Comet Blade

Game Design Document

Champagne Studios

COMET BLADE | CSS 385 - DESIGN DOCUMENT

Authors: Zach Shim, Nick Soeren, Kelvin Kam, Gonzalo Lara
Version 2.1
Last Update: November 9th, 2020

VERSION HISTORY

Version 1.0 – October 27, 2020

First version of the document. Template suggested from Final Game project specification. Note that many details are subject to change.

Version 1.1 – October 30, 2020

Refinements made for game pitch presentation, including revised synopsis, game details, and game world sections.

Version 2.0 – November 6th, 2020

Refinements made for prototype.
Iteratively designed enemy behavior and animation.
Revisions:

- Made the game story/logline more refined/focused
- Defined behavior, attributes, and look of enemies in the game.
- Gave more examples of game look/setting
- General spelling and gameplay refinements

Version 2.1 – November 9th, 2020

Further refinements made based on prototypes

- Included controls used in the prototypes

Version 3.0 – November 15th, 2020

Merging of prototype functionalities

- Added Rough Demo controls

Version 3.1 – November 16th, 2020
- Added Planned/Upcoming Features
- Add product backlog

Version 3.2 - December 15th, 2020

- Added final game features/details
- Added additional screenshots and enemy details

GAME OVERVIEW

Game logline
- ~~Comet Blade is a story about an explorer who raids a tomb to find it's hidden treasure. Little did he know what he would find next…~~
- Traverse the depths of an unknown, ancient tomb in the depths of egypt. Discover a mythical power unknown to civilization for centuries and use it to escape a deadly curse.

GAMEPLAY SYNOPSIS
Synopsis:
- Discover an ancient, but cursed artifact that has been sealed away and unknown for centuries. The player comes about it accidentally after falling through the floor of the tomb of a monarch where the treasure is supposed to be. The treasure turns out to be a sword, the texts accompanying it long faded. Once drawn, the sword shatters as the monarch invokes his curse, the temple beginning to fall apart around you. Hilt in hand, discover the blade's secrets and make your escape.

Player Experience
- Players will feel like they have to study the terrain around them to survive
- Players will be encouraged to explore
- Players will feel uneasy and will want to escape
- Players will feel anxious and feel they need to quickly act to survive
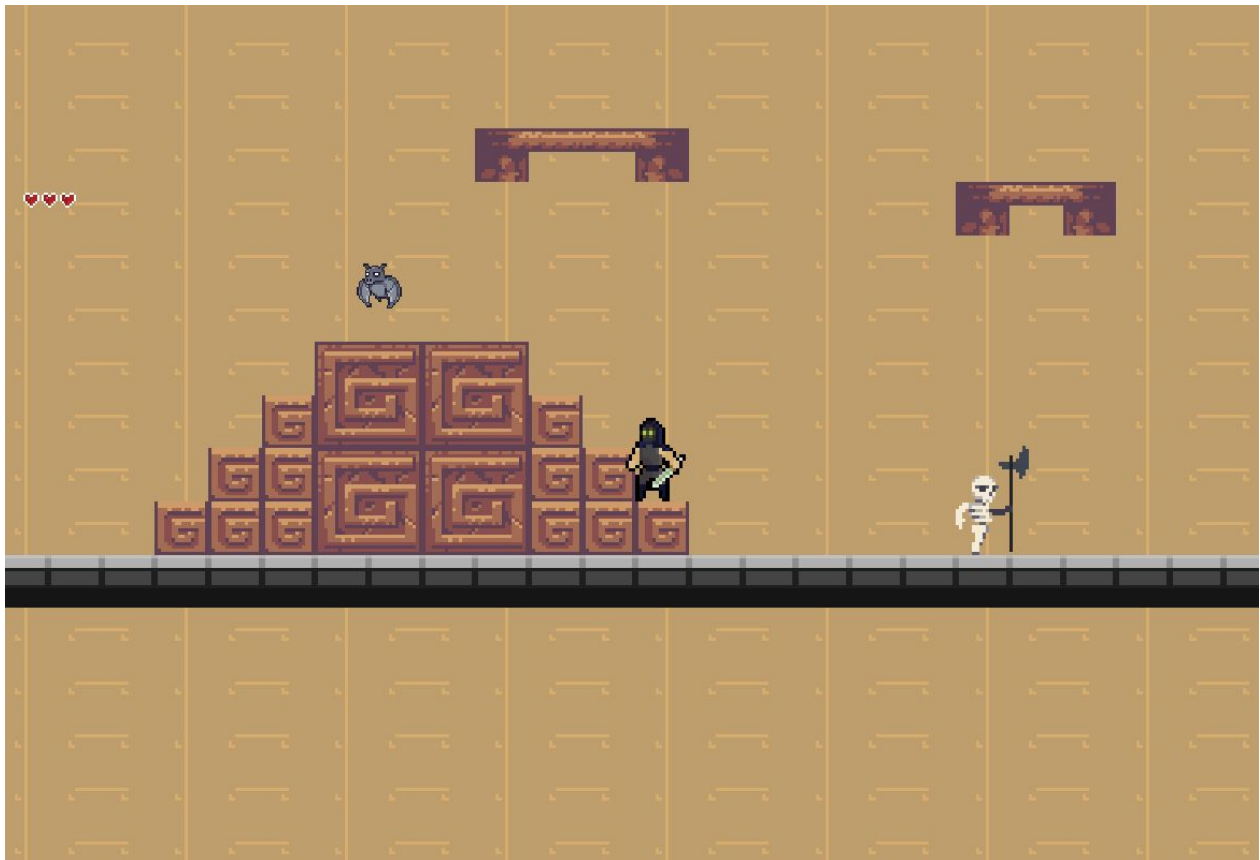
Setting
- Pyramid catacombs of a pyramid in egypt

Concept Art for Setting:

Concept Art for in-game:

GAME DETAILS

Description
- Comet Blade is a single player adventure game, where the user plays as an explorer named Kliff who plans to raid an ancient vault for its treasure. Once inside, he finds a strange blade from a coffin resting within the catacombs. Now faced with this vault crumbling around him, he must use this artifact's power to escape a potentially evil curse and a crumbling environment. While finding a way out, he comes across mummies, treacherous terrain, and other hazardous traps that he must find a way around to escape.

Game genre?
- Adventure Puzzle Platformer

Is this single-player or multiplayer game?
- Single-player

Is this 2D or 3D?
- 2D

Where does the game take place? (world)
- The game takes place in the catacombs of a sealed vault, inside an ancient pyramid in Egypt. ~~hidden on a distant planet. Our tomb raider, Kliff, has entered the pyramid above the vault in search of treasures, only for a tremor to send him tumbling into the depths below.~~ The game will take place in the depths of the pyramid's catacombs as Kliff, the main character, attempts to escape before its too late.

What do I control? How many characters? Can I use vehicles?

- There is a single playable character named Kliff
    - The player controls an ancient blade that has three powers:
        1. Power 1: Can retrieve/transport objects
        2. Power 2:Can sword dash
        3. Power 3: Can transport objects
- Controls:
    - A/D: move left/right
        - ~~Double tap - dash teleport~~
    - ~~SPACE: Jump~~
    - SPACE: Attack
    - ~~LMB click: throw fragment OR attack (Power 1/3)~~
    - LMB click: retrieve an object
    - RMB click: place captured object ~~OR alternate attack (Power 1/3)~~
    - SHIFT: Dash Power (Power 2)

- ○ ~~R: Change current object(?)~~
- ○ ~~F: Shift artifact state~~
- ○ ~~Possible~~ Keyboard implementation~~(?):~~
- ○ ~~Q + Arrow keys: Throw fragment~~   ~~Q: Attack~~
- ○ ~~E + Arrow keys: Place captured object~~   ~~E: Alternate attack~~
- ○ ~~Jump + Q: Fireball attack (3rd power)~~
- ○ Jump + Space: Fireball Attack(3rd Power)
- There is one main character (human), and various enemies (bugs, undead bugs, skeletons, archers, etc.)

Current Prototype controls

- A/D: Move left/right
- W/Spacebar: Jump
- X: Attack/launch fireball
- Left click: Capture special object
- Right click: Launch captured object
- LShift + Right click: Place captured object
- R: Cycle through captured objects
- 1/2/3: Select specific object
- Esc (certain scenes only): Reload scene

Rough Demo Controls

- A/D: Move left/right
- Spacebar: Jump
- Q: Attack/launch fireball
- Left click: Capture special object
- LCtrl + Left Click: Launch captured object
- LShift: Dash
- R: Cycle through captured objects
- 1/2/3: Select specific object
- P: Return to main menu
- *Removed ability to place objects directly*

Final Game Controls

- A/D: Move left/right
- W: Jump
- Spacebar: Attack
- W + Spacebar: Attack/launch fireball
- Left click: Capture special object
- Right Click: Launch captured object
- (Hold) Left Shift: Dash
- R: Cycle through captured objects

- 1/2/3: Select specific object
- P: Return to main menu
- Q: Quit

What is the main focus?

- The main focus is to escape the catacombs after finding the ancient weapon

How long does the game last?

- The game should last 5-10 minutes

What is unique?

- Being able to teleport ~~the player, as well as~~ objects around the player
- Creating switches through doorways, make sure play react fast enough using Kliff's dash feature

Why create this game?

- We are interested in the concept of teleportation and space manipulation.
- We want to give a genuinely engaging experience, utilizing plot details and game mechanics we each find highly interesting.

AUDIENCE, PLATFORM, AND MARKETING

Target Audience

- Our target audience is people who enjoy puzzle games, but also enjoy adventure.
- Along the way, the main character will have to traverse puzzling dungeons while fending off enemies to survive and escape.

Platform

- Interesting power mechanics for engaging puzzles
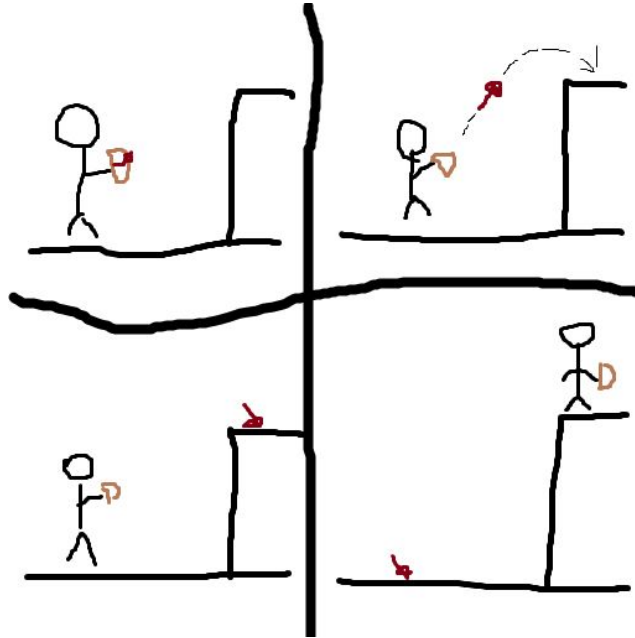- Engaging story and atmosphere
- Mixing puzzle with adventure

Top Performers
- Portal
- Velocity 2x
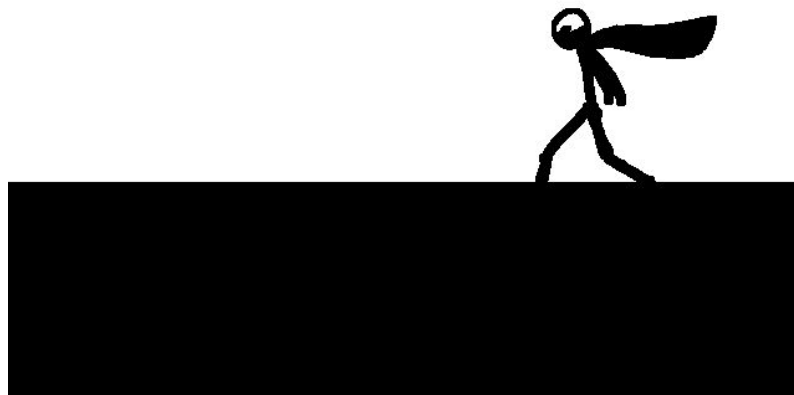- Mr shifty
- Hollow knight

FEATURE SET

General Features:

- ~~Teleport two~~ "Capture" and launch specific objects
- First gem of sword illustration:

- Second gem of sword illustration (dash teleportation):

- Third gem of sword illustration (sword sonic boom/fireball)

Feature comparison
- Portal
  - Warp feature with two portal vs. player ~~dash/teleportation and~~ object manipulation. Players can pick up objects and place them from any distance.
- Mr shifty:
  - Dash teleportation feature that allows player to travel through walls and phase through enemies
- Hollow Knight
  - Powerups and sword abilities

THE GAME WORLD

Overview

- There are three main mechanics of Comet Blade
  1. Teleportation of objects/~~enemies~~.
  2. Player will be able to dash teleport
  3. Ability to emit a sonic boom/wind gust from sword
- Each ability is gained when a new gem is found

Key locations

- King's Tomb - Seated in the bowels of the pyramid, the king's tomb is ripe for plunder, and will be the site of the opening cutscene.
- Sealed Vault - These halls aren't in any architecture plans you've come across. Best get out of here before the king makes good on his threat to bring the place down on you.
- Bottom of pyramid (entrance/exit) at the end and beginning of game. This is where you encounter the final boss and battle to escape.

Travel

- The player will have a dash power that will allow Kliff to phase through enemies and quickly travel forward. ~~and will be able to teleport through certain barriers.~~
  - Dashing is also useful for moving between platforms.
- The hero will be able to teleport objects using a special weapon, allowing him to access new platforms and areas. ~~found in the bowels of the pyramid.~~

Scale

- Normal/realistic space/scale

Objects

- Boxes and rocks for the player to teleport and progress through the level
- These boxes will be used to get to hard-to-reach platforms as well as activate switches for doors and other triggered events

Time

- The player will have no sense of actual date/time or weather in the outside world as they will spend the duration of the game inside the pyramid.
- There may be timed events where the player has a limited amount of time to escape a dungeon.
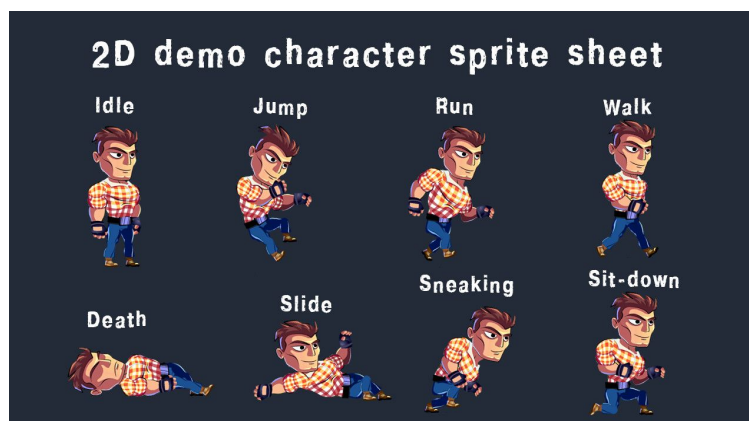
CAMERA

Overview

- The main camera will move with the hero (hero is at the center of the camera).
- It will be a flat, classic 2D side scroller style similar to the original mario.

GAME CHARACTERS

Overview

- The game's main character is Kliff, a dungeon raider/extremist who loves treasure hunting.

~~**Enemies and monsters**~~

- ~~Enemies will largely be:~~
  - ~~mummies~~
    - ~~Hits to Kill: 4~~
  - ~~bugs/insects~~
    - ~~Hits to Kill: 2~~
  - ~~Golems~~
    - ~~Hits to Kill: 10~~

ENEMY TYPES

Note: Kliff has a total of 50 health points indicated by his red health bar. If Kliff's health reaches 0, he respawns from his last known checkpoint.

- Enemy 1: Cursed Beetle
  - **Location:** Cursed Beetles are creatures that crawl around varying parts of the map.
    - They have patrolling behavior, meaning that they will travel forward, and when running into a wall, will turn around.
    - If Kliff comes within a certain range and the beetle is facing him/sees him, it will charge and attack Kliff.
  - **Attacks:**
    - Swipe: will swipe at kliff with arms/antenna
  - **Range:**
    - Short
  - **Frequency**: Common
  - **Health**: Tank
    - It will take five hits from Kliff to destroy this creature
  - **Damage:**
    - ~~Swipes cause 1 heart of damage to kliff~~
    - ~~Body contact will cause 1 heart of damage to kliff~~
    - Swipes take 10 damage points from Kliff's total health.
    - Body contact takes 5 damage points from Kliff's total health.
- Enemy 2: Undead Skeletons
  - **Location:** Undead Skeletons are creatures that crawl around varying parts of the map.
    - They have patrolling behavior, meaning that they will travel forward, and when running into a wall, will turn around.
    - If Kliff comes within a certain range and the skeleton is facing him, it will attack Kliff.
  - **Attacks:**
    - Axe attack: will swipe at kliff with axe attack
  - **Range:**
    - Short

- ○ **Frequency**: Uncommon
- ○ **Health**: Normal
  - ■ It will take five hits from Kliff to destroy this creature
- ○ **Damage:**
  - ■ ~~Axe attack causes 2 hearts of damage to kliff~~
  - ■ Axe attacks take 10 damage points from Kliff's total health.
  - ■ Body contact takes 5 damage points from Kliff's total health.
- ● Enemy 3: Bats
  - ○ **Location:** Bats are creatures that fly and follow Kliff in the air around varying parts of the map.
    - ■ They have tracking behavior, meaning that they will travel to the general location of Kliff
  - ○ **Attacks:**
    - ■ Projectile attack
  - ○ **Range:**
    - ■ Long
  - ○ **Frequency**: Common
  - ○ **Health**: Fragile
    - ■ It will take three hits from Kliff to destroy this creature
  - ○ **Damage:**
    - ■ Projectiles take 5 damage points from Kliff's total health.
- ● Enemy 4: Archer
  - ○ **Location:** Archers are individuals that will patrol and shoot arrows at Kliff if he is within range. He has the capability to dodge attacks and swipe at Kliff.
    - ■ They have tracking behavior, meaning that they will travel to the general location of Kliff
  - ○ **Attacks:**
    - ■ Projectile attack
  - ○ **Range:**
    - ■ Long & Short
  - ○ **Frequency**: Uncommon
  - ○ **Health**: Fragile
    - ■ It will take five hits from Kliff to destroy this creature.
  - ○ **Damage:**
    - ■ Arrows take 10 damage points from Kliff's total health.
    - ■ Bow swipes take 10 damage points from Kliff's total health.

~~Touching the enemy/ Getting hit by enemy bullet would cost the player one heart~~

~~Later levels may include soldiers of an insectoid empire also in search of ancient artifacts and technologies. These enemies are to reflect a realistic yet fantasy feeling of a pyramid.~~

USER INTERFACE

Overview

● The user interface will be very similar to the game Hollow Knight.
● It will be a flat 2D camera, and will have basic UI such as health on the top left and settings on the top right. There will be a main menu where the player can adjust settings as well as start the game from.
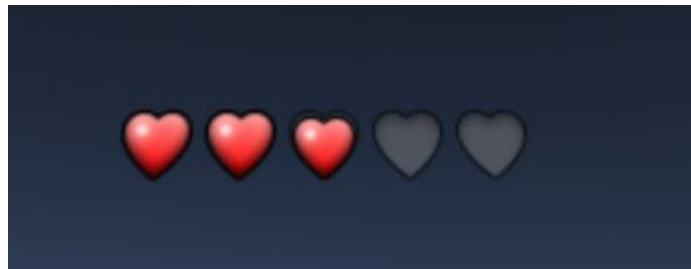

Menu UI
● The main menu will have the following buttons:
  ○ 'Start Game'
  ○ 'Settings'
  ○ 'Credits'
  ○ 'Quit Game'

GAMEPLAY INTERFACE

Health
- The player will have limited health (5 hearts)
- 5 hearts (each heart is a hit)
- Run out of hearts, game over to last checkpoint
- ~~Spikes do 2 hearts damage~~
- ~~Enemies do one heart damage~~

OBJECTS

Weapons

- ~~Ancient artifact which can serve a number of functions, depending on its form~~
- ~~When shattered, store a certain amount of objects to be used later~~
- ~~May have additional functions when reformed~~
- There are three gems for Kliff to collect throughout the game.
- ~~Sword that can radiate a sonic boom~~
- ~~Sword's gems that give the player power~~

Weapon Damage:
- Initial Attack Damage (Sword): 1 health
- Fireball Damage: 0.5 health

Items

- Collectibles (coins/gems)
    - Coins can be collected to increase a user's overall score. Death decreases the player's score proportionately to where they are in the game.

Equipment

- Runes/power ups that give the player temporary powers/abilities
    - Jump boost: for 7 seconds, kliff will have enhanced jumping ability
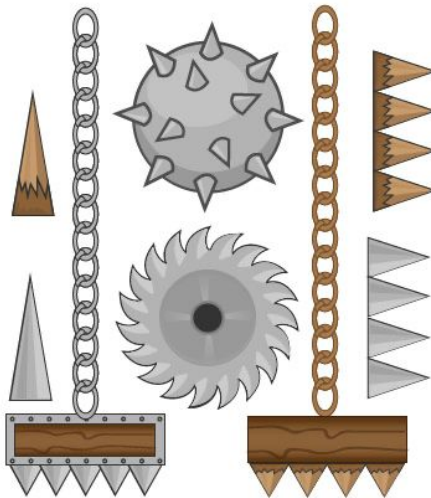   - Hearts give player health

○ Bubbles give player temp shield

Platforms/Obstacles

● There will be switches in levels that the player can use to activate triggers
  ○ A prime example would be placing a box onto a button switch to open a door

● Spikes to injure player
● If a player steps on a spike, they will pass out and be sent to the last checkpoint

MUSIC AND SOUNDS EFFECTS

Overview

● Music and sound will feature ambient/creepy sounds.

- There will be an eerie/ominous feeling to the game, as the main objective is to escape the pyramid as it crumbles around you.

Music tracks

- A creepy/slow winding looping track with deep piano chords and bass

Sound effects

- Environment:
  - Water dripping from ceiling
- Enemies
  - Bugs/insects will have a patrolling sounds (buzzing/slime) and a dying sound (squishing)
- Hero
  - Dash (swooshing)
- Death and Damage (hero groan)

ART

What kind of style will be used in the game?
- The art style will be basic and 2D rogue-like.
- It will be cartoonish/pixel art esque

Needed building models

- Scenery models
- Vines
- Pyramid
- Moss
- old/crumbling stone platforms/walls

Character models

- ~~Insects~~
- ~~Bugs (undead)~~
- ~~Bees~~
- ~~Golems~~
- Bats

- Skeleton Soldier

- Undead beetle

Old Designs:

Particle effects

- Player dash will have particles emitting mid- and post-dash
- Enemies will emit a 'poof' of smoke when destroyed

SINGLE-PLAYER GAME

Story

- ~~Discover an ancient, but cursed artifact that has been sealed away and unknown for centuries. The player comes about it accidentally after falling through the floor of the tomb of a monarch where the treasure is supposed to be. The treasure turns out to be a sword, the texts accompanying it long faded. Once drawn, the sword shatters as the monarch invokes his curse, the temple beginning to fall apart around you. Hilt in hand, discover the blade's secrets and make your escape.~~

- Kliff searches for a sealed vault inside an ancient pyramid.
- He finds himself trapped within the catacombs of the pyramid after a tremor rocks the ancient structure.
- Through the chaos, he finds a gleaming blade that is sure to fetch a hefty price on any market.
- However, it may be Kliff paying the price, with the tomb's eternal guardians coming to life, the tremors growing in intensity.
- With the vault collapsing around him, Kliff must unlock the powers of the sword and use them to escape

Victory conditions

- The game will have three levels.

- At the end of the third level is a boss that will be a giant wasp. The player's objective is to fend off/attack/escape the wasp. Victory is achieved when the player espaces out of the top of the pyramid.
- End of Stage 1: Acquire sword. Space to play around with object teleporting
- Stage 2: Acquire dash ability (manifests as shield)
- Stage 3: Hornet boss escape, becomes hornet boss fight by getting the ~~sword proper~~ sword wave ability

PLANNED/UPCOMING FEATURES

- Build additional levels
  - Construct basic scaffolding of each level, including boss fight
  - Transition between levels upon reaching level exit
  - Track information between levels
    - Time taken
    - Collectables
    - Persistent abilities
    - Deaths
  - Flesh out/redesign parts of levels
- Define additional level object interactions
  - Capture Objects
    - Objects which are not affected by gravity upon being launched
    - Objects which break upon hitting a wall, being hit (by player or launched object)
    - Objects which explode and damage enemies, player
    - Objects which attempt to fly to some position
    - Launched objects dealing damage to enemies
  - Switches
    - ~~Activated by enemies/other obstacles?~~
    - Affect level geometries (possibility of moving platforms)
    - Add another type of switch logic (e.g. door closes within a certain amount of time)
  - Checkpoints
    - Players will have 3 lives. When the player runs out of health three times, the game ends
  - Future level objects
    - Rising kill plane from floor over time, which kill player outright (2nd level)
    - Possibility of platforms which can be jumped through? (All levels)
  - Enemies
    - Death animation and additional behavior
    - Implement beetle and flying enemies
  - Boss behavior
    - Attacking the player from background (3rd level, boss level)
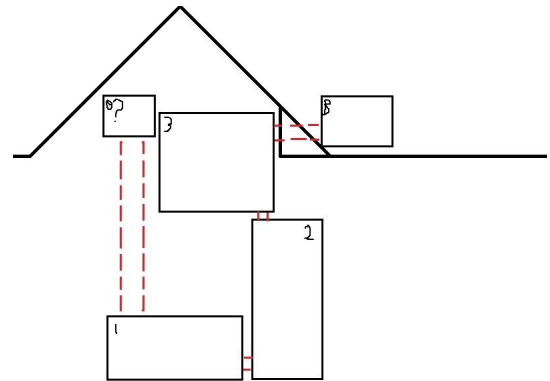
- ■ Charge attack (boss level)
    - ■ Transition from foreground to background (boss level)
    - ■ Additional foreground attack (boss level)
- Sound design + music

PROTOTYPE SCHEDULE
Zach:
Patrolling and flying Enemy Behavior
Switch/Door (puzzle) behavior
Hero movement

Kelvin:
Hero combat and interaction with enemies

Gonzalo:
Checkpoints, collectables, and home screen

Nick:
Object retrieval and placement

PRODUCT BACKLOG SCHEDULE

Product	To Do:
11/16 Rough Demo	- Merge all prototypes into a short basic game demo to introduce our game 1 level - Have at least 1 patrolling enemy - Develop basic UI (health bar, minimap, instructions) - Add stunned/dead states to enemy FSM - Clarify object interaction and placement logic
11/17 - 11/23 Alpha Playtest	- Create a basic level design for the 3 levels of the game. (tile palettes) - Player information (score, collectables, power) shall be pertinent throughout all levels - Diversify puzzles (2 types of switches) - Add at least one enemy (either patrolling or flying) - Sound, (Scary BGM)
11/24 - 11/30 Beta Playtest	- Add additional animations (Enemy and Player Defeat) - Add at least 1 additional hero powerup (hearts) - Add at least one enemy (either patrolling or flying)
12/14 Final Game Test	Smooth out logic and animations

12/17 Final Video	● Make voice overs and record game