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**Final Project Proposal:**

**Updated Mario 64**

**Abstract**

We would like to re-create the first level from the Nintendo 64 game Mario 64. The implementation would be similar to the 3rd assignment we did. We could create a camera that either follows Mario around, or flies through the level giving a bird’s eye view of the level. We would like to update the original version by using more polygons and some of the advanced shading and lighting techniques we have learned. If time permits, we could add actual game features such as moving enemies and a Mario that can jump.

**Implementation**

We would like to use Blender (or a similar program) to model the original 3D terrain from the game. After some research, it appears that we can draw the model in Blender, export it to a OBJ format and use Three.js to render the model in WebGL. We’re not sure to what extent we can update the graphics with the modern tools available to us, but better textures combined with advanced lighting and shading models, we should be able to make it look much more modern.

I did not get my camera working properly in the 3rd assignment, so I will need to fix that. Once fixed, we would use a refined version of that for the camera that follows Mario around the map. We can create a Mario avatar that is centered in the camera’s view and implement the jumping motion to get over obstacles.

Another area we would need to research would be how to model things such as bridges and trees. So far, we have only done one consistent plane, nothing with a potential underside or multiple layers. Incorporating something like a sun in the sky could really help to bring the level to life.

**Note:**

We are open to other project ideas. If we are not allowed to use Blender or Three.js, We have a backup project in mind to create a music visualizer. We think we can implement the music visualizer with just WebGL, but haven’t looked into it too far. We would like some feedback on whether or not you think this project is too ambitious.

**Screenshots:**

 

 

 

