Run.

Project Plan for Group Red 3

Scott Hiraki, Leah Ruisenor, Alex Merk, Irene Fransiga

Introduction

We plan to make scrolling platform similar to RobTop Game's "Geometry Dash" and Adult Swim Game's "Robot Unicorn Attack". In this game you will play as a rabbit with the goal being to stay alive as long as possible while obtaining the highest score. The game will feature a variety of hazards and pickups to add some complexity.

Animated Resources

The game will consist of several animated components to give the illusion of the rabbit moving constantly to the right. These components include: the rabbit protagonist, the enemy chasing the rabbit, enemies such as bears, snakes, and birds, as well as pickups including mushrooms and carrots, as well as the scrolling background.

- **Protagonist Rabbit:** The user controlled character will have several different animations.
    - Running in place
    - Jumping
    - Falling
    - Floating
    - Hanging (for when the rabbit hanging on a vine)
    - Dead Bunny
    - Pooping Bunny

Other assets will be animated moving left across the screen. Because the rabbit protagonist will be stationary on the x-coordinate, these assets will be animated moving to the left.

- **Enemies:** The rabbit will face a variety of enemies. These enemies will all have subtle animations. As mentioned above, the enemies could be bears, snakes, and birds.
    - Stationary movement (subtle swaying or bobbing).
    - Attacking the rabbit (will vary by enemy).
- **Pickups:** During the game, there will be some pickups like carrots and mushrooms.

- **Platforms:** The rabbit can jump on a variety of platforms: ground, branches, rocks, etc.
- **Background:** The background will animate left as well, but at a slower rate to give a parallax effect.

Control

The rabbit will only have one primary control.

- **Jump**: The rabbit will only be able to jump while it is on a platform. The game does not allow double jumping.
    - The default jump key will be the spacebar.

Interaction

Because of this simple control scheme we want a tight set of entities interacting together.

- **Enemy:** These enemies lower the rabbit's speed upon collision. No enemy will outright kill the rabbit, as the only death condition is being caught by the "monster" chasing the rabbit. Some possible enemies include:
    - Bears, which are stationary but larger obstacles.
    - Snakes, which will move along the platforms.
    - Birds, which will swoop down to attack the rabbit.
    - Bushes, which are smaller stationary obstacles.
    - Water, which will be stationary.
- **Pickups:** The game will contain two primary pickups: carrots and mushrooms.
    - **Carrot:** The carrot is possibly the most complicated entity as it is central to playing the game.
        - If the rabbit picks up a carrot after it has hit an enemy it will regain the speed it lost in the collision.
        - However, this will increase a "poop-o-meter", which will fill up as the player picks up carrots. Over time the bar will empty. If the bar fills entirely the rabbit will stop for a few seconds and poop, after which it will resume its movement (This can be considered a "soft" death state, as it will not outright kill the player but will cause the monster to catch up much, much faster, killing the player unless they are lucky).
    - **Mushroom:** The mushroom can be considered the antithesis of the carrot.
        - When picked up the "monster" will slow down slightly.
        - However, this will trigger a "death-o-meter" on the rabbit. The meter will slowly fill up. When the meter is full, the game will end.

        - This can be counteracted by picking up a carrot. A carrot will clear the meter and allow the player to keep playing.
- **Monster:** This will be the primary antagonist of the game. The player will be chased by a monster that will trigger a game over on collision. The monster is “aided” by the enemies of the game, which will slow down the rabbit.

Extras

- **Extra levels:** Time permitting we would like to include extra levels to our game. They would be functionally identical to the forest level, but will vary thematically.
- **Curved surfaces:** Thematically we would like to implement curved surfaces for the protagonist to run over. This will provide some variety to the player as they will not be running across straight platforms.
- **Random Generation:** We would like our levels to be randomly generated. This will provide greater variety for the player and make the game feel more dynamic.
- **Difficulty options:** This could be a variety of things. Higher difficulty means a higher ratio of enemies, a lower ratio of power ups, or collisions slowing the rabbit down more.
- **Hi-Score:** We would like a simple high score system. If we implement this the score will be based on how long the player lasted on each difficulty.

Timeline

- **Prototype:** For our prototype we plan to implement all of the animations our game will include. We will also include implementation of our jump control.
- **Minimal deliverable:** The minimal deliverable will include implementation of all of our interactions and entities. The game will end when the player dies.
- **Final game:** The final game will include at least one extra feature, possibly more if time permits. Hi-Score will likely be the easiest, with random generation being the hardest.

References

Robot Unicorn Attack - Adult Swim Game
Geometry Dash - RobTop Games