

### General Idea

Story - you're a rabbit in need of food and see a delicious carrot, little do you know it belongs to a ferocious pitbull, after eating the carrot the pitbull gets very mad at you and chases you, you must avoid obstacles while running and make it to your den without hitting obstacles. There are many levels with each one getting faster with more complex obstacles.

Genre - Side scroller

Objective - your objective is to runaway from the pitbull to your den while avoiding obstacles. If you hit a obstacle the pitbull gets closer. Within a certain timeframe if you hit a obstacle again the pitbull gets you.

## **Game Information**

### **Target Audience:**

Any demographic from 8-11 years old, old enough to know the objective of the game and quick enough reaction time. With the specific subgroup being gamers.

#### **Entities:**

Main Character - Rabbit

Player controls vertical movement but not horizontal

Enemy - Pitbull

Impossible to get rid of

Gets closer to rabbit when rabbit stumbles or hits an obstacle

Environment - Constantly moving with a variety of obstacles to stop the rabbit

Gradually gets faster the longer the rabbit is alive

### **Game Mechanics**

The game is a side scroller where the player can make the rabbit jump to avoid obstacles in the way. The rabbit has one life, if he experiences two collisions within a certain time frame, he dies and the game is over

Player Mechanics - Player controls vertical movement but not horizontal,

Loses if the pitbull catches him or if rabbit falls into a pit.

Enemy Mechanics - The enemy is impossible to get rid of,

Gets closer to rabbit when rabbit stumbles or hits an obstacle, catches rabbit when rabbit hits an obstacle twice. Enemy can also be a bird moving up and down and is also a obstacle you must avoid colliding with.

# **Technical Description**

Modules - Obstacles including rocks and branches that stop rabbit from running, and bird obstacle that moves up and down that can collide with rabbit. platforms, pitfalls, background music, running pitbull sprite, parallax nature background, ground, rabbit sprite that's constantly running and jumps with user input.

Levels - 3 levels of environment obstacles, with each level getting faster and with more obstacles.

Effects - Rabbit can jump given user input, obstacles can stop running for a bit when rabbit collides with obstacle and pitbull show up on screen. Second obstacle hit will cause pitbull to grab rabbit and game will be over. Else, over some time pitbull will fall behind screen. Screen is constantly moving right with each level being faster. Obstacles move left as screen moves

Collision Detection - The rabbit will detect collisions between itself and obstacles. 2 collisions within a certain time frame or rabbit falls into pit it ends the game. If rabbit reaches the burrow at the end of the environment it ends the game and goes to next level.

Physics - Gravity and collision

Algorithms - Procedural Generation of Environment, collision detection, gravity and jump mechanics, procedure for pitbull to catch rabbit.