

A detailed digital rendering of Hogwarts Castle at dusk. The castle is built on a rocky cliffside, with its intricate Gothic architecture illuminated by warm, golden light. The sky is a mix of deep blue and orange, with soft clouds. The castle features multiple towers, spires, and a prominent round tower. The overall atmosphere is magical and serene.

# Hogwarts Racing

## Games Design Document

# Introduction

'Hogwarts Racing' is taking the famous sport from the Hogwarts Legacy and Harry Potter universe '**Quidditch**' and making it a local multiplayer racing game with inspirations from the greats such as 'Mario Kart'.

Taking the most entertaining parts of the magical world: broom flying, spells and the castle and mashing it together to make a fast paced exciting experience.

We wanted to stay true to inspirations from the games and movie with familiar obstacles and scenes which you'll traverse through.

Using medieval gothic architecture set on the edge of a little island you feel like you're in the game

With the flight in mind we wanted speed to be a real fun factor so keeping the controls simple allows players to breeze through the map.



# Gameplay Mechanics

# Main Movement

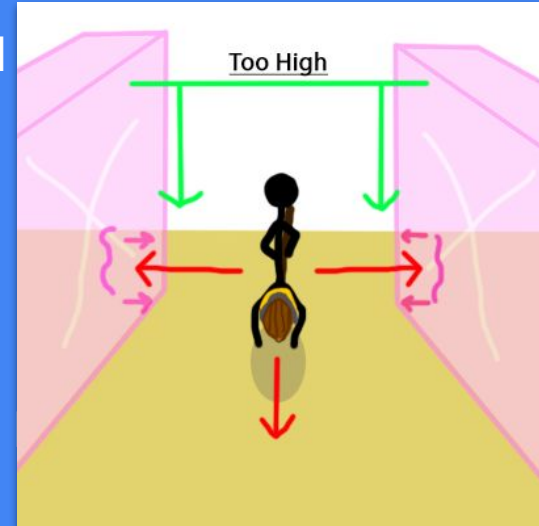
We were advised and drawn to embrace height in our game. So, allowing the player to fly reasonably freely is really important to us.

We're going to have bounding boxes on the sides of the track so they can't just fly off.

If you're too high the game will push you down which paired with the going forward boosts your speed.

You'll have XYZ movement in space giving the player the necessary freedom but also limiting them from major exploration.

This XYZ movement needed to keep speed as that's a core of the game and part of it's enjoyment.



# The Speed Mechanic

## Boost Bar:

- To help with keeping speed up in the game there will be a boost bar that goes down quickly due to it giving you a high amount of speed boost but as a downside it restores really slowly so you'll have to carefully manage it and only use it when necessary.



## Speed Ring:

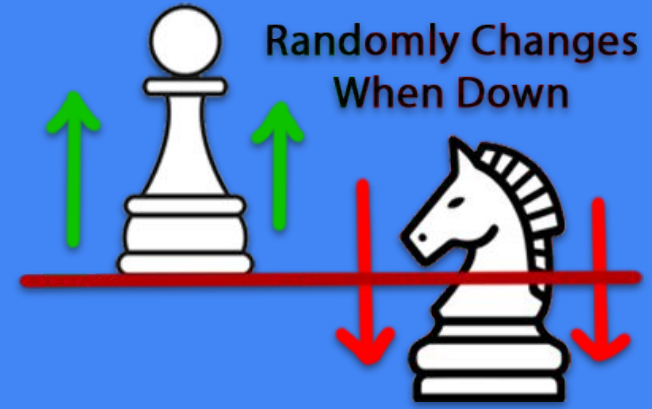
- We will have speed rings which allow the player to zoom through the outside area that will push you depending on their rotation carrying the player in that direction.



# Obstacles

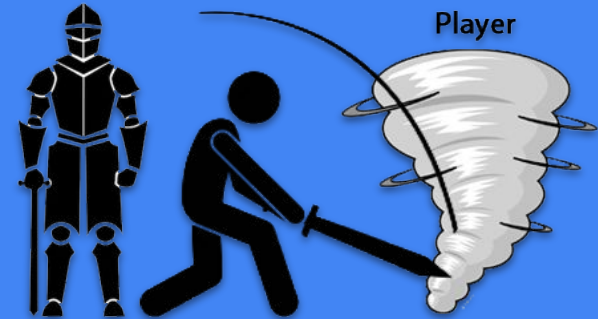
## Chess Pieces:

- Down one of the corridors, chess pieces appear from the floor randomly blocking the player causing you to slow down.
- Due to the meshes randomly changing this creates a different sense of shape. The player has to navigate around as one mesh could be a pawn shape and another could be a horse shape.



## Alive Knight Statues:

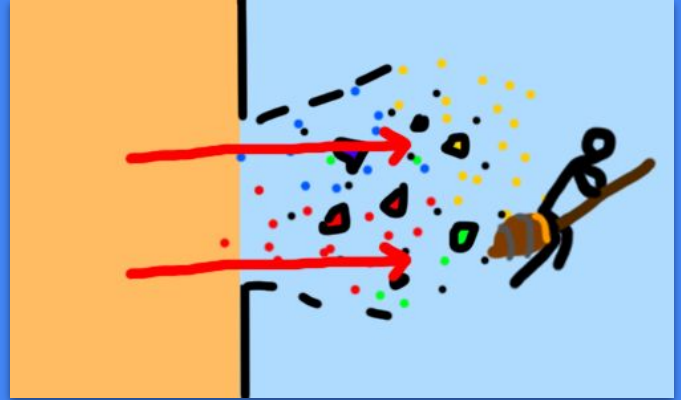
- Down another corridor there are knight statues which swing a sword at the player and when hit it causes the player to spin out.



# Destructible Obstacles

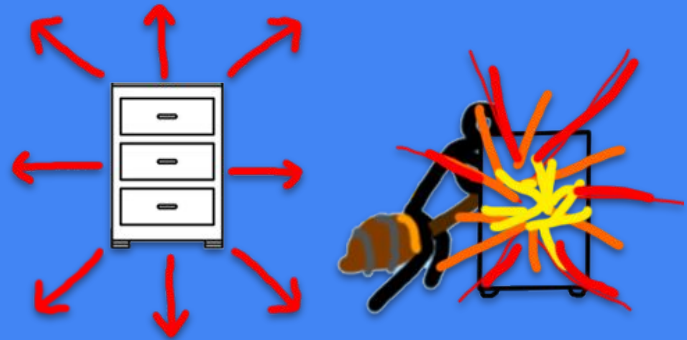
## Stained Glass:

- One of the hero assets is going to be this amazing stained glass window that's from 'Hogwarts Legacy'.
- This is used as a transition piece between inside and outside with a dynamic window that can be smashed through which will be entertaining for the player.



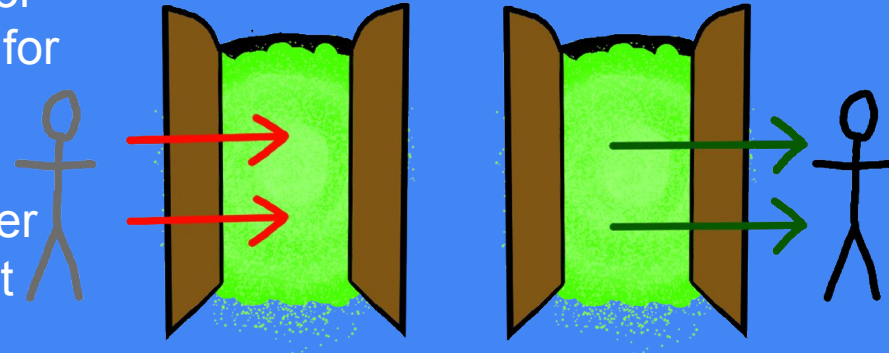
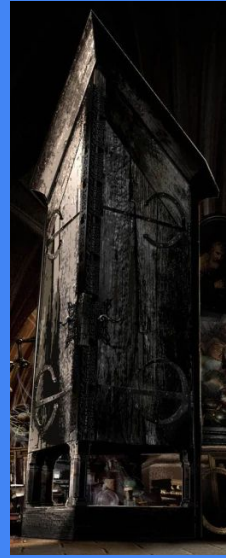
## Breakable Furniture:

- This is used to disorientate the player and slow them down.
- We want them to float randomly around the map making the player have to think fast.
- When the player collides with the box it'll smash to pieces.



# Short cuts

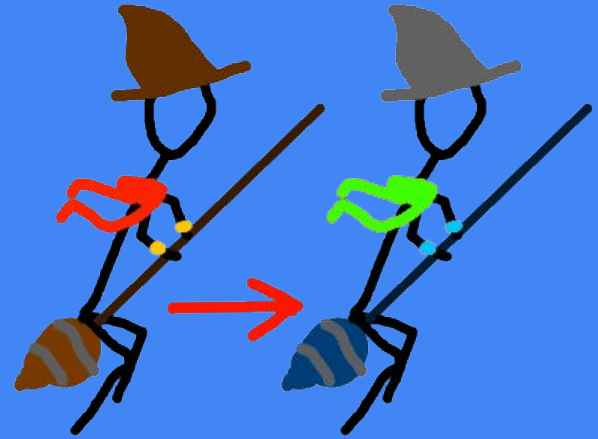
- Teleporting doors will be placed around the map to allow players to start in one area of the map and end a bit further along the map.
- Some of the doors might be permanently open where others will probably open for random intervals making it a challenge for the player to use the door.
- I was taking inspiration from Harry Potter with its floo powder and the cabinet that allows the enemies to teleport into the castle.



# Main Menu

## Broom/Character Customiser:

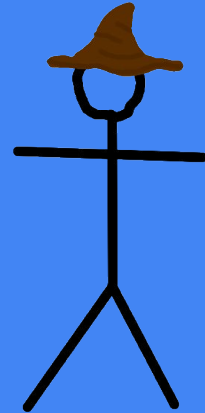
- In the main menu you'll be able to change the mesh of the broom and character.
- Different brooms should give differing stats boosts, for example: more acceleration, more up/down speed and more speed.
- You'll possibly be able to obtain different brooms from doing different races.



## Name Changer:

- In the main menu you'll also be able to change the username you play with.
- This adds a personal touch to our players' experience paired with the character customiser they'll be able to make their favourite racer.
- Having a name changer also tells the players which player they are when they play the game.

*Enter Username*



# Controls

## - Main Game -

- Left Joystick = Left / Right and Forward / Back
- Right Joystick = Up / Down
- Right Gamepad Face Button = Use Pickup Ability
- Spam Y = Release Rock Hands Grip

## - Main Menu -

- Left Gamepad Face Button = Start Game
- Bottom Gamepad Face Button = Ready Up
- Left Joystick Left / Right = Change Broom
- Left Joystick Up / Down = Change Character
- Top Gamepad Face Button = Open Name Changer

# The Lap System

- We'll have 3 laps in the race lasting about 1 - 1:30 minutes
- Each lap time the player makes is recorded and displayed on the top left of the screen
- When the final lap is completed a leader board will displayed with the players names and times
- We want a VFX spline effect that continuously spawns leading the player the correct direction helping with navigation
- Due to the structure of the map, players won't be able to go to places they are not allowed to enter meaning you won.

# Local Multiplayer Functionality

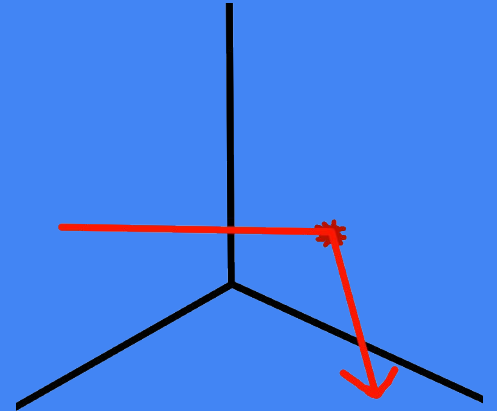
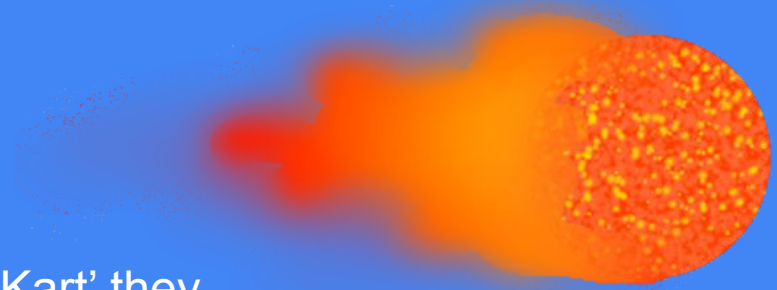
- There will be a max of 4 players on local split screen
- You'll only be able to add players by plugging in a controller to the pc but only in the main menu so there's no issues when actually racing
- Ai will be a toggleable feature as players might want to just get the best time
- As a stretch goal, online multiplayer would be a fun feature to add increasing connectivity among friends

**Abilities**

# Pickups

## - Fireball -

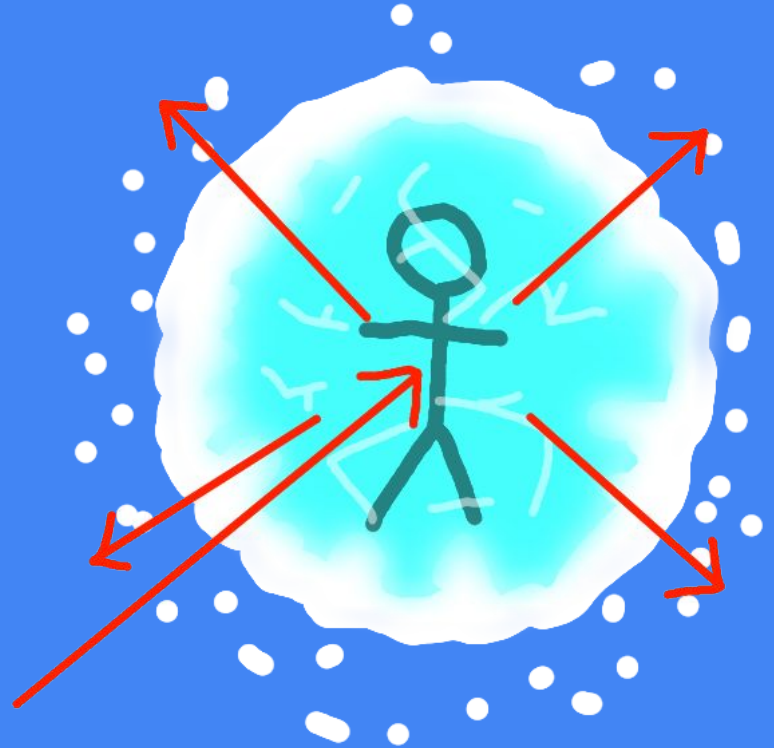
- Fireballs take a lot of inspiration from 'Mario Kart' they act as a sort of red shell to players.
- When they are shot they fire forward and constantly detect if enemies are in a radius. If it detects an enemy it'll track them for about 10 - 20 seconds.
- When it hits a player it'll make them spin out slowing them down.
- If the fireball hits a wall it'll bounce off it meaning it is possible to spin out the person who fired it.
- This ability should be only given to players who are behind allowing them to overtake and change the course of the game.



# Pickups

## - Freeze -

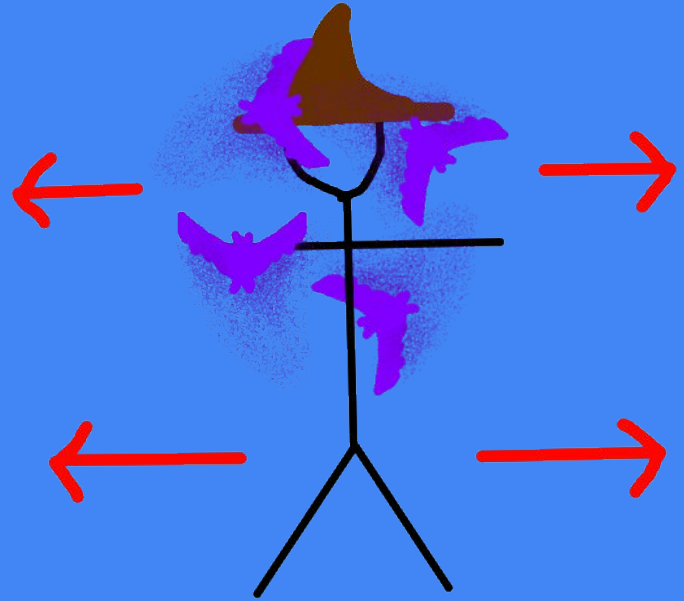
- The freeze ability shoots the same as the fireball but has a shortened distance.
- When it reaches that end point it does a radius effect and freezes the enemies in that radius. This effect also happens when it hits something.
- The freeze effect lasts for 5 seconds
- This ability is given to people further back in the race than first place.



# Pickups

## - Bat Swarm -

- The bat swarm ability took inspiration from the squid ink ability in 'Mario Kart' which its soul purpose is to distract the player and disorientate the player.
- The bat swarm ability will fly around forward erratically and when it hits a player they latch on and push the player left and right making it hard to fly.
- This is also given to players not in first place.



# Pickups

- Rock Hand -
- The rock hand took a lot of inspiration from Doctor Strange Multiverse of Madness where Doctor Strange created this massive demon hand to attack the monster.
- The rock hand appears from the ground and grabs the player, to free themselves they have to spam Y on the controller.
- This is used on the player in first place to slow them down.



# Pickups

## - Shield -

- When used, you will have a sphere shield around you that protects you. This spell takes inspiration from Mario Kart's Invincibility star and the Harry Potter spell, the "Shield Charm".
- When hit by a Freeze, Swam or Fire spell, the racer remains unaffected and shield bounces it off, It has a chance to reflect the spell back to the caster or another racer.
- you will be unaffected by attacks from the knight statues, however, this spell is can be overpowered and broken by the Rock Hand.
- The shield effect lasts for 10 seconds



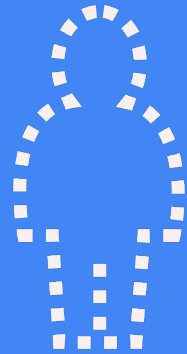
# Pickups

- **Boost Bar filler** -
- This spell was taken from suggestion from playtesting and minor inspiration from Mario kart mushroom ability
- When spell is used, you get your boost bar filled up, so you can use boost again after finishing it or just after being used.

# Pickups

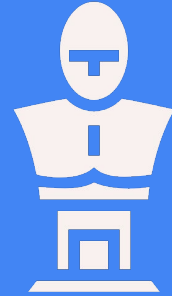
## - Invisibility -

- This spell takes inspiration from Harry Potter's spell.
- When used, You will turn transparent and won't be seen nor followed by spells like the fire & swarm spells.
- Fire and Swarm spell won't be able to affect or hit you
- You will be able to phase through certain objects and hazards like the statue planted by the seed spell, the chess pieces, and the knights.
- If the rock hand tries to appear when you are using this spell then you will phase through it and you'll shake once, as the rock hand disappears instantly
- This spell last for 10 seconds



# Pickups

- **Statue** -
- This spell takes inspiration from Mario Kart “Banana” pickup. You can throw a seed behind you. when the seed goes on the ground, it will grow and make a statue.
- The statue blocks and pushes you back and other racers.
- Statue stays there for 10 seconds, then the statue will go back into the ground with duration of 4 seconds, then it will be destroyed.
- If the statue was hit by a fire spell, it automatically goes back into the ground.



# Pickups

- **Astral Dash** -
- This spell takes inspiration from Mario Kart's "Bullet bill" pickup and Harry Potter's Apparition spell. The player turns into an energy ball and automatically follows the spline as you move at an extreme speed.
- The user is immune to spells and hazards and won't be able to collect pick ups in this state.
- If you were trapped in rock hand and have this pick up, you can use it to break the rock hand and free yourself
- The spell lasts for 3 seconds.