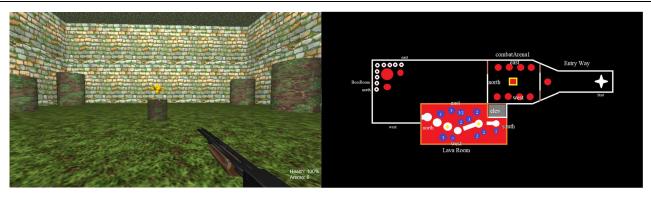Non, Gary Steven L.   4/20/2018

Screenshot from 'Find the Golden Suzanne!' and Map of the play environment

I. PROJECT DESCRIPTION

My project is a simple first-person shooter game, in the vain of DOOM classic. DOOM classic is one of my favorite games and I have always wanted to make a game like the aforementioned DOOM.

II. CONCEPTS APPLIED

I applied a lot of the lessons I learned in class; Modeling transformations were heavily utilized, from the rotation used in the firing and reload animation of the gun, the scaling of the fire ball as the boss character charges his attack, and the translation used when one of the lesser enemies charged at the player to engage in melee combat. I placed a few point lights as well as an ambient light to create a general mood.

I also created and utilized quite a few 3D models in the project. Please note that the mesh material used was MeshPhongMaterial (), to make each one reactive to the light in the scene.

List of created Models;

1. **Wall** – *Uses box geometry.* This mesh is a simple rectangle that stops the player from wondering off course and has an image of a brick wall mapped to it.
2. **Trap Wall** – *Uses box geometry.* Is the same as **Wall** but will sink to the ground to reveal a possible passage way to the player.
3. **Door** – *Uses box geometry.* Is the same as **Wall** but has an image of a door mapped to it instead.
4. **First Aid** - *Uses box geometry.* Is a small box that will give the player plus 50 health when picked up. It has a custom image of a red cross with a white back ground mapped to it.
5. **Ceiling** - *Uses box geometry.* Is used to create the ceiling of the enclosed arena environment. It has an image of stone with grass mapped to it.
6. **Floor** – *Uses plane geometry.* Is used as the floor for the whole game. It has a looping image of grass mapped to it.
7. **Platform** - *Uses box geometry.* Is used to create an elevated platform to jump off from in the lava portion of the game. It has an image of brown dirt and leaves on it.
8. **Lava** - *Uses box geometry.* Is a trap that will deduct 10 health from the player when he/she falls into it. It has an image of molten rock mapped to it.
9. **Elevator** - *Uses box geometry.* Is a platform that will lift the player. It has an image of stone with grass mapped to it.
10. **Sentry** – *Uses cylinder geometry.* Is often a hiding spot for the Ruby Monkey but is also used in the lava portion in tandem with the **Platform**. It has an image of brown dirt and leaves on it.

11. **Ruby Monkey** – *Uses exported Suzanne model from blender made*. Is a red colored Suzanne model that spits fire balls at the player until killed. Also has a gold variant.
12. **Sapphire Monkey -** *Uses exported Suzanne model from blender made.* Is a blue colored, horned Suzanne model that will charge and then melee the player until killed. Also has a gold variant.
13. **Golden Suzanne -** *Uses exported Suzanne model from blender made.* Is initially a small gold colored Suzanne, it will grow to 35 times its normal size to engage the player in combat.
14. **Golden Hands -** *Uses box geometry. Left and right variant both exist.* The hands used by the **Golden Suzanne** to combat the player. Is formed by 2 palms, and 14 finger parts, all using box geometry with a custom image.
15. **Fire Ball** – *Uses sphere geometry.* Used by the Ruby Monkeys as projectiles, will deal 10 damage if contact is made with the player.
16. **Big Fire Ball** – *Uses sphere geometry.* Is the same as **Fire ball**, but bigger, and is used by Golden Suzanne instead.

III. RESOURCES THAT YOU BORROWED FROM THE PUBLIC DOMAIN

3D Models:

1. The **Shotgun** model used as the player's primary weapon is from the free 3d model sharing website Clara.io
2. The **Chainsaw** model is used as the player's secondary melee weapon and is from the free 3d model sharing website free3d.com.

Audio:

1. The sound the Golden Hands used is called '***Concrete break'*** from YouTube.
2. The sound the chainsaw uses for effect is called '***Chainsaw Sound Effects'*** from YouTube.
3. The sound used by the shotgun as its fire and reload sound effect is called '***Shotgun Sound Effect'*** from YouTube.
4. The sound used when the Boss enemy takes damage is called '***Stock Scream Effects***' from YouTube
5. The sound used when Trap Doors are opened is called '***Sound Effect: Stone Slide***' from YouTube
6. The sound used when the Sapphire Monkey charges and attacks at the player is called '***Sword Slash Sound Effect***' from YouTube.
7. The sound used when the Ruby Monkey attacks the player with a fireball is called '***Cinematic Whoosh Fireball - Sound Effect [HD]***' from YouTube.
8. The background music '***At Doom's Door***', '***I Sawed the Demons***' and '**Victory Music**' are from the Doom Remake album, '***IDKFA'***. It is specified in the description of the album on YouTube that the album is 100% free to use.
9. The sound used for when the shotgun is empty is called '**Handgun Trigger Pull Empty [SOUND EFFECT]**' from YouTube.
10. The sound used when the Boss character is hit is called 'Dio – MUDA MUDA' from YouTube
11. The sound used when the Boss Character dies is called '**Dio - WRYYYYYY**' from YouTube.
12. The sound used when the player wins the game is called '**yare yare daze'** from YouTube.

Images:

1. The skybox used for the background environment was from a GitHub project called '**Website**' by BabylonJS.
2. The image that was mapped to the ceiling was from '**Stylized textures practice**' by AkiRa.
3. The image used for the floor is called '***Grass floor 01***' by Hoover1979.
4. The image used for the lava is called '**Lava**' from Giphy.
5. The image used for the sentry towers is called '***Ground Texture Grassy Time***' by Aecoleman.
6. The imaged used for the wall and trap wall is called '***PixaTool Default Wall***' by Twitter user @Kronbits.

Code:

1. The Threejs documentation was used heavily in this project, from sections about the Raycaster, Audio, JSONLoader, ObjectLoader, and Pointer Lock controls.

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