Idea

The Game will be set in the era of the knights, and it will be the classic knight tale adventure. You, the player, will be playing as a knight on the chase to save the Queen who has been captured by a rival kingdom, but this isn't your classic knight he has been bestowed with mystical powers that will help in his adventure to save the Queen, but just as much as he has powers so do the enemy and they will use them to stop him dead in his tracks, spawning obstacles, barrels, the undead skeleton army and destroying pathways. But the knight can fight back and destroy anything in his way with his trusty sword and the powers he obtains further he goes into his journey.

Rules

The Rules of the game are as follows:

- The player is only allowed to move left and right in between three lanes or paths.
- The player is also allowed to jump which will increase his y position at a certain point.
- The player will be in a constant motion forward meaning that he doesn't stop and cannot be manually stopped.
- The player will have to dodge obstacles or destroy obstacles that are in his way with a swing of the sword.
- Not all obstacles can be destroyed some have to be dodged.
- If the player hits an obstacle, they will die and will have to reset the run.

- The player's mystical powers will be represented by the Pick Ups in the Game that will aid the player in runs and they are as follows:
- **Wind of haste:** This powerup gives the player increased speed for a short duration and gives increased jump height and distance meaning it affects the Y position of the player and the weight of the player to travel greater distances and will fall more slowly.
- **Fire of strength:** This makes non-destructible objects destructible for a short duration, and it provides 1 hit of invulnerability meaning that if the player hits an object while in the duration of the powerup, they lose that powerup instantly but does not end the run.
- **Light of Restoration:** This pick is rare and can only be found once in a run, it has no duration but a condition, on death it will automatically revive allowing you to continue your run and you get a choice on which power you stow from the two above (more choices when more power-ups will be added). Once chosen you will not be able to pick up any more powerups until you defeat a boss.
- After a certain distance is reached you will then face a boss during the run defeating one will enter you into the next area.
- Losing to a boss will completely restart your run, it doesn't matter how far you get once you have lost you will reset to the beginning area facing the first boss again.
- During boss encounters you will have 3 lives meaning getting hit will not kill you instantly but take a life away
- The first boss will also have 3 lives and that number will further increase by 1 when fighting other bosses in further areas.
- In boss encounters you will be chasing the boss and overall trying to get close to them to do a QTE final blow to finish them off. (subject to change)
- You will still be dodging and destroying obstacles in boss encounters.
- All bosses will have a power that they can control which will also be visualized in the areas that they are in and as well their powers will

tie into their mechanics when fighting them. For now, I will focus on the first two.

- **Boss 1**: Boss 1 has the power of the wind; he will try to do damage to you by throwing wind projectiles that will not take life on hit but will send you flying back (by subtracting a number from the x position of the player). In this encounter, there will be a pickup specific to this boss which allows you to do the same thing hitting him with a projectile that takes away one life from the boss. After losing all lives a prompt will come on the screen and you will be able to finish the boss.

- **Boss 2**: boss 2 wields the power of fire and will try to attack the player by engulfing either one or two lanes with fire. This will be random, and the fire will be active for 5 seconds. If the player runs in the lane consumed by fire, they will have a number called burn that will count to 100, once it reaches 100 the player will lose a life and be put into an animation stat that immobilizes the player for 2 seconds. If the burn doesn't reach 100 and is above zero it will stay the same number as when the player left the lane and anytime the player enters a lane with fire the number will continue to add until it reaches 100. There is a pickup that is specific to the boss that when picked up will reset the burn counter to zero and will fire a projectile taking away one of the boss's lives. Taking away all four of the boss's life allowing for the QTE finisher.

- The first prefab will be barrels which can be destroyed or dodged by the player.

- Fallen pillars are also another prefab that can only jumped over.

- Standing pillars, another prefab that can only be dodged.

- And finally standing enemies that can be dodged or destroyed or that can be slid under.

- You gain 1 point per the distance you travel, 5 for the number of objects you destroy and 500 for every boss defeated.

Game Scripts

PlayerMovement.cs is responsible for the following rules:

- The player is only allowed to move left and right in between three lanes or paths.
- The player is also allowed to jump which will increase his y position at a certain point.
- The player will be in a constant motion forward meaning that he doesn't stop and cannot be manually stopped.

SpawnObjects.cs is responsible for the following rules:

- The spawning of prefabs which are:
- Fallen pillars are also another prefab that can only jumped over.
- Standing pillars, another prefab that can only be dodged.
- And finally standing enemies that can be dodged or destroyed or that can be slid under.
- The player's mystical powers will be represented by the Pick Ups in the Game that will aid the player in runs.

PowerUps.cs Is responsible for the following rules:

- For the implementation of all the following powerups in the game:
- **Wind of haste:** This powerup gives the player increased speed for a short duration and gives increased jump height and distance meaning it affects the Y position of the player and the weight of the player to travel greater distances and will fall more slowly.
- **Fire of strength:** This makes non-destructible objects destructible for a short duration, and it provides 1 hit of invulnerability meaning that if the player hits an object while in the duration of the

powerup, they lose that powerup instantly but does not end the run.

- **Light of Restoration:** This pick is rare and can only be found once in a run, it has no duration but a condition, on death it will automatically revive allowing you to continue your run and you get a choice on which power you stow from the two above (more choices when more power-ups will be added). Once chosen you will not be able to pick up any more powerups until you defeat a boss.

Death.cs is responsible for the following rules:

- If the player hits an obstacle, they will die and will have to reset the run.
- An end screen will display which will allow the player to choose to restart the run or head to the main menu.

Boss.cs is responsible for the following rules:

- After a certain distance is reached you will then face a boss during the run defeating one will enter you into the next area.
- Losing to a boss will completely restart your run, it doesn't matter how far you get once you have lost you will reset to the beginning area facing the first boss again.
- During boss encounters you will have 3 lives meaning getting hit will not kill you instantly but take a life away
- The first boss will also have 3 lives and that number will further increase by 1 when fighting other bosses in further areas.
- In boss encounters you will be chasing the boss and overall trying to get close to them to do a QTE final blow to finish them off. (subject to change)
- You will still be dodging and destroying obstacles in boss encounters.

- All bosses will have a power that they can control which will also be visualized in the areas that they are in and as well their powers will tie into their mechanics when fighting them.

BossOne.cs is responsible for the following rules:

- **Boss 1**: Boss 1 has the power of the wind; he will try to do damage to you by throwing wind projectiles that will not take life on hit but will send you flying back (by subtracting a number from the x position of the player). In this encounter, there will be a pickup specific to this boss which allows you to do the same thing hitting him with a projectile that takes away one life from the boss. After losing all lives a prompt will come on the screen and you will be able to finish the boss.

BossTow.cs is responsible for the following rules:

- boss 2 wields the power of fire and will try to attack the player by engulfing either one or two lanes with fire. This will be random, and the fire will be active for 5 seconds. If the player runs in the lane consumed by fire, they will have a number called burn that will count to 100, once it reaches 100 the player will lose a life and be put into an animation stat that immobilizes the player for 2 seconds. If the burn doesn't reach 100 and is above zero it will stay the same number as when the player left the lane and anytime the player enters a lane with fire the number will continue to add until it reaches 100. There is a pickup that is specific to the boss that when picked up will reset the burn counter to zero and will fire a projectile taking away one of the boss's lives. Taking away all four of the boss's life allowing for the QTE finisher.

Score.cs is responsible for the following rules:

- You gain 1 point per the distance you travel, 5 for the number of objects you destroy and 500 for every boss defeated.

DestoryObstecle.cs is responsible for the following rules:

- The player will have to dodge obstacles or destroy obstacles that are in his way with a swing of the sword.
- Not all obstacles can be destroyed some have to be dodged.

Sound.cs is responsible for the following rules:

- All the sounds associated with the game.
- All the music associated with the game.

TerrainGenerator.cs is responsible for the following rules:

- Spawning the terrain prefab that the player will walk on.
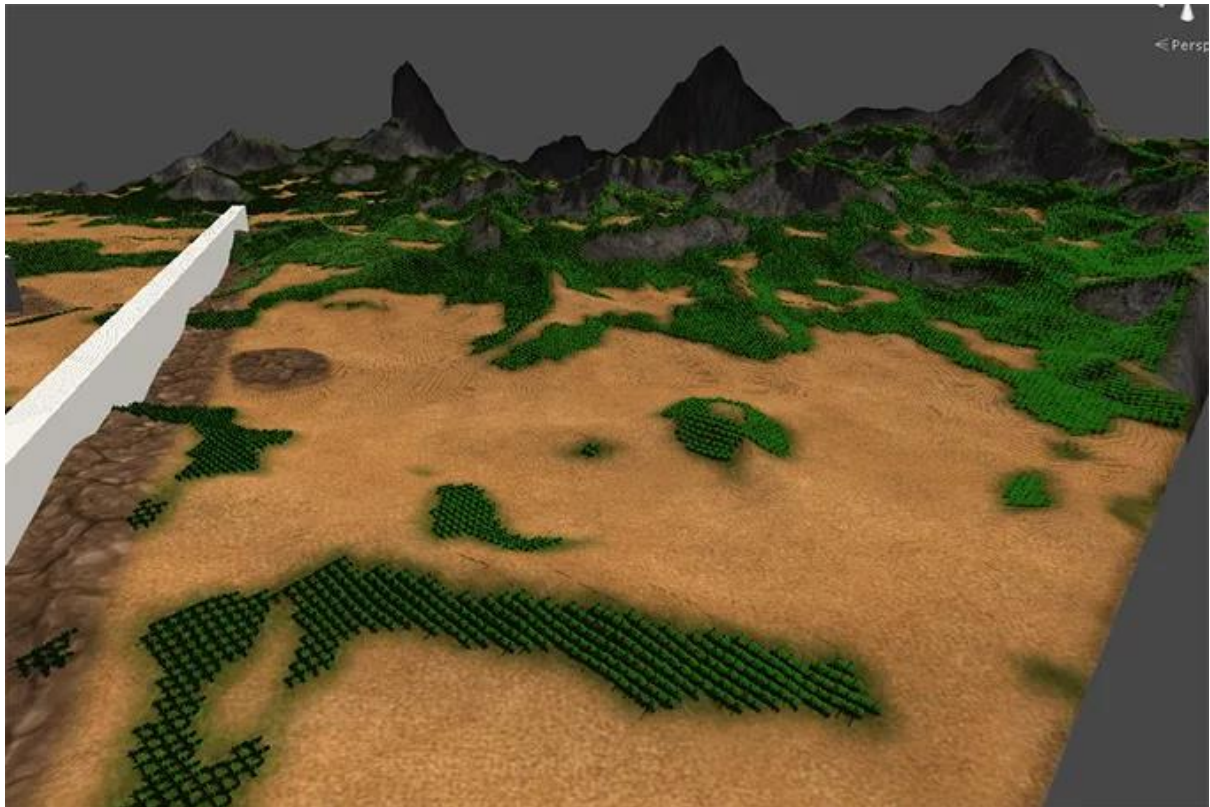
Prefab Types

Figure 1: UnityCoder [s.a.]. Grass Maker For Mess Terrain (UnityCoder 2024)

This is what the terrain prefeb will look more or less for the first lever and will use the *TerrainGenerator.cs script*

Figure 2: Cambridge Dictionary [s.a.]. Barrel (Cambridge Dictionary 2024)

This is the Barrel Prefab that will use the *SpawnObjects.cs* script.

Figure 3: ShutterStock [s.a.]. Fallen Piller (ShutterStock 2024)

This is the fallen pillar prefab that will also use the *SpawnObjects.cs* script.