2018

Fresh Avocado Design Document

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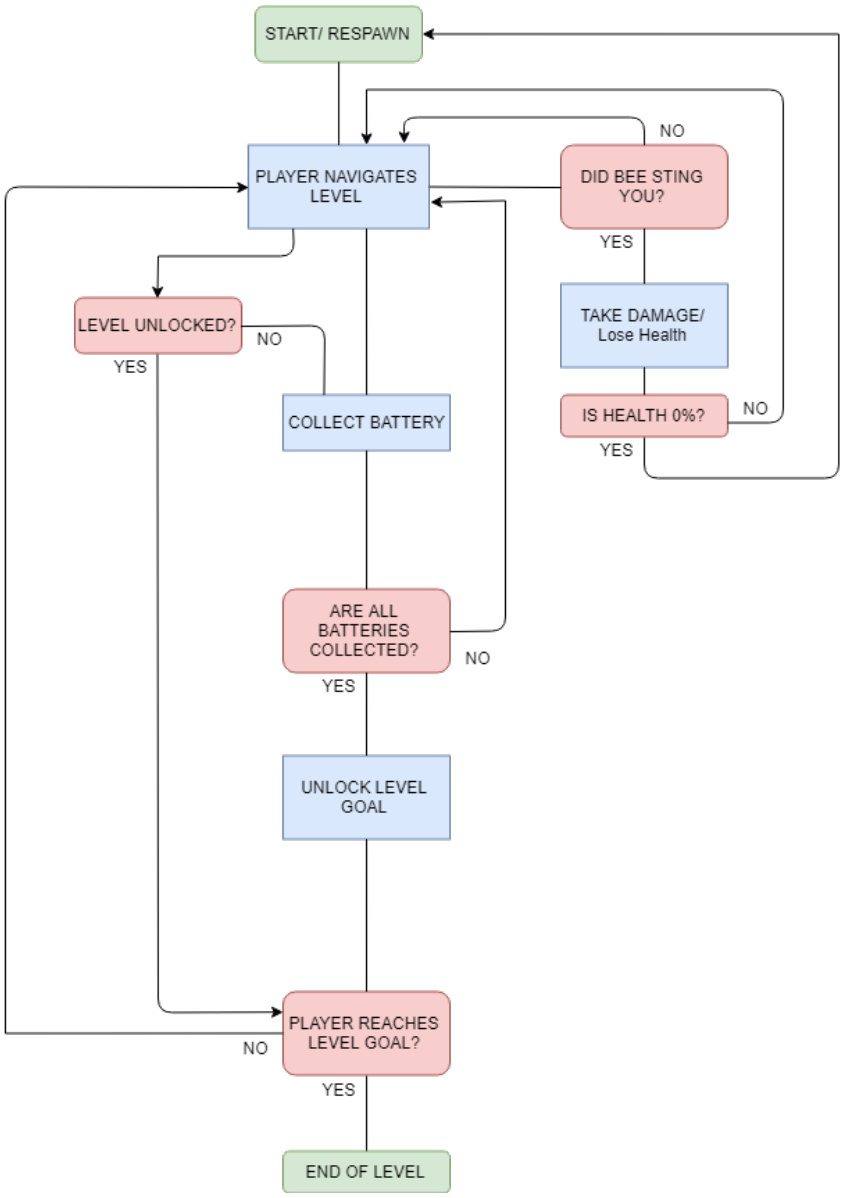
Target Device

Fresh Avocado is game which would be be designed and built for the Windows Platform (PC) and Mac OSX, as part of understanding how to use the Unity Game Engine alongside coming up with original ideas for a video game. The decision to use both PC and Mac OSX is that PCs are vastly used in a wide variety of households so as such the game will be accessible to a large number of people but apart from that there may be some Mac users who would wish to play the game so as such the game would be accessible to anyone with a desktop or laptop computer.

Flowchart


START/ RESPAWN
PLAYER NAVIGATES LEVEL
DID BEE STING YOU?
NO
YES
TAKE DAMAGE/ Lose Health
IS HEALTH 0%?
NO
YES
LEVEL UNLOCKED?
NO
YES
COLLECT BATTERY
ARE ALL BATTERIES COLLECTED?
NO
YES
UNLOCK LEVEL GOAL
PLAYER REACHES LEVEL GOAL?
NO
YES
END OF LEVEL

Game Mechanics and Objectives

Fresh Avocado's game mechanics are similar to every traditional puzzle platformer game. The player, who is an avocado, would navigate through the various levels by moving and jumping, where the goal would be to collect a certain amount of a specific key item (batteries) in order to unlock the goal and gain the ability to progress to the next level.

The player would have to avoid various enemies, in the form of bumble bees and snails as well as keep their eyes peeled on a time limit in the form of a day-night clock which would instantly kill the player should it reach Day Time.

Visual Assets

The game's graphics would be done in an 8-bit art style, due to its simplicity to replicate in a short amount of time as well as the style itself being aesthetically pleasing to the eye and popular amongst gamers. The assets would be created through an online application called Pixilart.

Fig. 1 – Avocado Sprite

Fig. 2 – Battery Sprite

Fig. 3 – Tree Sprite

Fig. 4 – Bush Sprite

Fig. 5 – Cloud Sprite

Fig. 6 – Grass-Terrain Sprite

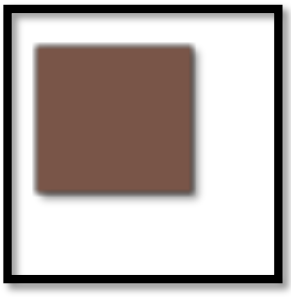


Fig. 7 –Terrain Sprite

Fig. 8 –Open Fridge Sprite

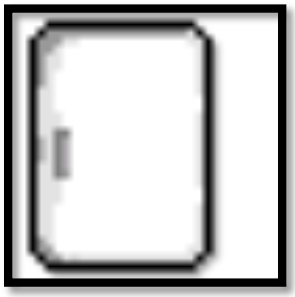


Fig. 9 – Fridge Sprite

The retro style font ‘Press Start K’ would be used for all the UI elements due to its ‘old-school’ style aesthetic, which would blend in well with Pong due to it being a retro-styled video game.

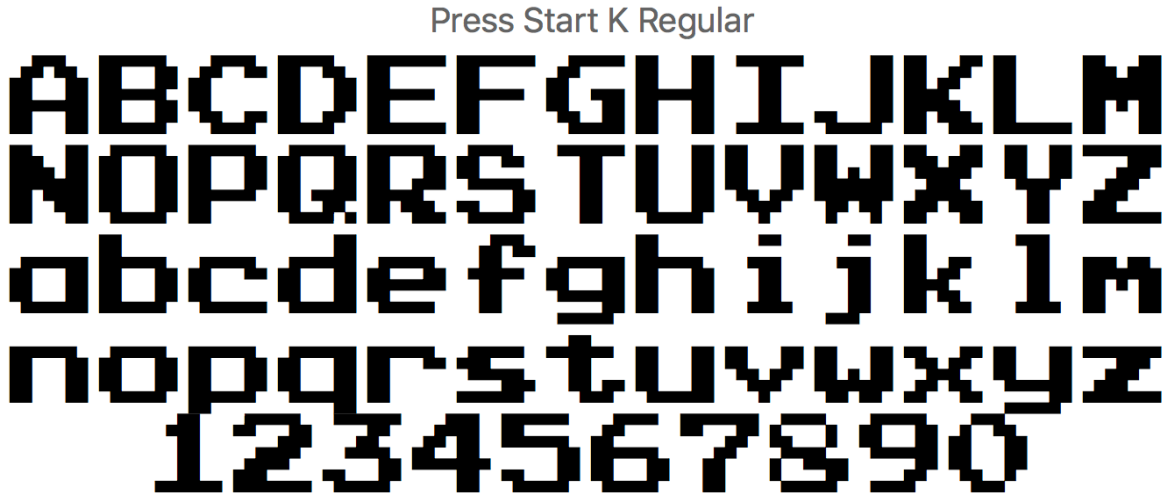


Fig. 10 – Press Start K font

UI Elements

The game’s HUD would display the player’s battery counter, health counter, life counter and time remaining. The player’s health would consist of a health bar which would decrease in value after the player would take a hit, where once the bar drains completely a life would de deducted from the life counter.

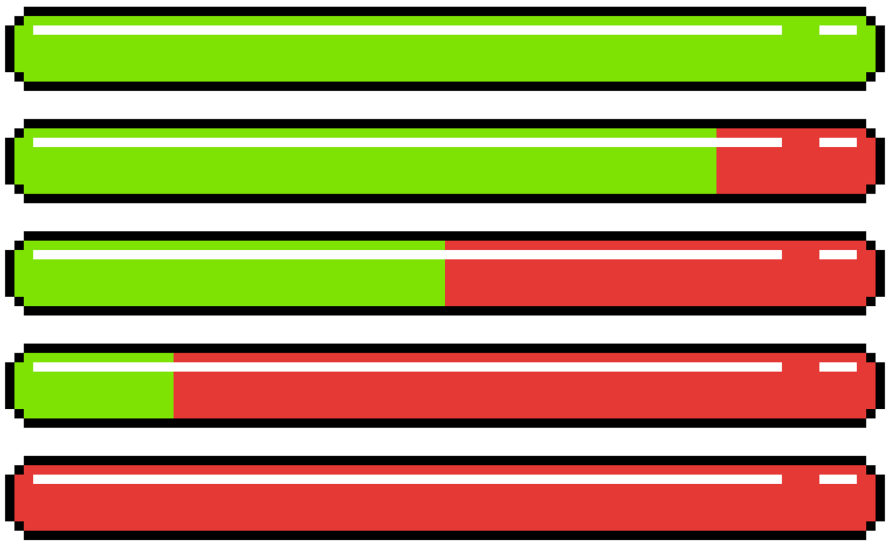


Fig. 11 – Health Bar

As already outlined in the objectives section, the time limit would be shown in the form of a clock which would turn from “Night Time” to “Day Time” where the clock would start off as Night Time and more slowly to Day Time. Once it reaches Day Time, the player would be instantly killed.

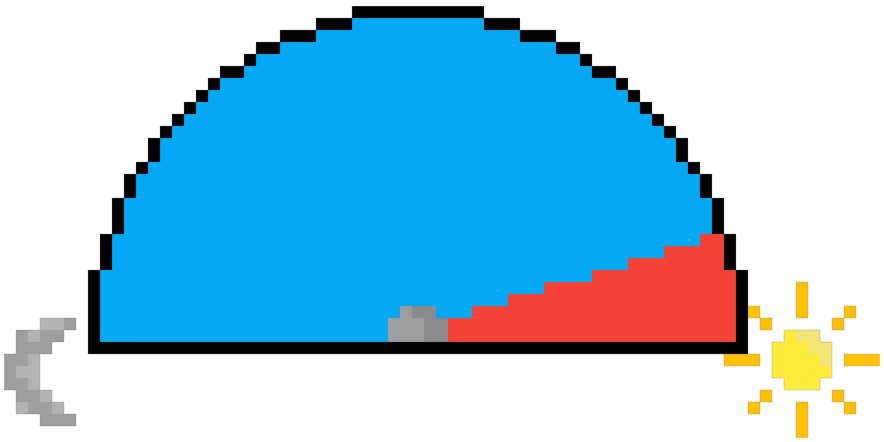


Fig. 12 – Timer going from Night Time to Day Time

Psychological Theory

The game’s level design and overall structure would be done in such a way that it would make use of the Player Types psychological theory. Mainly the exploration Player Type would be applied, as the game’s various levels would be designed in a non linear fashion so that the player would have to explore their surroundings in order to find the required collectibles (Batteries) in order to advance through the game.

Apart from the Player Types theory, the game is also aiming to educate players that fruit and vegetables must be kept fresh at all times with the overall plot about making the Avocado collecting batteries in order to power up its fridge in order to remain fresh.

Code Structure

The code would be organised in various C# script files for each component as follows:

- Player Controller would handle player movement
- Bee controller would make the Bee move up and down
- Snail controller would make the Snail move left and right
- Life Controller would deal with the health and life system
- Battery Controller would allow the player to pick up batteries and trigger the next level when a certain number is collected (will be the same for each level)
- Respawning Controller would deal with the player respawning when they die
- Game Over Controller would allow the player to return to the title screen once they lose all of their lives and get sent to the Game Over screen
- Game Start Controller would allow the player to start the game itself from the title screen