



Teesside
University

Advance game mechanics

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FLAMES OF DESTINY : THE ETERNAL EMBER

Game concept:

- The aim is to create a thrilling, action-packed adventure game set in a third-person perspective within the ancient world.
- **Genre:** Action-adventure
- **Platform:** Windows
- **Story:**
 - A once-powerful king possessed numerous superpowers given to him by a magical diamond gifted by the gods. However, when villains discovered the existence of this precious gem, the kingdom was plunged into darkness. They stole the diamond ruthlessly, killing the king in their pursuit of newfound power. Several years later, the king's son discovered the truth about the stolen diamond and its location. He set out on a dangerous journey to reclaim the magical gem and ensure justice for his fallen kingdom, driven by the desire to restore his father's legacy.

MOOD BOARD:

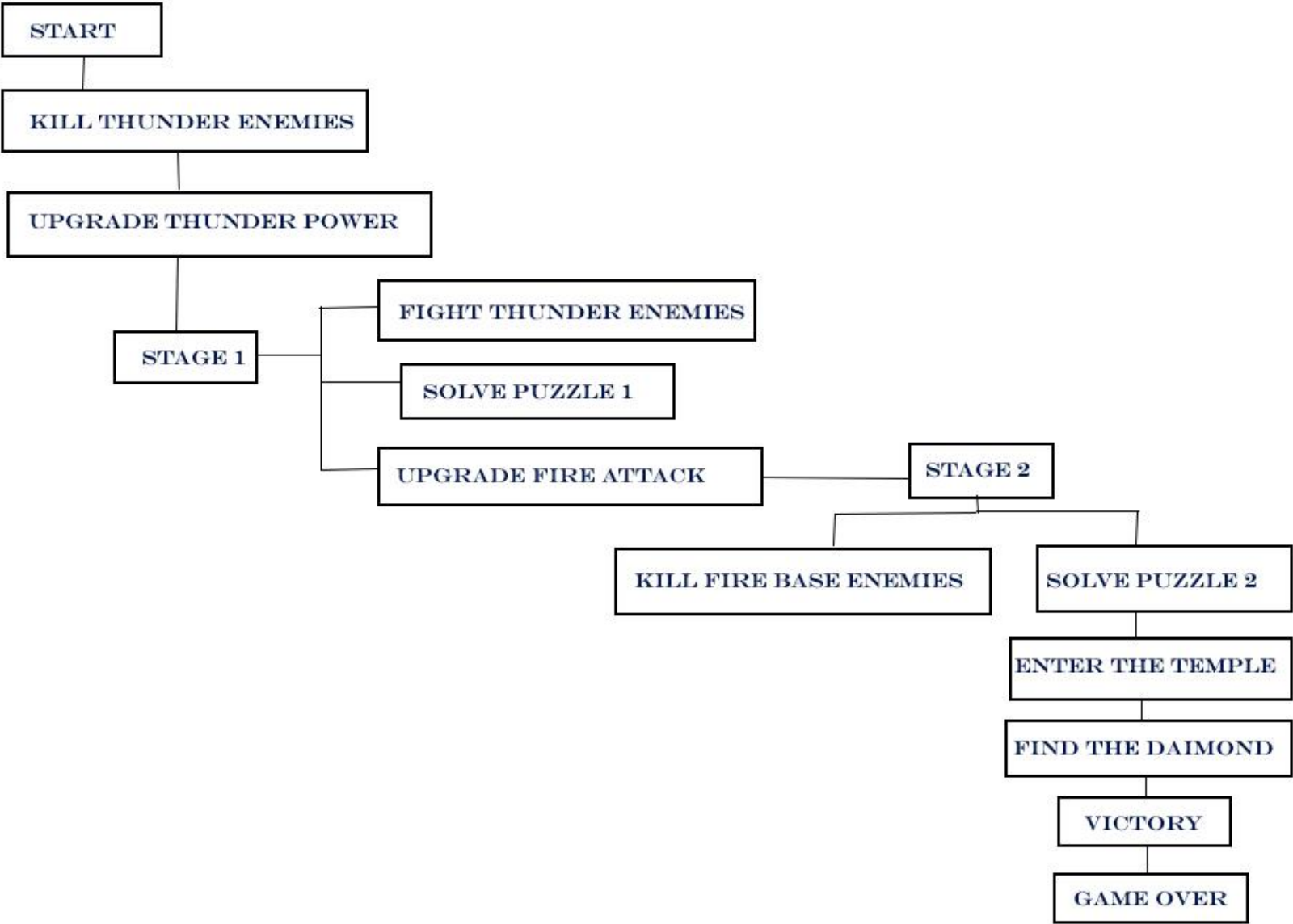


Gameplay:

Start off a thrilling journey on a mysterious island, where the main character has two extraordinary abilities: thunder control and the fiery power of fire. The adventure begins with elemental enemies classified as fire and thunder. As they progress through difficult terrains, players must strategically engage with enemies in order to find the coveted Thunder Power Upgrade for enhanced abilities. As the landscape becomes more crowded with thunder enemies, players must confront and overcome these challenges strategically.

An almost indestructible bridge blocks progress to the next stage. The solution is to obtain the Fire Power Upgrade by defeating strong fire guards, which will allow players to break the bridge's restraint and face a new wave of fiery enemies in the following stage. The journey continues with a maze leading to the temple, where players must solve intricate puzzles. To unlock the final door and progress, players must obtain the Push Attack collectible by finding a trigger associated with the statue. When entering the temple, the ultimate goal is to find the diamond and emerge victorious. The captivating adventure across elemental landscapes on the island concludes as players seize the diamond, providing a thrilling and strategic gaming experience.

Game flowchart:



Mechanics:

Basic:

Character movements

- running

- sprint

- jump

Two types of attacks- The player can click the button to switch between powers.

- 1.fire

- 2.thunder

Two types of enemies

- fire based enemies

- thunder based enemies

Interactive triggers: I implemented interactive triggers to enable players to engage with doors and other important game objects that require collecting.

Collectible objects: Collectible items will enable the player to level up their attacks and acquire new abilities that are helpful in strategic combat.

- **Combat Mechanics:**

To deal with various enemy types, I have created two main attack types for the game: fire- and thunder-based attacks, and an external push attack that the player can unlock with collectible.



- **Fire attack:**

- The primary ability accessible to the player character is the Fire Attack. Basically, it involves the player hitting powerful flames at enemies. This attack provides a smooth and responsive fighting experience by being specifically made to deal damage only to enemies that are fire-based. The Fire Attack's mechanics include particle systems and flames, which give players a visual display every time they launch a fire attack. The player can use the left mouse button to launch a base attack as a standard attack, and the right mouse button can launch a power attack to deal more damage.



- **Thunderd attack:**

- To get rid of enemies connected to the element of Thunder, the Thunder Attack was developed as an alternative to the Fire Attack. The player's body has no elemental appearance when he switches to Thunder Attack. Rather, a special blue flame that emerges from the weapon is used to deal with the damage. When the player uses the upgraded Thunder Attack, more visual effects will appear from the weapon to indicate the attack's increased power in addition to the ability to deal more damage.

- **Power upgrade collectibles:**

As in-game items, players can obtain power upgrade collectibles to enhance the power of their elemental attacks. The implementation makes use of a system in which collected upgrades dynamically boost the damage of related attacks. When the player chooses an attack, its damage potential modifies, but its attacking method and visual impact stay the same. These collectibles are intended to reward players for their exploration and strategic engagement while adding a progressive element to the gameplay experience.

- **Push Attack:**

A unique type of combat known as the Push Attack provides players with a versatile tool for both attack and defense. Acquired through particular push attack collectibles, this move unleashes an explosive burst of energy. The mechanisms that were used to push them away and inflict damage make the gameplay element impactful and well-balanced. The push attack was created to be unaffected by elemental affinities, to promote strategic use against both fire and thunder enemies.

- I have created two kinds of enemies: fire- and thunder-sensitive. They are both designed to attack when they sense the player is in their visual field. These enemies can only be defeated by particular kinds of attacks. Though their attack styles are similar, players can still distinguish between the two enemy types by looking at their elemental powers or identifying the kind of player attack that deals damage. Thunder enemies appear without any element, whereas fire enemies have low burn and smoke elements incorporated into their bodies.

- **Fire based enemy:**

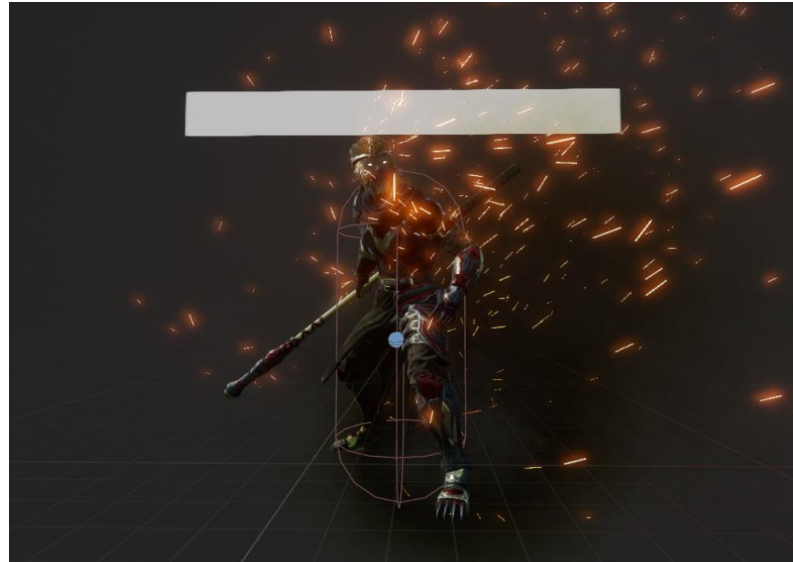
- Health:100

- Base damage:10

- **Thunder based enemy:**

- Health:100

- Base damage:10



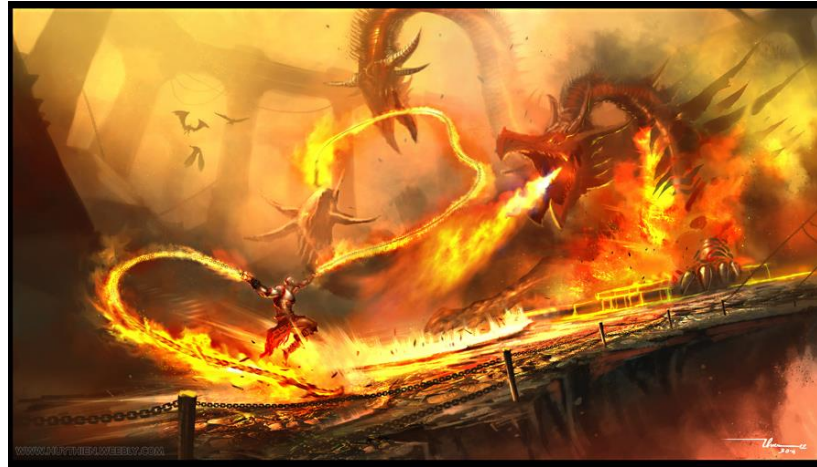
- **Health pick-up:** I have created a magical water healing system to help players regain health during combat. When a player collects this enchanted water, it heals 50% of their health, giving them an essential way of maintaining their health in the game.

- **Points system:** To add an extra layer of excitement for players, I added an exciting point system to the game. Each kill, regardless of whether the enemy is thunder or fire, awards the player 5 points.
- **Puzzles:** I have included two critical puzzles in the level that players must solve in order to advance to the next stage. The first puzzle in Stage 1 requires players to break a rope in order to cross a bridge, while the second puzzle in Stage 2 requires them to unravel a challenge in order to open a door leading to their destination.
- **Accessibility:**
- To improve accessibility in the game, I've added light blinkers near objects in the environment that players can interact with, making it clear which items are available for pickup. In addition, I've used a white colour scheme for triggers, which helps players identify interactive elements like doors within the level.





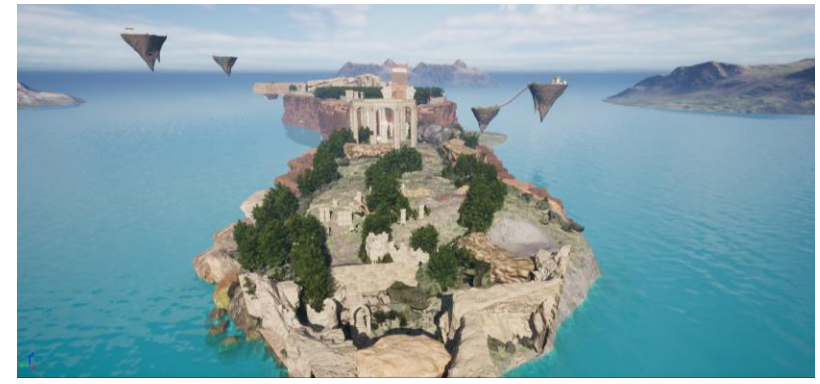
- There are a few games that have impacted my decision regarding combat mechanics, but Infamous 2 is the first here. Publisher: Sucker Punch Productions; released in 2011; the game centres on a main character who strategically uses a wide range of superpowers to defeat enemies. The AMP is a weapon in the game that I really like to use for fighting enemies because it can produce high-voltage electric power. With comparable visual effects that I created with Infinity Blade VFX, my game's thunder attack takes inspiration from its incredible power. Combat mechanics in my game have been greatly influenced by the inventive gameplay and dynamic abilities found in Infamous 2.



- I would like to mention another source of inspiration is God of War Ascension, my all-time favourite game. I've always wanted to make an action-adventure third-person game with visuals inspired by this iconic work. God of War: Ascension, released by Santa Monica Studio in 2013, illustrates excellent characterization and storytelling, contributing to my vision for thrilling gameplay. The Talo Guards' elemental prowess in the boss fight was especially influential in shaping the fire elemental power in my game. God of War: Ascension's dynamic attack variations and elemental visual effects have heavily influenced the core mechanics of my game.

- **Challenges:**

- Developing the player mechanics caused significant challenges for me, particularly due to the complexities of engine physics and the selection of VFX for fire and thunder power attacks. Adding flame-throwing VFX to the weapon caused several challenges, but after resolving bugs, I was able to successfully apply fire elemental VFX to visually enhance specific attacks. Unfortunately, technical constraints within the engine and file size limitations prevented the use of these visual elements on the player's body during gameplay. As an alternative, I've recorded a gameplay video showcasing the elemental VFX, which I'm submitting alongside a game build that doesn't have the elemental effects attached to the character model.



Level design result:

- Level design includes:

- player

- enemies

- interactive objects

- collectibles

- Maze

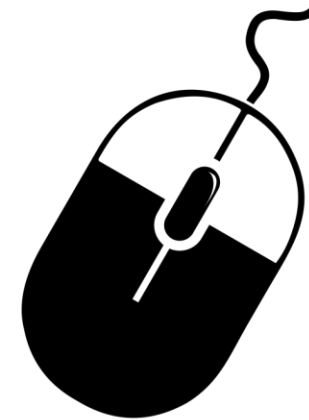
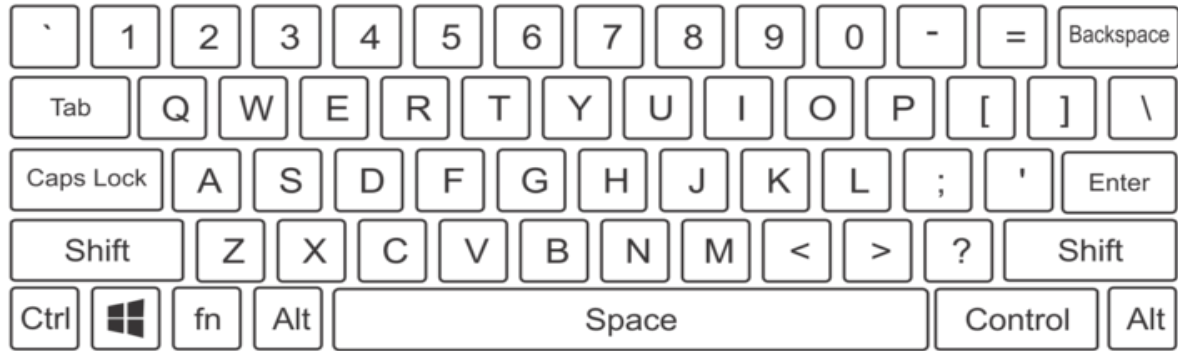
Target audience:

- This third-person perspective game with superpowers is designed for teenagers and adults looking for an exciting and visually stunning experience in the open-world genre. It is aimed at action and adventure fans, superhero admirers, and competitive gamers.
- The game is open to anyone over the age of 16.

Map:



keys:



- Player movements: W-A-S-D
- Jump: Space bar
- Sprint: Shift + W
- Standard attack: Left mouse button
- Power attack: Right mouse button
- Switch powers: Press E
- Push attack: Press Q

- **UI:**
- This information was communicated to players via the game's user interface, which included a tutorial level that provided step-by-step instructions as players progressed through the game's levels.



credits:

- Player and enemy characters: paragon-wukong (unreal engine market place)
- Vfx: Infinity blade; Effects(Epic content- Unreal Engine market place)
- UI: fontspace (<https://www.fontspace.com/>)
- Music: royalty free music (<https://www.bensound.com/royalty-free-music>)
- Asset packs:GothicTemple (unreal engine market place)
 - Isometric_world (unreal engine market place)
 - MWMeadow wetlands (unreal engine market place)

- **Playtesting/feedback:**The playtesting phase is an important part of the game design process, although it's challenging. I asked some of my friends to platest my game, who kindly playedtested my game. I created a Google form for them to share their insights in order to streamline feedback collection. This valuable feedback prompted me to address specific issues, such as resolving VFX bugs and refining the AI system based on bug reports from a friend. The AI is now running smoothly as a result of this collaborative effort.
- **LINKS:**