INTERN REPORT

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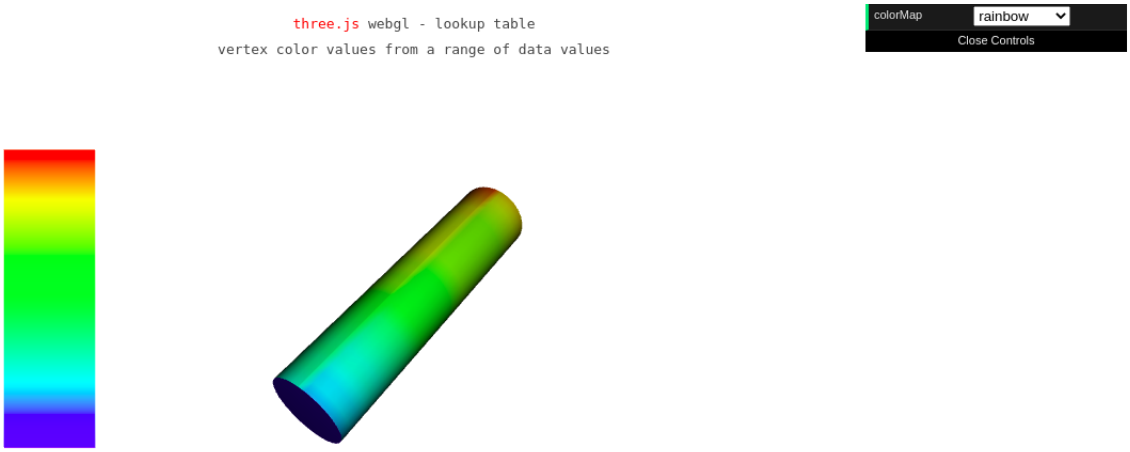
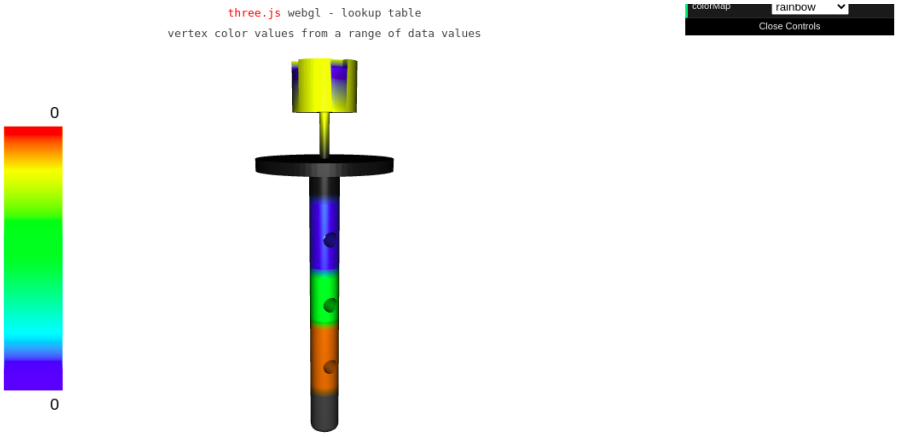
Model Designing:

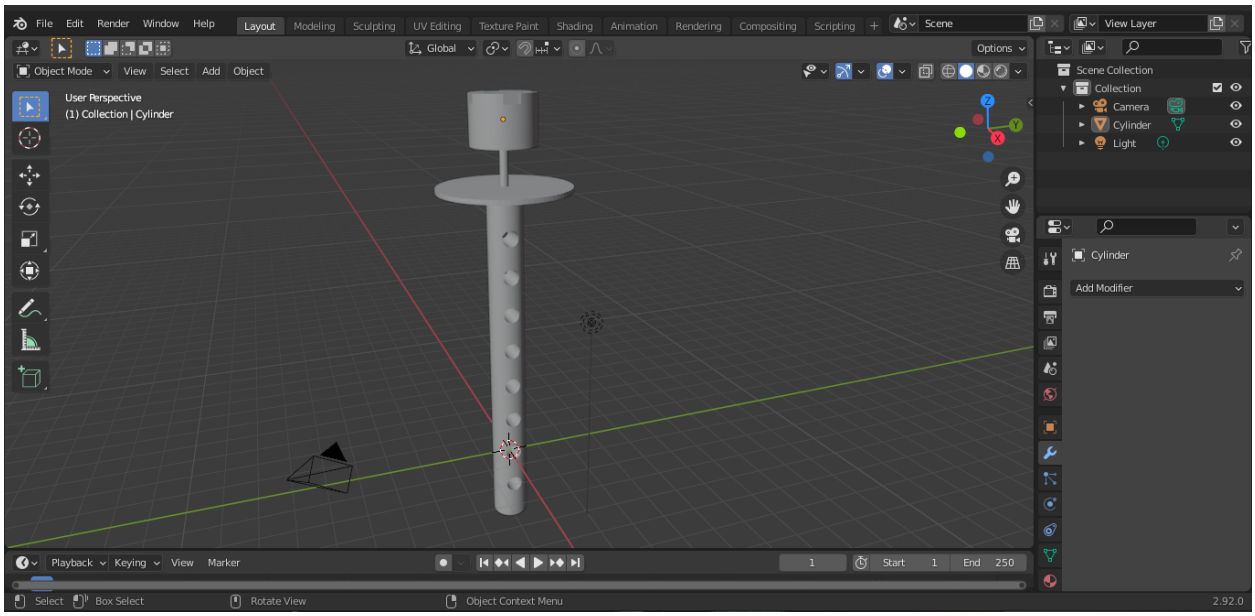
- To start with designing a 3D-model for a web application, we need to use a **gltf/glb** extension model for an optimal rendering on the website.
- In my project I used Blender to create 3d models.



- With limited resources on the internet, I could come up with this model(generating this model with 3Js). I used a naive method to colormap the model, by analysing the index of vertex and coloring each vertex based on that.
- A GLTF format is a JSON file, containing all the information about the scene(in Blender) and the mesh associated with it.
- The final product looks like this.



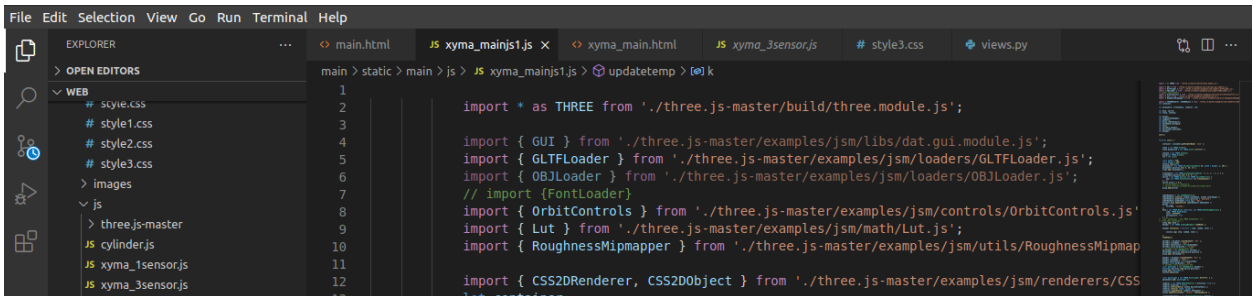
- [ ] Create a Blender model suiting the model appropriately.



- [ ] Then click on **File->Export->gltf/glb**
- [ ] Save the file in the project folder.

Download Code:

- Download the repository from the site-[Git Hub[3Js]]



- Use the repository-[Main codebase]. In this navigate to **main->static->js->xyma_mainjs1.js**

Code Walkthrough:

- ***Line 1-12**:* Importing packages from threejs, path to source codes are mentioned in the code.

- ***Line 13-28:*** Initializing required variables. (fps in ***25*** is for controlling the frames per second in live data updating)
- ***Line 33-85(init()):***
    - container- provide the div element of html, for rendering the 3d model on the webpage.
    - scene.background- background color of the scene.
    - width,height - Based on the screen dimensions,(***Change accordingly)***
    - sprite.scale.x - changing the width of the legend.
    - mesh=(new….(THREE.MeshPhongMaterial))-To ***change accordingly,*** use this site for more info **Materials**- navigate the side bar for materials.
    - earthdiv,moondiv -For labelling on the legend.

- ***Line 158-188(loadmodel()):***
    - loader-setpath to the folder where the glb files are located, and in .load(provide the ***file name***).
    - console.log(geometry)- checkout for geometry properties.

- ***Line 190-240(updatetemp()):***
    - sensortemp- array consisting of temperature values of sensors.
    - If else conditions are based on positions done by debugging from geometry properties.

- ***Line 242-289(updatecolors()):***
    - Update colors on the model based on temperature values assigned to vertices.