Project Movement

CSE 481 D

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Overview

- ➢ **Theme / Setting / Genre**
  - ○ 2D platformer with futuristic/abstract setting

- ➢ **Core Gameplay Mechanics Brief**
  - ○ Movement abilities to gain speed with unrestricted movement
  - ○ Level-based platformer
  - ○ Combat system based on movement speed of character. Giving higher damage when going faster.
  - ○ Equipment system allowing for customizing movement abilities and gameplay possibilities

- ➢ **Targeted platforms**
  - ○ PC

- ➢ **Monetization model (Brief/Document)**
  - ○ Monetization Type: One-time Purchase

- ➢ **Project Scope**
  - ○ Game Time Scale
    - ■ $0 - 100
    - ■ 2-3 Months
  - ○ Team
    - ■ John Fu
      - ● Combat + Levels
    - ■ Chaos Gao
      - ● Levels + Equipment
    - ■ Jason Gao
      - ● Movement + UI
    - ■ Alan Huang
      - ● UI + Equipment
    - ■ Eli Matamoros
      - ● Movement + Art
  - ○ Licenses / Hardware / Other Costs - Under $100
  - ○ Total Costs: Under $100
    - ■ Employee costs: $0
    - ■ Licensing: <$100

➢ **Influences (Brief)**
  ○ Super Mario
    ■ Video game
    ■ Level based movement game. You need to slash the enemies and dodge the obstacle during the gameplay
  ○ Cup Head
    ■ Video game
    ■ You have a choice between playing fast or slow through the levels. You do this by dashing.
  ○ CSGO Surf and BHop
    ■ Video game
    ■ Skill-based movement across maps with a focus on fast completions, with speed capped much higher than in normal gameplay
    ■ Techniques arise naturally from mouse and keyboard input to gain speed
  ○ Ultrakill
    ■ Video game
    ■ Focuses primarily on movement techniques that makes the game fast paced.

➢ **The Elevator Pitch**

A level based 2d platformer, with momentum mechanics allowing for maximum player skill expression and aiming to be the fastest platformer ever.

➢ **Project Description**

Our project is a level-based platformer that has movement abilities to continually gain speed with unrestricted movement. The combat system has stats based on the movement speed of the character where the player has higher damage when moving faster. These abilities will include techniques like sliding, bhopping, wall jumping and more to conserve the momentum of the player.

Equipment system allowing for customizing movement abilities and gameplay possibilities. There will be an rpg mechanic where the player will be able to obtain loot by defeating progressively difficult enemies. These equipment sets will give different abilities to add to the players arsenal to give them a variety of techniques to traverse our levels.

Market Analysis

- ➢ **Audience**
  - ○ Platform game players who love challenge
  - ○ Players who are not familiar with platformers but want to play a game with interesting movement
  - ○ Children and adults
  - ○ Smaller audience (~100)
  - ○ Use social media (instagram, reddit) to make posts advertising games
- ➢ **Other Games/Media**
  - ○ Cyberpunk Edgerunners
  - ○ Source Surf + Bhop
    - ■ Difficult to learn, limited visual flair, sense of progression is wholly internal
    - ■ Only a few mechanics with a lot of techniques arising from that, potentially less exciting
  - ○ Mario
    - ■ Can sometimes be too simple
    - ■ Can't go fast

What sets this project apart?

- ○ 2D game that is focused on speed and momentum, going fast
- ○ Easier to approach for newer players with ability based movement system
- ○ 2D instead of 3D movement makes it simpler as well
- ○ <Reason #4>
- ○ <etc.>

- ➢ **Core Gameplay Mechanics**
  - ○ Movement Technique
    - ■ The player can bhop without any equipment to preserve their momentum
    - ■ Every time the person completes a successful movement technique it builds some kind of combo meter that accumuluates momentum. If the player messes up the movement tech, then they lose all their built up momentum.
  - ○ Movement Abilities
    - ■ There are some enemies that will drop different equipment when they are defeated. This newly found equipment will allow for the player to customize their movements and get different abilities. This interacts with the combat and equipment systems.
    - ■ The player can use movement abilities like dashing to move through the level. The better the player gets at executing these movements the more momentum they can gain and the faster they will be. There are various enemies and

obstacles throughout the game that can potentially slow the player down causing them to rebuild their momentum.
- Level-based 2D Platformer
    - The goal for the player is to reach the destination of each level as fast as possible. There are enemies and obstacles that will block your way in the middle. The player can go back to the previous check-point in this specific level and restart the process with original speed if he/she is defeated.
    - The levels will be designed based on our story background. As the level increases, the player can acquire better equipment and get faster. At the end of each level, the player will face a boss. To defeat the boss, you need to dodge the hit and move to a specific place to deal damage
- Combat System
    - The player can get speed boosts for completing certain actions or using special skills. The player will need to face mobs and bosses during the levels in order to advance. Damage is dealt to hostile units when the player performs an attack action in close range of the target. Allowing the player to attack the target dealing damage that scales with the player's attack speeds. Different weapons have different attack patterns and each boss and mob will be given an unique moveset. After defeating an mob the player has a chance to receive items from the defeated enemy. With each progressed level the enemy will deal higher damage and have a more complex moveset.
    - Some base enemies will be immune to certain types of attack-abilities so you need to mix up your loadout and try new things
- Equipment System
    - The player will unlock new movement abilities by obtaining new equipment through the course of the game. The equipment system will allow for only a limited number of abilities to be equipped, adding a level of player choice in which abilities they decide to use to traverse through the levels. Each equipment type will correspond to some movement ability, potentially with multiple equipment for the same ability but with different feel/parameters. More effective/faster equipment can be unlocked as the player masters the basic movement abilities.
    - Equipment can be used as a reward or milestone in certain portions of the game. Level design should reflect the ability of the player to select different combinations of movement abilities.
    - The player will gain more equipment slots to be able to use more abilities at once.
- Enemies
    - Boss with bullet hell/projectile attacks and bosses with unique melee attacks
    - Mobs with unique immunities to certain abilities (see abilities)

Story and Gameplay

➢ **Story**
○ Futuristic, cyberpunk setting about a person who gets implants and needs to go fast.

➢ **Gameplay**
○ Intro Hook
  ■ Put a soft tutorial with platforms that are placed in a way that forces the user to perform a bhop to progress.
  ■ Player is thrown into a boss room where they're expected to be annihilated in order to see what to expect later in the game.
  ■ Then the player loses all the fancy abilities and starts over from the basic level with only jump and slade.
○ Core Loop
  ■ The core loop of the game involves the player navigating through levels while making use of available movement abilities. They will dodge obstacles and defeat enemies in the process of going through the level. There will be checkpoints in each level.
○ Progression
  ■ The game's progression will involve unlocking new abilities through new equipment at fixed points in the levels (maybe from enemies too). Levels will be designed to allow for using new movement abilities.
  ■ The game will focus on skilled and speedy movement, so the player should be improving at moving the character, and this will be part of the game progression as well.

Assets Needed

- ➢ **2D - Pixel Art**
  - ○ Sprites
    - ■ Player character (unnamed speedrunner)
    - ■ Enemies + Bosses
    - ■ Items
      - ● Shoes
      - ● Weapons
      - ●
    - ■ Props/Decoration
  - ○ Backgrounds
    - ■ Environment art
  - ○ UI

- ➢ **Sound**
  - ○ Sound List (Ambient)
    - ■ Different tracks for each level
      - ● Combat vs non-combat
  - ○ Sound List (Player)
    - ■ Character Movement Sound List
      - ● Jumping
      - ● Sliding
      - ● Abilities
    - ■ Character Hit / Collision Sound list
      - ● Damage
      - ● Hitting an obstacle
      - ● Landing
      - ● Different sounds based on damage type
    - ■ Character on Injured / Death sound list
      - ● Death
      - ● Injured
  - ○ Sound List (Enemies)
    - ■ Enemies sounds, attacks
    - ■ Bosses sounds, attacks

- ➢ **Code**
  - ○ Character Scripts (Player Pawn/Player Controller)
    - ■ Player controller

- - - ■ Abilities scripts
  - ○ Ambient Scripts (Runs in the background)
    - ■ Timing script, effects, environmental modifiers
  - ○ NPC Scripts
    - ■ Mob enemies
    - ■ Bosses
  - ○ Dialogue scripts
  - ○ User Interface scripts

➢ **Animation**
  - ○ Environment Animations
    - ■ Clouds, trees, buildings, machineries, lights, parallax
    - ■ obstacles
  - ○ Character Animations
    - ■ Player
      - ● Idle, run, jump, slide, attack, use ability, landing, get hit, die
      - ● Reach checkpoint, end level celebration, emote
      - ● Cutscenes (low priority or depends on story)
    - ■ NPC
      - ● Enemies attacking, moving, idling
      - ● Other NPCs idle

Schedule

- ➢ **Gain Familiarity with Godot**
  - ○ Week 3
    - ■ Each group member completes some Godot tutorial

- ➢ **Basic Virtual Prototype**
  - ○ Week 4
    - ■ Player controller basic
    - ■ Playground/sandbox level
    - ■ Begin UI

- ➢ **Framework Finished**
  - ○ By Week 6
    - ■ First level finished
    - ■ Movement most complete
    - ■ Some animations

- ➢ **Finish MVP**
  - ○ March 1st
    - ■ Movement Complete
    - ■ 3-4 levels
    - ■ UI complete