Basics in Game Engines Task 1

The game we will be recreating is Happy Hop: Kawaii Jump

Target Device:

The target device chosen for the replication of Happy Hop will be Desktop. The screen resolution being HDTV with the ratio being 16:9 as it is a landscape game. We chose this as we thought it would be the best outcome for Happy Hop.

The Input method Will be with keyboard and include:

- Press the left Arrow key to jump to the left
- Press the right Arrow key to jump to the right
- Press space to start

Gameplay Flowchart:
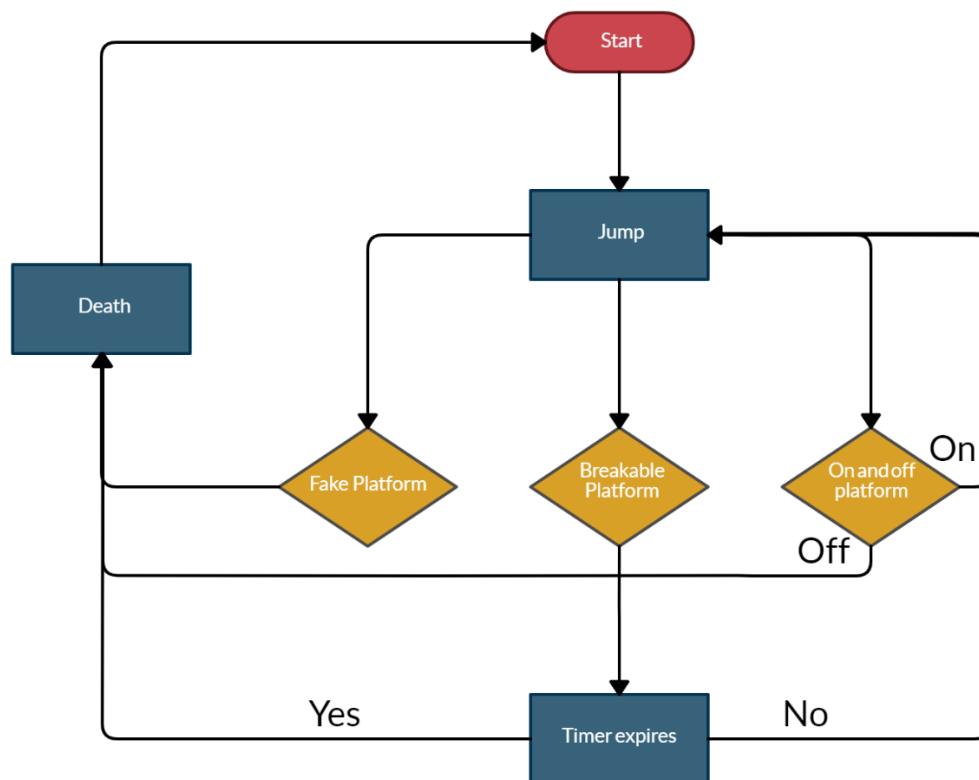
Pseudocode

Game Script

//When the game icon is pressed the game loading screen shows up.

//When eighter the right button or the left button is pressed the game starts.

//When character falls the game ends.

//When the game ends the retry/play button pups up.

//If retry/play button is pressed change scene to the start.

Player Script

// When left arrow is pressed the character jumps to the upper left platform.

// When right arrow is pressed the character jumps to the upper right platform.

//If platform is not present the character will fall.

//If character exceeds the platform's time limit the character will fall.

// When character jumps on Platform C or on Platform D when D is off the character will instantly fall.

//If character jumps on Platform D when platform is on the character will be able to stay on it for a second but once that second is over the character will fall.

Platform A Script

//When character lands on Platform A the platform falls apart after 5 seconds.

Platform B Script

//When character lands on Platform B the platform falls apart after 1 second.

Platform C Script

//When character lands on Platform C the platform instantly disappears(poofs).

Platform D Script

//Platform D switches on and off every second.

Game Manager

//When character successfully lands on a platform player's score is increased by 1.

//When a higher score than the current one is met change High score to current one.

Game Walkthrough

The game starts off with a small animation which serves as the game's loading screen.

Then the game setup shows up. To start the game, you must press on the space bar. Every time an arrow is pressed the character jumps up on a platform above it.
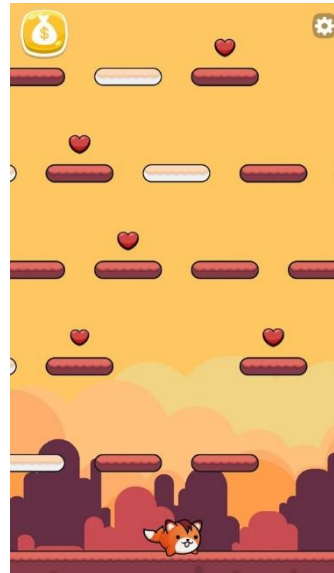

Figure 1: Happy Hop loading screen

Figure 2: Happy hop layout

If on the side which is pressed, a platform is not present, the platform's time has expired or the character jumped on a cloud, the character will fall from the sky and the game ends.
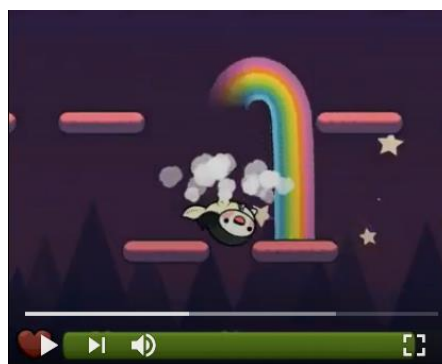

Figure 1: Character falls from the sky

The game has 3 kinds of platforms which are Platforms A, B, C and D. Platform A, which is the green one, has a standing timer of 5 seconds. Platform B, which is the broken up green one, has a timer of 1 second. Platform C, which is the white one, is a cloud so if the player lands on it, it will fall instantly. Lastly, Platform D, which is the purple one, switches on and off every second. In the game there was one with spikes, but we decided to remove it.
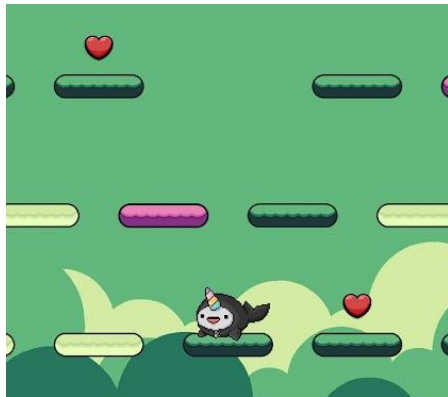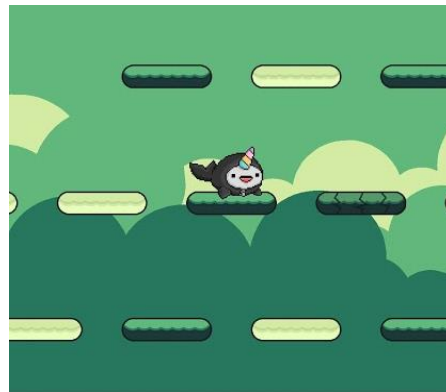

Figure 4: Platforms A, C and D

Figure 5: Platforms A, B and C

When the game ends the replay/play button appears which once clicked will take you back to the start of the game.
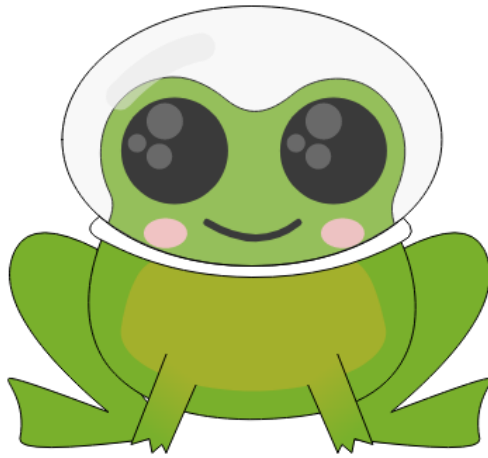

Figure 2: The blue play button after the game ends

Game objective

To get your character to the highest level possible and beat your previous score.

Game 2D Assets

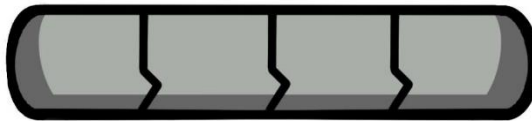**Game Character**

Platform A

Platform A broken

Platform B

Platform B Broken

Platform C

Platform D

Game Background ⟶