Protector

Game Design Document

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Intro

Protector is an FPS 3D game that includes 4 kinds of weapons. (Bosses will drop new weapons.) When you kill all the enemies in the level, you will win the game. All the accessible houses in the game are not accessible to the enemies, and all the houses will have a health case to heal yourself. So, try to use those houses to kill the enemies.
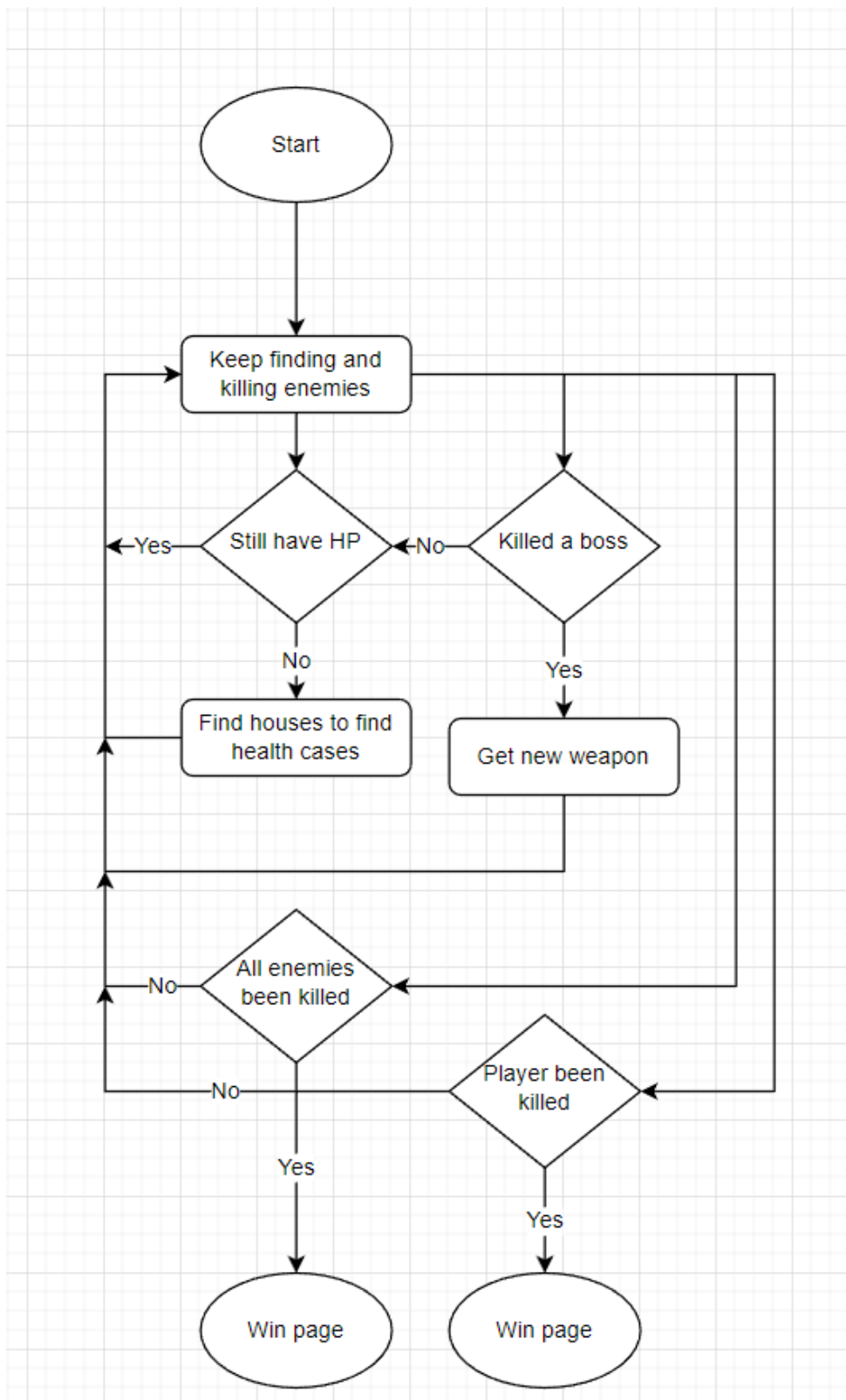
Gameplay Description

The core game play is to kill all the enemies in the game. When you kill the bosses, they will drop new weapons to help you to kill enemies. All the bosses should be killed at the end so no matter which you want to kill first.

The most important way to avoid an attack is to enter the accessible houses. Players are always safe when they enter the houses. And all the houses contain a health case to heal the players.

Spiders and bosses will automatically attack the player if they are close enough. And when players shoot them, they will also find and attack players.

Flow chart:

Flowchart:

- **Start** (oval) → **Keep finding and killing enemies**
- **Keep finding and killing enemies** → **Still have HP** (decision)
  - Yes → loop back to Keep finding and killing enemies
  - No → **Find houses to find health cases**
- **Killed a boss** (decision)
  - No → **Still have HP**
  - Yes → **Get new weapon**
- **All enemies been killed** (decision)
  - No → loop back
  - Yes → **Win page**
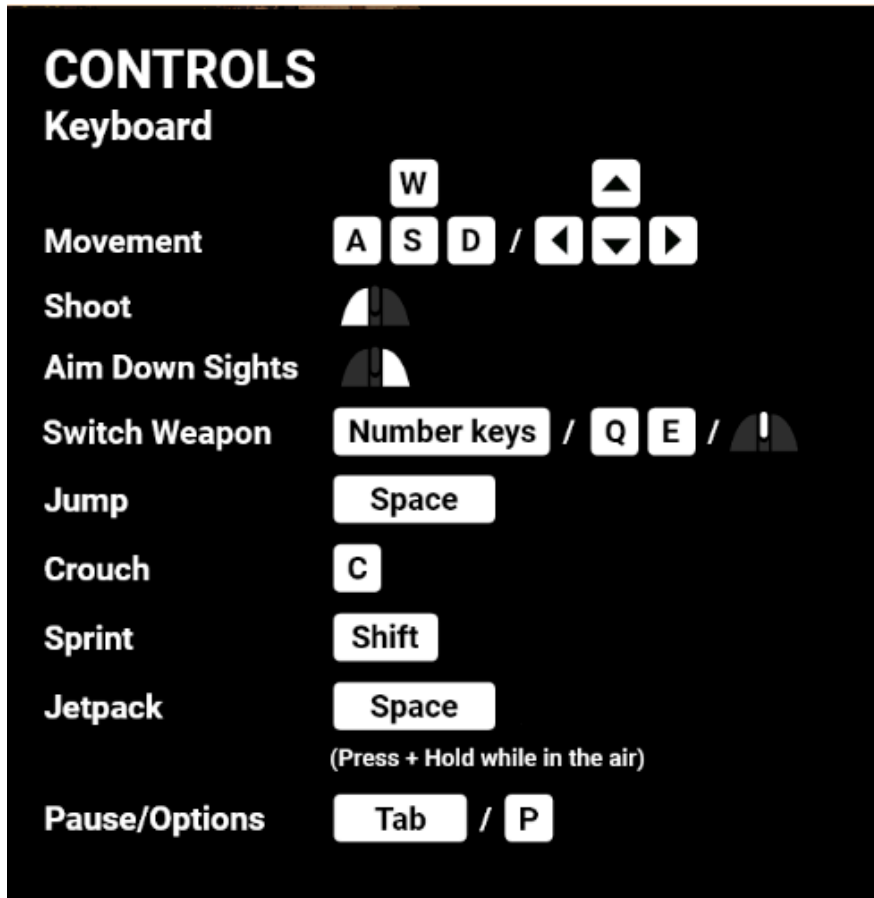- **Player been killed** (decision)
  - Yes → **Win page**

Map:

Merchants have now been deleted because time doesn't allow me to make a trade system. It's now just a place that players can go through. It can be used to dodge bullets from bosses.

Some houses are accessible but some of them are inaccessible. PLayer will have time to get familiar with the map in the tutorial level.

Control:

Systematic Breakdown of Components

3D renderer: Skybox, etc.
UI system: Include start menu, in game menu and win/lose menu. Also, the animation.
Collision system: Hit boxes. Weapon system.
Particle system: I add floating particles to the NPC and exit door.
Drop System: Spiders may drop health cases and bosses will drop weapons.
Pickup system: Players will be able to pick up the drops.
Enemy AI system: Bake the terrain and enemies will automatically follow and attack the player.
Sound system: Background wind sound. Attack sound. Hurt sound, etc.

Artistic Style Outline

The entire map constitutes a low-poly medieval village surrounded by wooden walls. The UI style is a concise style, containing only the most basic data that needs to be known.

The monsters are spiders and robot bosses. The robot boss belongs to the general robot appearance of low poly. The VFX is in the sci-fi style.

Weapons have the same style as the bosses. They came from the same asset package.

I also made the start interface and end interface as concise as possible, including all the required functions.

Asset Breakdown

Art Assets

Player: from the Unity Asset Store. Could jump and squat down.
Weapons: from Unity Asset Store. Will smoke when it overheats. Automatically charge. Have different ammo effects. Aiming is allowed. Use the right button to aim.
Spiders: model and animation from Unity Asset Store. Contain a small robot inside. The robot can be harmed. Spiders don't have a hit box.
Bosses: from Unity Asset Store. Have different attack methods. And have animations when shooting
- Both spiders and Bosses have a drop system. Color will change when being attacked. They have a health bar floating at the top of them.
- Enemies will have special animations when they find a player.

Environment: Ground edited by terrain tools, materials from Asset Store.
Light: Edit by me.
Buildings: All from the Asset Store.
Road Lights: from Asset Store.
UI/Menu: Health bar, ammo bar, navigation Bar and counting system from the same asset.
Start menu and Win/lose menu: have different buttons, like back to the main menu and replay the game.
injury feedback: come together with a package from unity Asset Store

Text Assets

I used UI to label all the tutorials and tips. It's easy to add some sentences on the screen through the UI.

The background story has been made as a short animation. It shows the background story when the player starts the game. It's skippable anyway. I made some simple pictures with sentences to show the story. It's a short video I made in Adobe PR.

Sound Assets

The game has an attack sound, it will be played when the player is shooting, or enemies are attacking. When players hit enemies, there will also be sound. Enemies have moving sounds.

The background sound is wind. Make a desolate feeling.

The game has a button sound at the start menu and win/lose menu.

Have a background music at the start page.

Have music when playing the story animation.

Development

Brainstorm Stage:

The game I will make is an FPS game. The game contains various hostile creatures, vultures, snakes, spiders, mice and so on that appear in the story. The theme of the game is like doomsday survival. The player will play as a citizen of Theodora city to defend the city from the invasion of those hostile creatures. Although most of the creatures are ordinary miscellaneous soldiers, there will also be elite monsters such as basilisks and chimeras to increase the difficulty. Players can use the heads of these elite monsters to trade with merchants to upgrade various items. When a certain number of elite monsters are killed, the player will meet the leader of the monster. When the leader is defeated, the player will win the game and successfully defeat all intruders in the city.

Level design:

Re made the map and added accessible houses.

Mechanics:
- ☐ Removed the trade system, time doesn't allow me to make a trade system.
- ☐ Decreased the kinds of enemies. Changed the kinds of enemies.
- ☐ Made the trade system a drop system.
- ☐ Added four different kinds of weapons to the game, and players will have one at the start. Edited the size of the player.

- Decreased the player's moving speed.

- Houses are now easier to enter. But some of them still need to jump to enter, this is to make sure enemies will not be able to enter houses. I'm still trying to find a better solution for it.

- Added dropping system includes weapon drop and health cases drop. Added spiders and bosses.

- Added AI for them and they will now automatically follow and attack the player when the player is close.

- Four bosses and they all drop different stuff.

- Spiders have a low chance of dropping health cases.

- Added pick-up of health cases in the accessible houses.

- Adjusted enemy bullets spread so players can live longer.

- Added gameplay tips to the player. Added Win page and lose page.

- Also, the replay button.
- Added invisible walls to resolve issues where players may get stuck in trees.
- Switch the random automatic enemy generate system to pre-placed system.

Final result:

- Added start page.

- Added narrative animation.

- Added in the game menu.

- Added music and button sound.

- Added tutorial level to help players understand the game.

Enter houses without jumping.

Additional Ideas and Possibilities

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As a level of this game, players will go to other places in future levels to help others defeat the invaders. There will be a wider variety of monsters and bosses than just spiders. Different types of buildings will also be added to the game, and players can better use buildings as passages to travel through various places on the map. Authenticity is also a good choice.

Also, I hope to make the trade system back one day.

Assets Used:
https://assetstore.unity.com/packages/3d/props/discobolus-statue-107544
https://assetstore.unity.com/packages/3d/fountain-prop-75912

https://assetstore.unity.com/packages/3d/environments/historic/modular-medieval-lanterns-85527

https://assetstore.unity.com/packages/3d/characters/dragndrop-minimap-radar-91675

https://assetstore.unity.com/packages/2d/textures-materials/10-free-realistic-nature-textures-forestdesert-arctic-more-235372
https://assetstore.unity.com/packages/3d/environments/wooden-canopy-182527

https://assetstore.unity.com/packages/3d/environments/fantasy/church-3d-68143

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