will "break" as shown by a pop-up
And it will be removed from the equipped armour slot.

As a player, I want shields to deteriorate with use so that I have an additional challenge to think about.
Given I am playing Loop Mania
And have a shield equipped
When I battle
Then the shield deteriorates by 1 point per enemy fought
When the shield deteriorates by a total of 100 points
Then it will "break" as shown by a pop-up
And it will be removed from the equipped shield slot.

As a player, I want my helmet to deteriorate with use so that I have an additional challenge to think about.
Given I am playing Loop Mania
And have a helmet equipped
When I battle
Then the helmet deteriorates by 1 point per enemy fought

When the helmet deteriorates by a total of 100 points
Then it will "break" as shown by a pop-up
And it will be removed from the equipped weapon slot.

Epic #10
As a human player, I want my character to receive aid so that I can have an advantage over enemies.
As a player, I want my character to be aided by an allied soldier so that I have an advantage in battle.
Given I am playing Loop Mania
And I have one or more allied soldiers
Then they will attack enemies with 10 damage per second each
When they lose a total of 100 health
Then they have been killed and will no longer aid my character

Given I am playing Loop Mania
And I have one or more allied soldiers
And I am currently in a battle
Then the allied soldiers will be attacked by enemies before my character