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Link to Demo: https://youtu.be/GzQfiXxTMVo

CG Final Project.zip contains everything we have in unity.

Build.zip contains the .exe game.

Computer Graphics Final Project Report:

Modeling & Animation:

As we put more effort into making our own models and animations, we realized making good models and smooth animations are too difficult but designing a game is more interesting and related to coding. So, we decided to borrow some existing models and animations online to use them in our games.

Game Features:

Player:

Like classical RPG games, we created a knight avatar as player. We can control the player using W, S, A, D keys to move. Initially there are no weapons on the player, and we put two weapons for players to pick up. When equipped weapons, player can attack

using left mouse click and roll while running using space key. Weapons have different animations and damages. Press 1 to equip sword, 2 to equip spear and 3 for drink potion.

UI & Interactable Objects:

On the left-top side, there are three UIs showing the current player health, current number of potions player owns, and current number of coins player owns.

HP bar: If HP bar gets empty (player has no more HP), players dies. And plays a death Animation. Then a restarted button and a text would pop up to notify player to restart the game.

Potion: Potion can restore players hp bar, can be collected via chests.

Coin: Can be collected via chests.

On the right-top side, there is an exit game button. Once clicked, the game exits.

There are some chests placed in the scene, they contain some number of potions and coins, and can be opened by player.

Monster:

There are two monsters placed in the scene and we wrote some easy AI to let them interact with player. Once player gets close enough with monster (monster has a perception area), monster starts to chase and attack player. Each monster has its health and dies if health is blow 0.

What we learned in this project:

We learned a lot about designing game and using unity engine.

We created an animator and wrote scripts to let player control the knight. And using cinemachine to create a smooth game camera. Also, we wrote several different scripts to let player to interact with other game objects using colliders.

We learned using Nav Mesh Agents and adding it to create our simple Enemy AI script.

For chests and weapons, we put effort to make them natural and intractable.