3DMODEL FINAL PROJECT DOCUMENTATION

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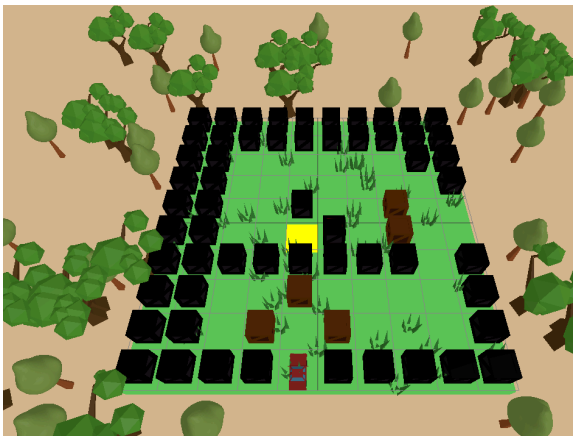


I. PROJECT DESCRIPTION

Our project is a simple block pushing game in 3D. Block pushing games like these are common in many games and usually serve as a puzzle to advance to another level. This is most commonly seen in games like Pokemon, where there is usually a puzzle where you have to push rocks in a certain order and pattern to advance. This served as the motivation of our project.

The game is easy. The point is to push a crate onto the gold square without unintentionally blocking yourself off permanently by pushing the crates in the wrong spot.

II. HOW TO RUN YOUR PROGRAM

1. Go to the project folder.
2. On CMD, run **`npx vite`**
3. Open the project on a web browser with the given address (localhost:5173 by default)

III. CONCEPTS YOU APPLIED

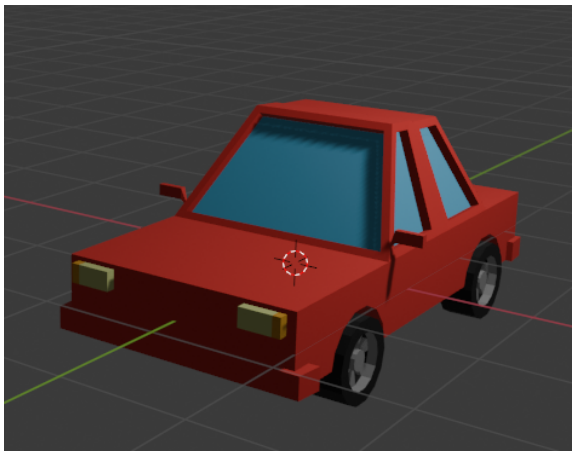
Camera and Perspective

- Orbital Camera (Default: Top-down at an angle)

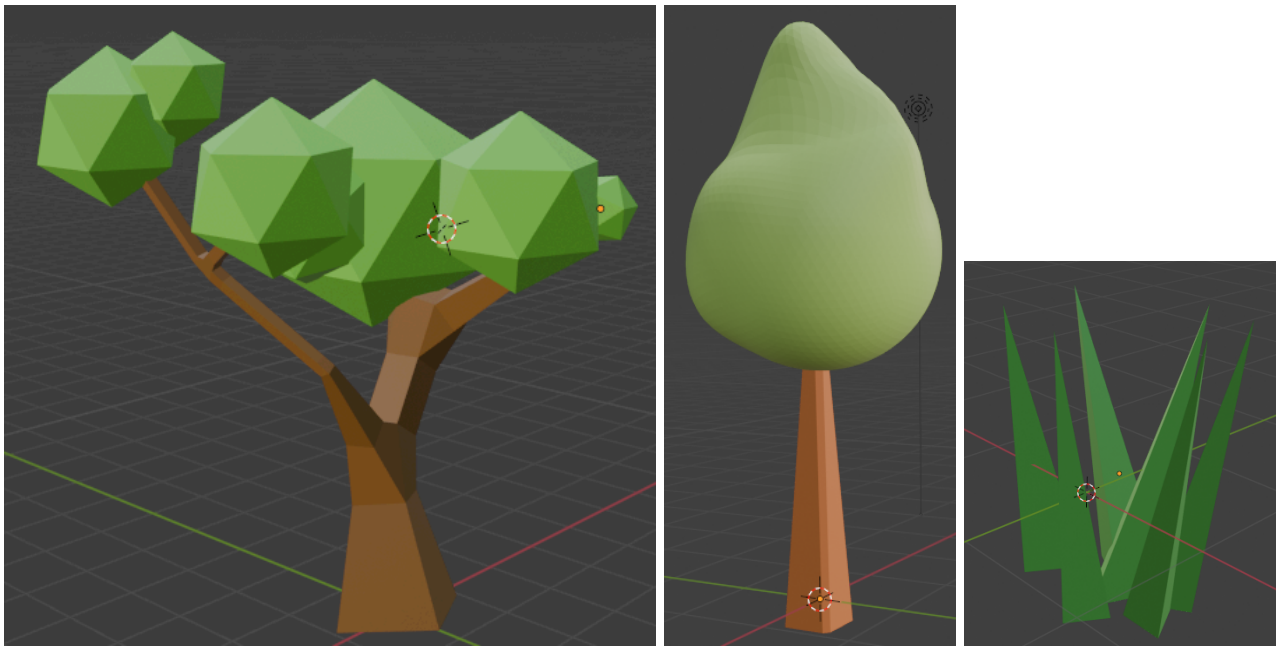
We created a perspective camera placed above the space. Then, we gave it Orbit controls to allow the user to view the space from different angles. This allows the user to adjust their view how they like so they can have an easier time navigating and playing the game.

Modeling and Materials

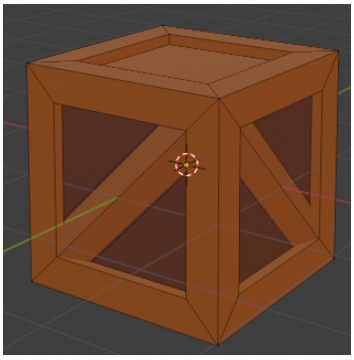
Several assets were created on Blender and were imported into the ThreeJS project. We were able to perform modeling transformations to create simple models by combining the built-in meshes on Blender. Each model was styled with its own material that made up its exterior. Below are the models we created on Blender:



Car Model
(Combined Cube and Cylinder meshes)



Tree and Grass Models
(Combined Cube, Icosphere, and Cone meshes)



Crate Model
(Combined Cube meshes)

IV. RESOURCES THAT YOU BORROWED FROM THE PUBLIC DOMAIN

The python http server code was from iansedano from the stackoverflow post: https://stackoverflow.com/questions/59908927/failed-to-load-module-script-the-server-responded-with-a-non-javascript-mime-ty.

- We took from this code due to the fact that the default python -m http.webserver was not properly loading our .js file since it saw the content type as text/plain instead of application/javascript.

V. REFERENCE

ChiknFrydBlender. (2021, August 23). How to make low poly box crate in Blender. YouTube. https://youtu.be/f6SgGG3koE8?si=aLm30mb1bqiDGjt5

Develentum. (2019, July 7). Blender low poly grass tutorial - for Beginners. YouTube. https://youtu.be/E1qp09nVEg8?si=QLIEbB2ob59STnLv

Grant Abbitt. (2019b, October 26). Make low poly trees & save the planet: #teamtrees: Blender 2.8. YouTube. https://youtu.be/p-9pgZI3inI?si=CsCM9SaWfRMhHRVc

Keelan Jon. (2020, June 3). Blender 3D - easy lowpoly car - beginners tutorial. YouTube. https://youtu.be/Dv4U-X-0Pms?si=iYj-JzOglRN3WlQa

Ryan King Art. (2021b, January 2). How to make low poly nature (blender tutorial). YouTube. https://youtu.be/a2vhQ6GfXIw?si=4lkdbR-_JxTa-IdZ