Building a Docker Image and Running it locally (For Windows)

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Content:

To Build a docker image, we first need to ensure that we have docker desktop installed and running on our system.

DOWNLOAD AND INSTALL DOCKER

https://docs.docker.com/desktop/install/windows-install/

Follow the steps for installing docker desktop, and ensure you have WSL2 installed in the system.

To create a docker image, follow these steps:

Step 1:

Clone the repository (https://github.com/mrdoob/three.js.git) using the following command in WSL command line:

git clone https://github.com/mrdoob/three.js.git

Step 2:

Navigate to the required directory:

cd three.js/editor

Step 3:

Create the Dockerfile using the following command:

Touch Dockerfile

Step 4:

To edit the dockerfile, either open the dockerfile in notepad and edit it, or if using WSL, use the following commands:

Vi Dockerfile

(press i to enter into edit mode, where we should enter the dockerfile content)

Dockerfile content:

Use a lightweight web server as a base image

FROM nginx:alpine

Set the working directory inside the container

WORKDIR /usr/share/nginx/html

Copy the editor files into the container

COPY . .

Expose the port on which the web server will run

EXPOSE 80

(press escape and type :wq to write and quit the vi)

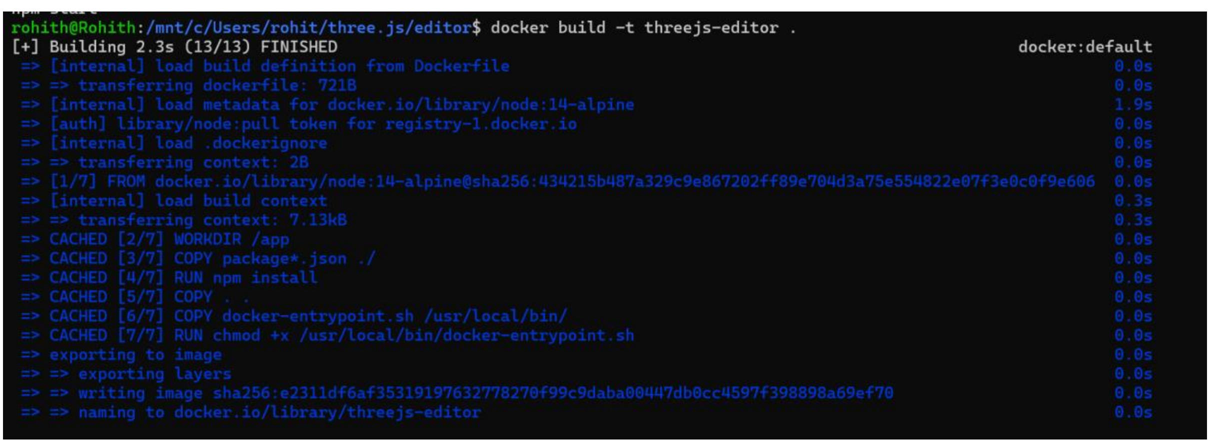
Step 5:

To build the docker image, we need to run the following command to obtain a docker image:

docker build -t threejs-editor .

We can view the image in docker desktop

The command line should look like this:



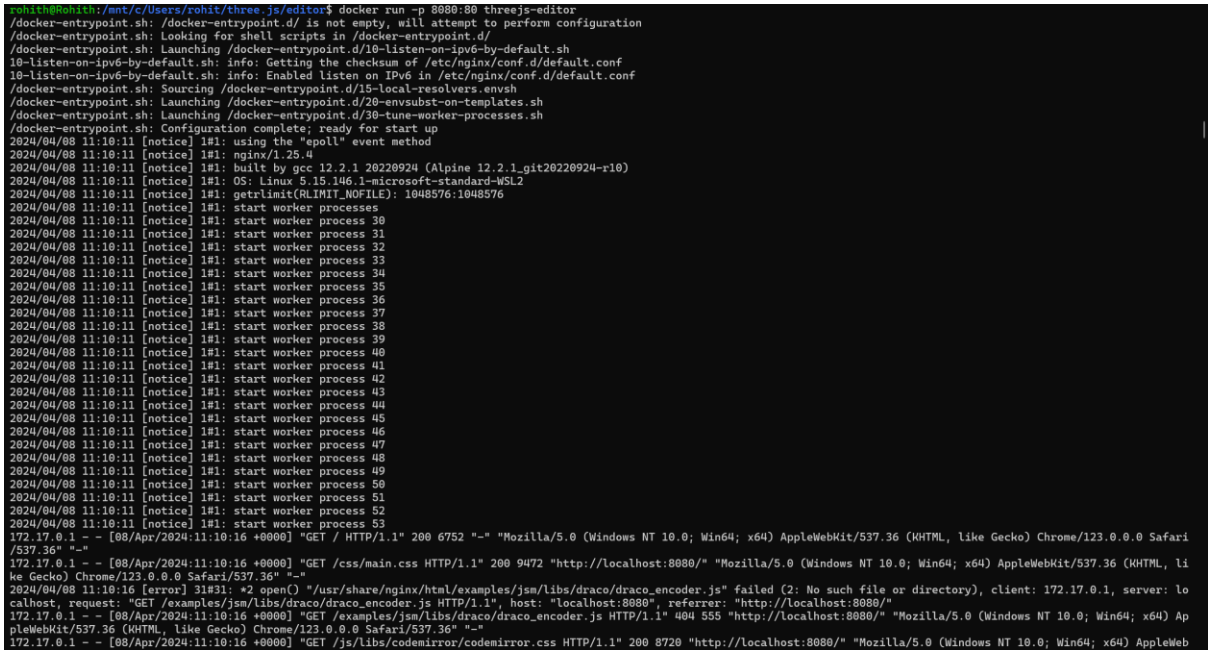
(if you get a permission denied message, run the command with sudo before it)

Step 6:

After building the image, run the container with the following command:

docker run -p 8080:80 threejs-editor

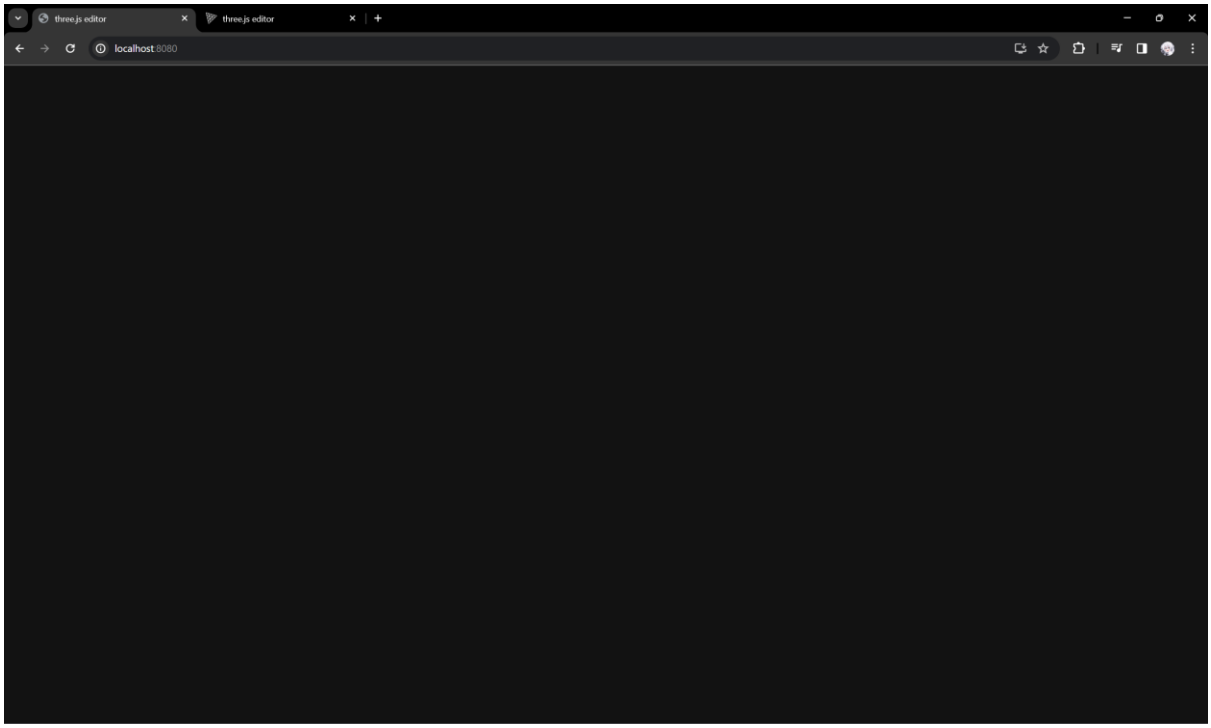
The Docker daemon will start and should look something like this:



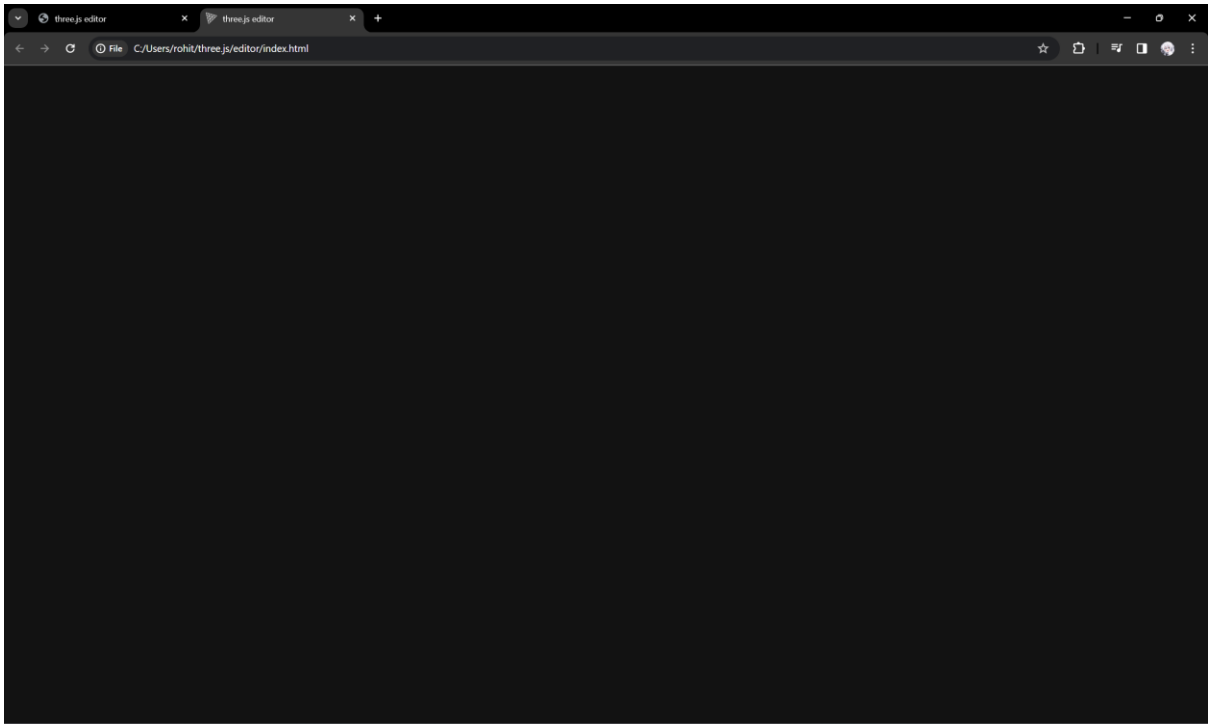
(This command prevents you from using the command line. If you don't want that, use the command line: docker run -d -p 8080:80 threejs-editor to run the docker container in a detached mode)

Step 7:

In a web browser, type in localhost:8080 to check whether or not the application is running or not.



This is the screenshot of the docker image running, and in the next screenshot we can see its mirroring the html file present locally in the editor directory.



Hence, we have understood how to create a dockerfile, build a docker image and run the docker container in a local machine.