Individual Project Part 2: Final Version
Farm Game

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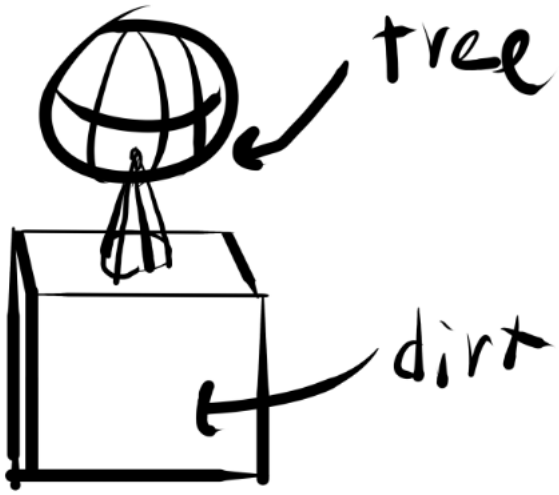
What your WebGL application is all about (brief description of your project):

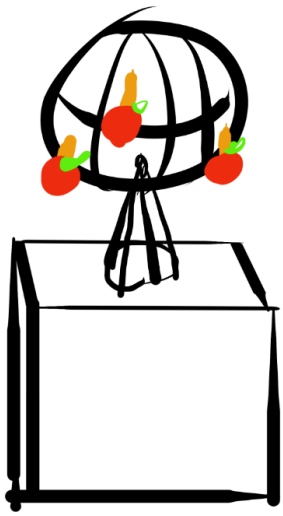
My project is a basic farming game where you can collect produce to make money.

Any changes, improvements, or modification from your proposal

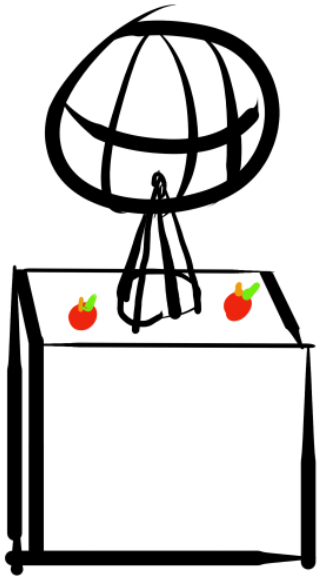
In the farming game you will start out with a cube of land and an apple tree.



The tree will grow apples, the apples will start out small and increase in size

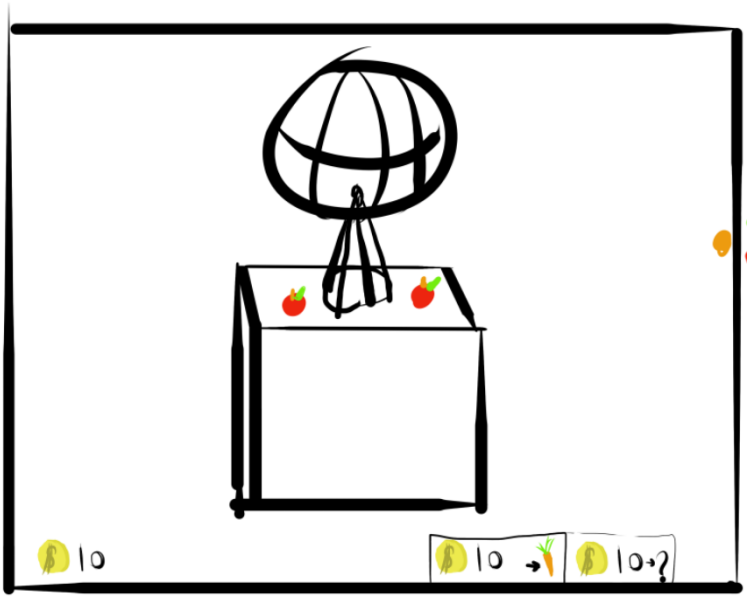


Once the apples are fully grown the player will be able to click on the tree to make them fall (the tree will shake) or they will just fall on their own when they are fully grown. I'm not sure if i want them to interact with the ground or if i just want them to stop at a certain point.
The apples stop when they hit the ground, audio was added when the tree shakes and the apples fall

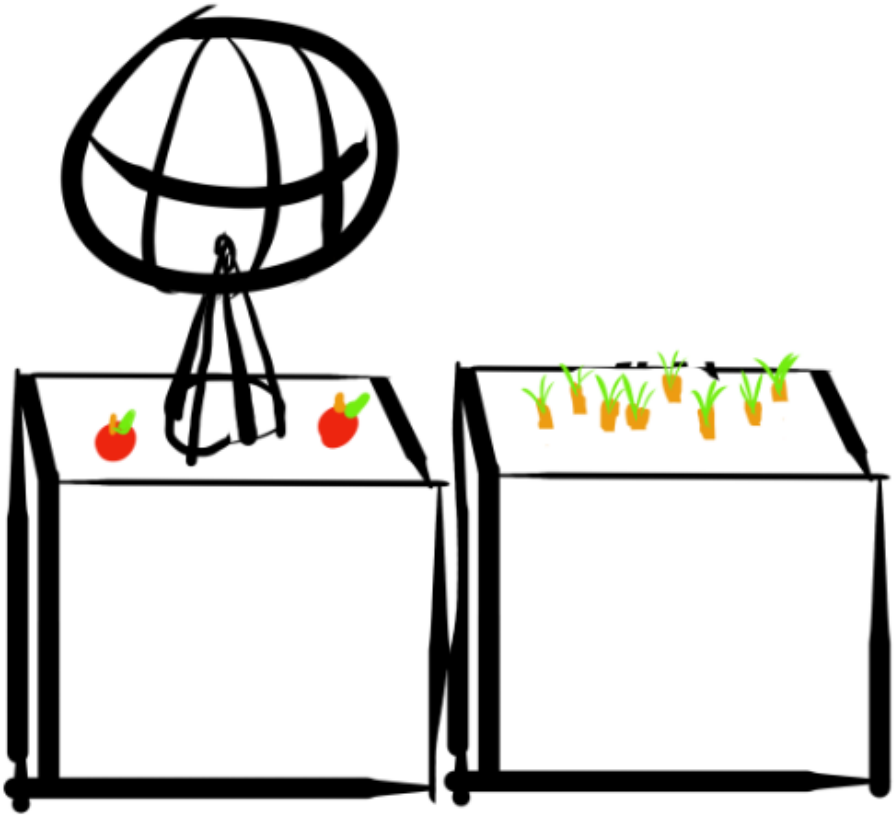


There should be a counter somewhere on the screen to keep track of the money you get from clicking on the apples.

Using this money you can buy another plot of land where you can grow more produce. If I have the time I think I'll have different kinds of produce, maybe carrots or grass that you can buy with the money from the apples.
I only had time to add carrots



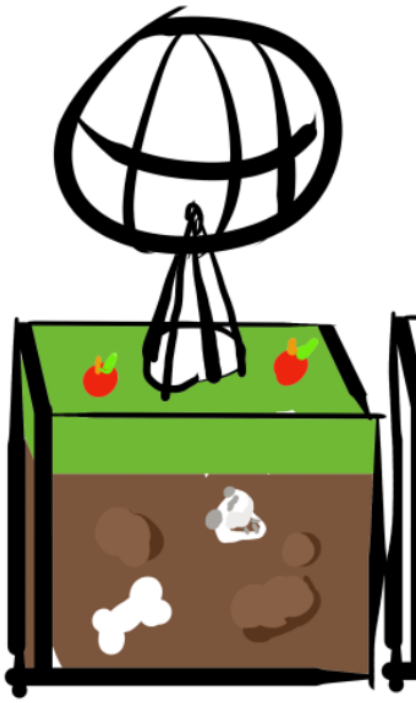
The new plot of land will be next to the old one and additional plots will be formed in a circle around the first one.



The camera will be able to move around the middle plot of land in a circle and if I have time “wasd” will move the center point of the camera. (as in the camera will now move around a new point that you can move with the keys “wasd”)
Did not implement “wasd”, i didn't feel as if it was necessary

The objects in the game will be made up of simple geometry and if I have time I want to make the apples with a more complex geometry possibly with another program and then imported.
I chose to make the carrots more complicated instead of the apples but they are not imported.

If it looks nice I want to use texture mapping on the plots of land to make the top grass but the sides a cross section of dirt maybe with rocks or bones in it.
I didn't add rocks to the texture but now i think it would have been a good idea



Shadows seem like they're going to be complicated so i'm going to work on them at the end hopefully having all objects cast a simple shadow but if i get short on time i'm going to dramatically simplify the shadow requirement.
No shadows, but i implemented lighting instead

For interactions, the camera will be moveable, the apples will fall, the tree may be shaked (possibly), the carrots or other produce will be clickable to harvest and users will be able to buy new plots of land and new seeds (or just trees if I'm short on time).

Description of how your WebGL application satisfies all the requirements (this is important to get proper marks for what you have done)

Using WebGL 2.0 APIs and libraries
I think so, i used WebGL Boilerplate from https://webglfundamentals.org/ which i think is fine
• Three-dimensional (3D) application (not 2D)
The project is in 3d
• 3D objects (your own)
The carrots are my own the rest is simple geometry, no objects were imported
• Camera(s) (viewing)

The camera rotates and a slider at the bottom lets you manually move the camera
• Lights and shading
The objects have lighting
• Texture mapping
The plots of land have texture mapping
• Interactions (user control)
You can click on the tree and the produce
• Originality and artistic creation
This ones up to you

Detailed instruction/manual of how to set up/install, run, and use your WebGL application (if necessary, include screenshots

1) Extract all and run farmgame.html
2) Uses textures so you might have to host it to get past CORS
3) Sometimes you have to refresh the page if all you see is a white page
4) Click in the tree to shake it, apples will fall if they are fully grown
5) Pick up the apples by clicking on them
6) Click “buy carrots” to unlock carrots
7) Click on fully grown carrots to pick them

What you have learned from the project

-I learned about writing in js
- i learned about lighting and textures in webgl
- i learned about CORS
- learned how to debug with vscode instead of the browser
- learned there is no good way to debug your shaders