

Witch Game Redux (working title)

CSCI 438 Final Project Game Design Document

Andrew Liden

Goal

Using the previous “Witch game” project as a guide, build a similar, Star-fox like game from the ground up.

Overview

The previous game was a Star-fox like game about a Witch banishing monsters. I intend to improve the game using the lessons I learned from developing the previous project. First, I plan to improve my development workflow and organization. The game will take full advantage of version-control using GitHub. It will also have a cleaner directory organization. This will help streamline development of the game. Additionally, I intend to improve the organization of the node structure within the game itself. In the previous build of this game, the player’s node structure especially had room for improvement. I intend to take more advantage of making scenes to improve separation of concerns within my code.

Game Description

The game is star-fox like. What that means specifically is that the player is guided along the level and is constantly moving. The player can move within a 2D plane that is orthogonal to their current path. They can also fire projectiles in the direction they’re looking. The direction they are looking is usually parallel to the current path. When the player moves within the 2D plane, though, their forward direction is “nudged” in the direction they moved. In the previous implementation, the player could fire a spell. This implementation will add a limited use area-of-effect projectile, as well as at least one power up. These added elements should make gameplay more exciting.

The player’s goal is to reach the end while maximizing their score and avoiding taking damage. The player takes damage from collisions (which, unusually, don’t stop the player’s movement). The player can collide with projectiles, enemies, the stage, or moving objects on the stage. In the previous iteration, there were three enemy types. This version will include more enemies and more moving objects.

Game Assets

The game will combine assets from the previous build with new assets that will make the game more interesting and enjoyable.

From Previous

Witch – The player avatar.

Ghosts – floating enemies that don’t try to seek the player out. I intend to improve these enemies by adding the ability to optionally give them a movement path.

Evil Witches – walking enemies that shoot towards the player when they’re sufficiently close.

Jiangshi – enemies that hop forward when the player is near.

New Assets

Potion bottle – A throwable, area of effect item that the player can use when they're overwhelmed. These will be limited use, and will be granted per-stage. It will be a rigid body that explodes on collision with the stage or at the end of a timer, whichever occurs first.

Stages – I intend to develop new stages for this project. I will likely re-use a few things from the previous game, but many assets will be newly created. I intend to have three stages. The first stage will have a similar "haunted town" theme to the single stage in the previous game. After that, I intend to have a graveyard stage, followed by a forest stage.

Wraiths – I may change what sort of monster I use for this, but the general idea will stick. This monster will fill a missing role from the previous game. Previously, none of the flying monsters shot at the player. This will be a flying monster that fires a spell towards the player's location.

Falling/flying objects – These are a staple of star-fox like games, and I intend to add a few to this game.

UI

The user interface design in this game will be similar to that of the previous. Some indicator as to how many potions the user has will need to be added. Additionally, if time permits, I'd like to make the game more aesthetically pleasing.

States and Transitions

Unlike in the previous game, this version will launch in a welcome screen that says to click to start. This way, the player doesn't feel quite so "thrown into" the game. When the player clicks, they will move into the gameplay state. The player will progress through three stages, then the game will move into the end state. I would also like to explore the possibility of a "pause" state, if I have time.

Milestones

1. Using the previous game as a reference, add features from the previous game.
2. Add a simple test stage.
3. Test the monsters from the previous game
4. Add the new throwable potion feature.
5. Add a simple power-up
6. Add a health pick-up
7. Create the new monsters.
8. Create stages
9. Test and refine.

Tuning

The first thing I intend to tune will be the player's movement speed, boost speed, and projectile size and speed. In the previous game, I had a combination that I felt worked well. Once I feel confident about how the player entity controls, most difficulty adjustments will be made by adding power-ups and changing enemy locations. In extreme cases, I may also adjust enemy behaviors slightly. I'm also considering making potion bottles a pick-up item, but I would like to test the game with a certain number granted to the user first.