Mr. Whiskers
Game Design Documentation
Designer: Caleb Wharton

Rules

- New room is unlocked every 4 successful days.
- 31 Days to win.
- Each day spans 9am – 5pm (3 min/ day)
- Defeat each enemy before your owner gets home.
  - If all enemies aren't defeated, then repeat the level (Déjà vu).
  - If enemies are defeated before 5pm time will lapse 10x speed.
- At the end of the day sleep and allot points.

Day Progression:

1. Start Livingroom
2. Cont.
3. Cont. (Max Heal Unlock)
4. First Boss (Alley Cat)
5. Unlock Office (1st unlock)
6. Cont.
7. Cont.
8. Second Boss (Racoon)
9. Unlock Kitchen (2nd unlock)(double jump unlock)
10. Cont.
11. Cont. (Catnip)
12. Third Boss (Catnip Illusion)
13. Unlock Bedroom (3rd unlock)
14. Cont.
15. Cont. (Damage Buff Unlock)
16. Fourth Boss (Burglar)
17. Unlock Bedroom (4th unlock)
18. Cont.
19. Cont.
20. Fifth Boss (Ally Cat & Racoon)
21. Unlock Garage (5th unlock)
22. Cont.
23. Cont.
24. Sixth Boss (Rat King)
25. Unlock Basement (6th unlock)
26. Cont.
27. Cont.
28. Unlock Master Bedroom (7th & Final unlock)
29. All previous Bosses
30. Landlord (Final Boss)

31.   Victory!!!

Abilities:

- Double jump - Spring
- Max Heal - Fish
- Damage Buff – Razor Claw

Debuff Abilities:

- Catnip (post process VFX)
- Overeating

Character Profiles:

Mr. Whiskers:

Main protagonist who strives to be the best cat his owner ever had. Defends the house from pests, animals, and burglars alike. Has been given super cat strength, 9 lives, and tons of wet food. Can use long range air slash that does 75% base damage.
Attacks: Swat (light melee), Slam (heavy melee), Air Slash (Range Attack)
Defense: Dodge

Owner:

Lives alone with a cat. Works 9-5 at an office. Loves cat and hates intruders. Believes "A cat can double as a guard cat".
Attacks: none
Defense: none

Alley Cat:

Dirty, scraggly, lives in gutters, and envious of house cats. Hates house cats and wants revenge on them.
Attacks: Swat(light melee), Launch Claw (Ranged Projectile)
Defense: Dodge

Burglar:

Wants to steal household items and destroy the house. Scared of dogs, but not cats. Never thought a cat could be a guard cat.
Attacks: Crow Bar(heavy melee)
Defense: Block

Landlord:

Hates tenants. Wants to raise rent, so goes into the house to trash it and make the tenant think there was a robbery, so they will move, and he can eventually raise rent.
Attacks: Kick (Heavy Melee), Punch (Light Melee), Throw the book at them (Ranged Attack)

Defense: Block, Dodge, Tanks Damage in 2nd half of fight

Racoon:

Wants to eat garbage. Dirty, mangy, and speedy. Might not pack a major punch but can land hits quickly. Grew up in the streets.

Attacks: Slash (light melee), Hiss (Stun)

Defense: Dodge

Catnip Illusion:

A figment of Mr. Whiskers imagination who is just like him, but an alter ego who is dark, evil, stronger and wants to tear up the house.

Attacks: Same as Mr. Whiskers

Defense: Dodge

Rat King:

Throws glass bottle projectile and bites as a melee. Looks like Danny DeVito as a rat with a crown. Comes through as the final rat in the game. After defeating him players will not fight anymore rats and a new base enemy will begin spawning.

Attacks: Bite (light melee), throw glass bottle (Ranged Projectile)

Defense: None (Tank)

Basic Game Loop
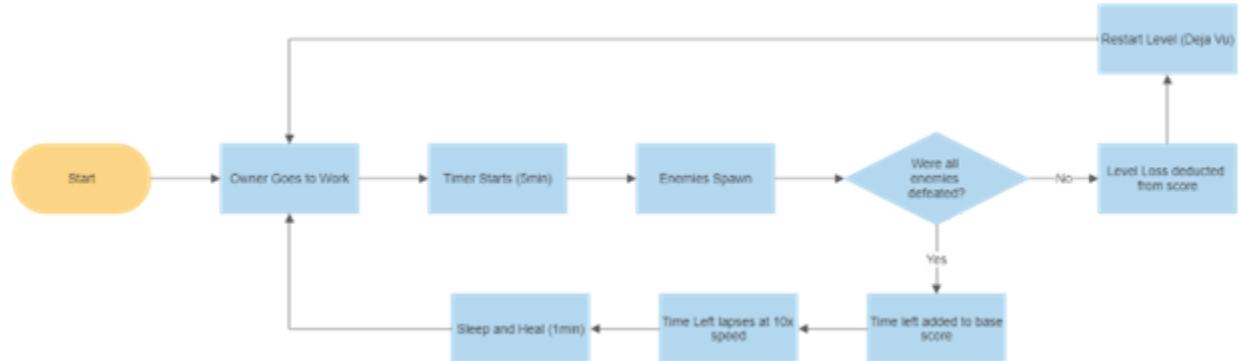
Game Audio

Music:

Title Screen: Builds Excitement, Playful. This is what the player will first hear when opening the game. Needs to draw the player in, excite them, build the idea that they are about to begin a big venture.

•   Needs to loop indefinitely

Pause Menu: Light, Playful, Major key. This is when players need a break, so this needs to feel like a break.

- Needs to loop indefinitely

Owner is Home @ night: Serene, Calm, Relaxing, Chill, low tempo. Owner just got home. Want players to feel more comfortable like they are ready to crawl into bed with their owner and go to sleep.

- Duration: 1 min
- No need for loop, but loops are acceptable

Basic fights: Builds some tension, easily in the background, doesn't distract the player, sets the tone of the fight. This is when players fight many unwanted intruders in their house, so it needs to reflect multiple enemies. Could be sporadic.

- Needs to loop up to 5 minutes

Boss fights: Lots of tension, Epic, Intense, Orchestral, Strings, high tempo. These are Big! There are only 7 boss fights, so this will be reused, so it needs to be interesting enough that it won't get stale as players progress.

- Needs to loop up to 5 minutes
- Alley Cat: Jazz Style
- Racoon:
- Catnip Illusion: Ethereal, cold, flute and woodwinds
- Burglar:
- Rat King: Hard Rock Style
- Landlord: Orchestral, Strings, Dramatic

SFX:

- Cat Walking SFX
- Cat Running SFX
- Hit SFX
- Mr. Whiskers Death SFX
- Air Slash (Woosh) SFX
- Human Walking SFX
- Healing SFX
- Meowing SFX
- Purring SFX

Cut Scenes

- Owner Leaving
- Each Boss Entering
- End Game

UI

- Title Screen
- Main Menu Screen
- Pause Menu Screen

- Death Screen
- HUD
- Settings menu

Skill Tree:

Attack

- Melee Attack Speed (25% decrease)
- Melee Attack Damage (10% increase)
- Power Attack Unlock
  - Deals 3x the base melee damage
  - 15s cooldown
- Ranged Attack Damage (10% increase)
- Ranged Attack Speed (.5 sec decrease)
- Power Attack Damage (15% increase)
- Power Attack Cooldown Decrease (5s cooldown decrease)
- Dash Attack Unlock
  - Cat Dashes forward slashing any enemy in its path
  - 1.5x base melee damage
  - 7s cooldown
- Dash Attack Cooldown decrease (50% decrease)
- Dash Attack Damage increase (15% increase)
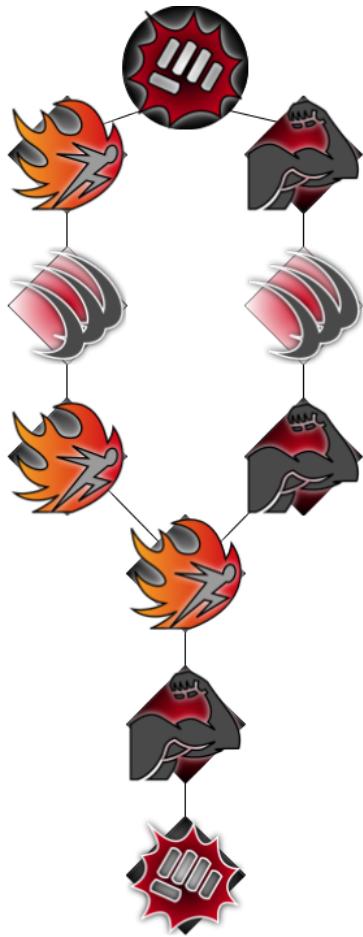
Defense

- HP increase (10% hp increase)
- Health Regen unlock
  - (Passive)When out of combat for 2+ seconds, regen health 4%/second
- Make Biscuits (quick Regen) unlock
  - When making biscuits, regen health 10% per second.
  - Only fills 70% max health
  - 30s cooldown
- Low Health = HP+++ (When health <= 20%, increase current health = 50%)
- More Health = Attack+ (When health >=80%, 10% attack increase)
- HP increase (10% hp increase)
- Health regen increase (2%/second increase)
- Make Biscuits cooldown reduction (-10 seconds)
- Low Health = Attack++ (when health <= 20%, increase attack 25%)
- HP increase (10% hp increase)
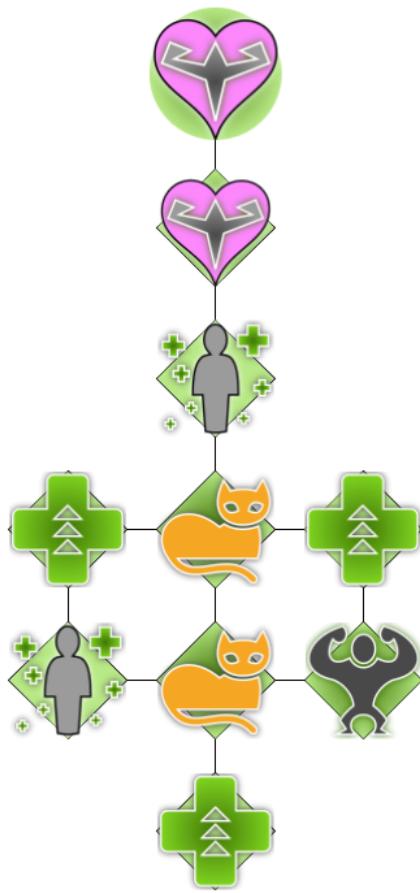
Speed

- Dodge unlock
  - Directional dodge
  - 3s cooldown
- Jump Height increase
- Speed increase
- Dodge cooldown decrease (-1second)
- Dodge cooldown decrease (-1second)
- Speed increase
- AfterImage unlock
  - Mr Whiskers teleports behind enemy, leaving afterimage behind for 2 seconds
  - Enemy attacks afterimage
  - 15s cooldown
- AfterImage cooldown decrease (50% decrease)
- AfterImage lasts longer (lasts 2X as long)
- Fast attack (lightning speed 5x combo multi strike)
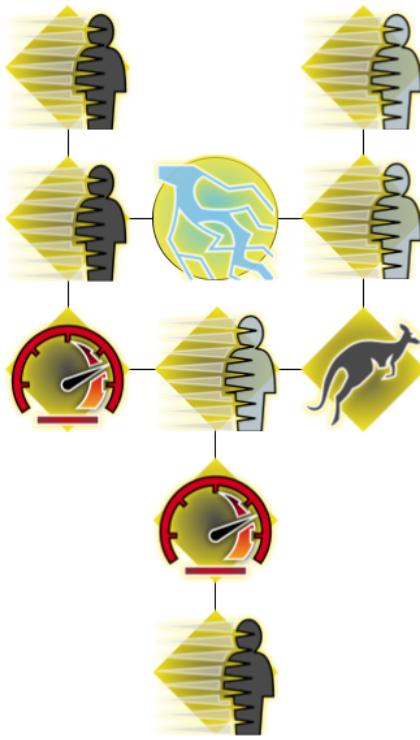
Developer Notes

Setting up the game mode:

      I decided to keep all of the relative game mode information such as the mice AI spawns, event dispatchers to call new days, tracking time, starting timers, delays between days, and any other relative processes to the current game mode.

Issues & Solutions:

This is my first game in Unreal Engine, so I've had many learning experiences associated with this development process.

1. Setting unique health bars for Rat AI.
   a. I originally set up the Rat AI to use a health component used for the Mr. Whiskers blueprint, but after many troubles communicating between the health component blueprint, the Rat blueprint, and the widget component I decided to rework the Rat AI health.
   b. Issue: All rats spawned with the same health bar and it didn't track their own unique health, instead tracking the first spawned rat's health.

c. Solution: I attempted to set up the spawner to create an array and reference each spawned rat AI in the array. This process was too strenuous, so I decided to keep it simple and create variables for the current and max health that initializes when each AI is spawned. These current and max health are then divided and connected straight to the progress bar after casting to the widget to get a personalized health bar widget for each rat AI spawned.

2. Increasing health & damage of enemies and player character to match leveling
   a. Prior to working on the visual scripting for my game I set up a spreadsheet and set up initial values, multipliers and additives that would give a gentle curve and progressive leveling to each enemy and the player character.
   b. Issue: Health would increment every time the rat AI would spawn after day 1. This led to the rats being severely overpowered and tanky late into day 2 and beyond.
   c. Solution: I was trying to use a function "Increase Health" during the initialization of each rat. Instead I made an event dispatcher within my game mode that would call every time there were 0 rats left in the level. I binded this event dispatcher to a new event called "New Day" that would increase all of the health and damage outputs at the start of a new day. Instead of all rats individually increasing their health upon spawn, this allowed me to change the blueprints stats each day prior to them spawning.