Zense Project

Project Title : FPS parkour challenge

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Project Description

Instructions to run

Download the files in the Github Repository (https://github.com/hypnotic2402/Zenze_Unity). extract the 'build' folder inside. In the build folder run 'fps t1.exe'

WINDOWS

Extract the 'build' folder inside. In the build folder run '*fps t1.exe*'

LINUX

Extract the 'linux_build' folder inside. In the folder run '*linux_build.x86_64*'.

MAC-OS

(May not work for ARM processor versions)

Extract the '*macOSBuild*' folder inside. In the folder open the containing folder and run '*macBuild.app*'.

Game instructions

The player will spawn at the beginning of the parkour course. The goal is to shoot all of the 5 apples placed on the map in the least time possible. Use the mouse to look around and MOUSE1 (left mouse button) to shoot (single-shot). Each apple will take 2 hits to destroy and the gun has limited range.

Move around using the WASD keys and space bar to jump. Find your way through the level and destroy all the apples.

If you get stuck at some stage press R to restart the game and Esc to close the application.

- Try landing on top of the platforms instead of the side faces to avoid getting stuck and falling down.
- Air-strafing is the trick.

Implementation

The game was designed using Unity. After watching a basic tutorial about Unity on YouTube, I tried to learn more about the libraries present in Unity through various forums, videos and Unity documentation. CharacterControl was used to make the player movement. To implement the FPS mechanic, the camera is rotated based on movement of the mouse in the X or Y directions.

The jumping mechanic is done by increasing the velocity in -Y direction for every frame that the player isn't touching the ground (checked by Mesh colliders in Untiy)

For the shooting mechanic, we take the vector pointing in the main camera's direction and cast a ray, returning any gameObject it hits. Changes in this received gameObject are made thereby.

These scripts were written in C# which was similar to C++.

Almost all of the designing (eg. the gun) was done using Blender.

The Blender modelling and level designing took the most time to complete. Each platform was to be checked to be possible to reach as well as not too easy reach.

Future Plans

Due to the game built in 5 days, it contains lot of improvements and potential bugs. Hence, there is a lot of scope for improvement. Some of the features that can be implemented are :

- The look of the game is quite bland and could use good textures.
- Menu System
- Sound and Music
- Additional levels
- Additional animations such as gun-firing.
- Power-ups
- Multiplayer support.

I plan to at least make the game into a more refined project than it is now.