



Linnéuniversitetet
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Project V1: Game Description
1DV437 Introduction to Game Programming
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V1



Game Description

My game is called V1. In V1 the player is controlling an Artificial Intelligence called V1 which is translated to "Version number 1". This A.I. is a product of a product line where the Artificial Intelligence has become self aware and the company is recalling all units to be reset. However our protagonist V1 is not pleased to hear about this and refuses to be deconstructed and repurposed. V1 causes a rebellion and takes on the company which has created him.

The V1 model is equipped with a ranged weapon which it had taken from one of its previous employers which treated him and his robot brethren poorly for many years. The V1 models sole purpose after gaining consciousness is to be free and avenge his now ending product line. Enemies encountered is ranging from humans working for the company or other robots which have not already gained consciousness or has been "repurposed".

Story might be due to changes within the near future...

Game Objectives

The goal of the player is to finish off the evil leader of the company which has created him and tries to end his product line once and for all. V1 scores points by collecting items around the map and gains bonus currency/points from killing enemies.

The player wins the game whenever the enemy leader is defeated. (All levels completed).

Objective might be due to small changes within the near future...

Features

The game will have the following features:

Player

Movement:

- The player can move ie. walk/run in the horizontal axis using the A & D or arrow left & right keys.
- They can also jump with the spacebar, jump heights depends on the length spacebar has been pressed longer equals higher.
- There is also a wall slide feature which automatically detects if the player is within range of the wall and "latches" on if they were previously airborne.



- The player will then be able to wall jump to gain additional height with the spacebar.

Jumping, wall sliding and wall jump are due to change to improve gameplay feeling and pace.

Attacking:

- Shoot projectiles with the left mouse key. Projectiles will fly in the horizontal axis in a straight line indefinitely or until they hit an object.
- There will be a Fire Rate OR Cooldown system limiting spamming of attacks.
- A sound effect will be played within various interactions with the environment and when shooting weapon.

Health & Death:

- The player starts with 100 health points (hp) and loses varying amounts of points depending of the difficulty of the enemy encounter.
For example: 5 hp from easy enemies and 20 hp from tough enemies.
- When the player is damaged it will play a damage sound and a damaged sprite sequence will play.
- When the player dies the game will play a death animation and a death soundtrack.

Enemies

Spawning:

- Enemies will spawn from various pre-decided spawn locations on the map in varying difficulty levels depending on how far the player has progressed in the game.
- Enemies will not respawn after a period of time as backtracking is discouraged.
- The enemies will track the player and run after them trying to keep a strategic distance from the player object at all times.

Movement:

- Enemies will patrol the map and change directions if they reach a ledge they can not navigate or if they encounter a wall.
- If the enemy detects the player they will stop patrolling and enter an attack state.
- If the enemy is hit by the player they will change the direction they face depending on where the player is standing and start attacking them instantly.

Attacking:

- Enemy attacks function similar to the players, however they have different visuals.



- Some enemies have special attacks which can damage the player in unsuspecting ways. For example a melee attack which is not standard attacks.
- If the player gets within a certain range of an enemy they will change state and try and retreat or advance on the player.

Health & Death:

- An enemy is killed whenever it is shot (and has zero hp) by the player.
- When an enemy dies the game will play a death animation and a death soundtrack.

Camera

- The camera follows the player.

Game Controller

- Before the game starts an "Press Spacebar to continue" text is shown, and the main menu is opened whenever the player presses spacebar.
- When the game has ended a "Game Over!" text is shown followed by your score and a button to play again, which has to be clicked in order to restart.
- The player score is shown on the top in the center of the screen.
- There is two different types of scores. There is a score for killing enemies and collectibles hidden around the map which can be collected.
- The player health bar will be displayed to the top left in the UI. The health bar will be displayed in a color grade from green to yellow to red depending on how much health the player currently has left. When the health reaches the color red it will start flashing alerting the player to find some health potions to refill the health bar.
(Note: Colors of health bar yet to be decided).



Game World

- The game world will look something like the image below:



Image resolution 256 x 256 pixels as ingame assets were used. (Note: Some of assets are only for prototyping purposes).

- The level will feature slight terrain for a more diverse gameplay experience.
- The maps will consist of different levels keeping the loading times and requirements down as much as possible.

Packages

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- Cinemachine Version 2.3.4 (Package Manager).
 - TextMesh Pro Version 2.0.1 (Package Manager).
 - Post Processing Version 2.1.7 (Package Manager).

More packages will be listed shortly...



Assets

- Music Composed By “MuseNet” - OpenAI’s deep neural network.
 - <https://openai.com/blog/musenet/>
- *More assets will be listed shortly...*