SIT737 - Task 5.1P: Dockerisation of a Simple Web Application

This task demonstrates how to Dockerize a basic calculator API built using Node.js and Express. It also includes Docker Compose for orchestration and a container health check to ensure the app is running properly.
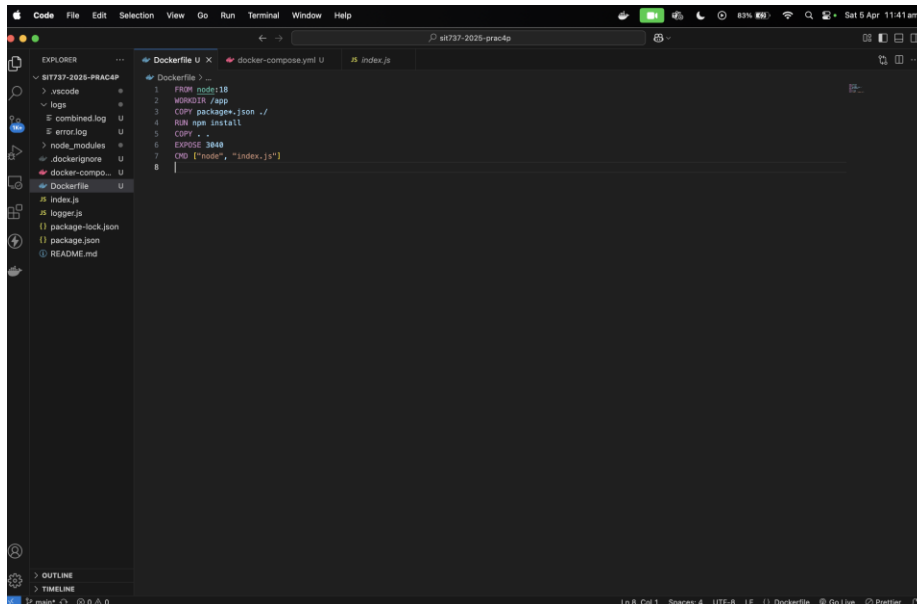
Step 1: Install Required Tools - Node.js - Docker Desktop - Git - Visual Studio Code

Step 2: Clone my previously created calculator app with endpoints like /add, /sub, /multi, and /div using Express.js
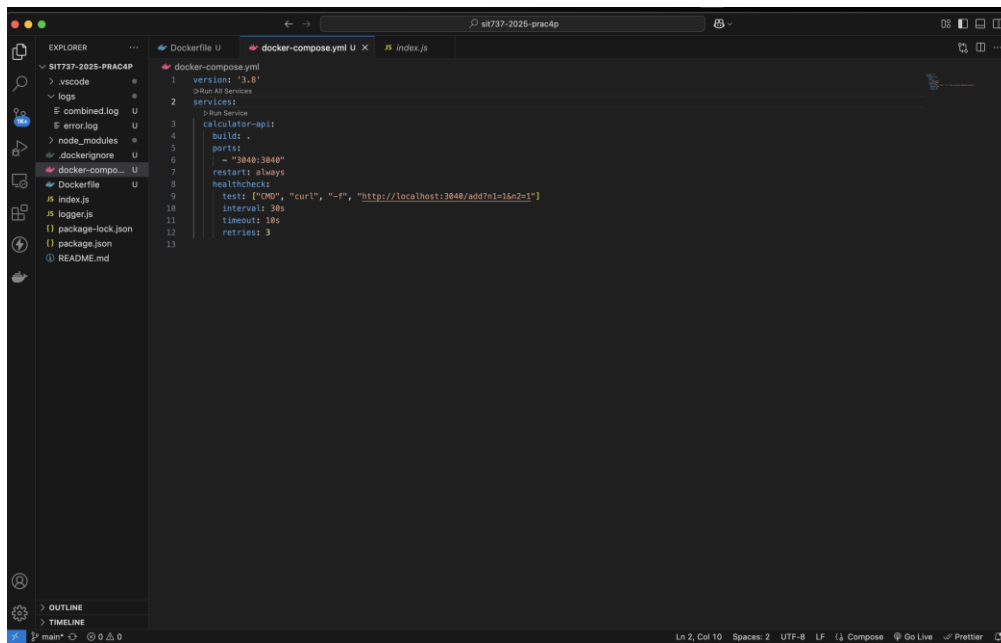
Step 3: Initialize Node Project and Install Dependencies
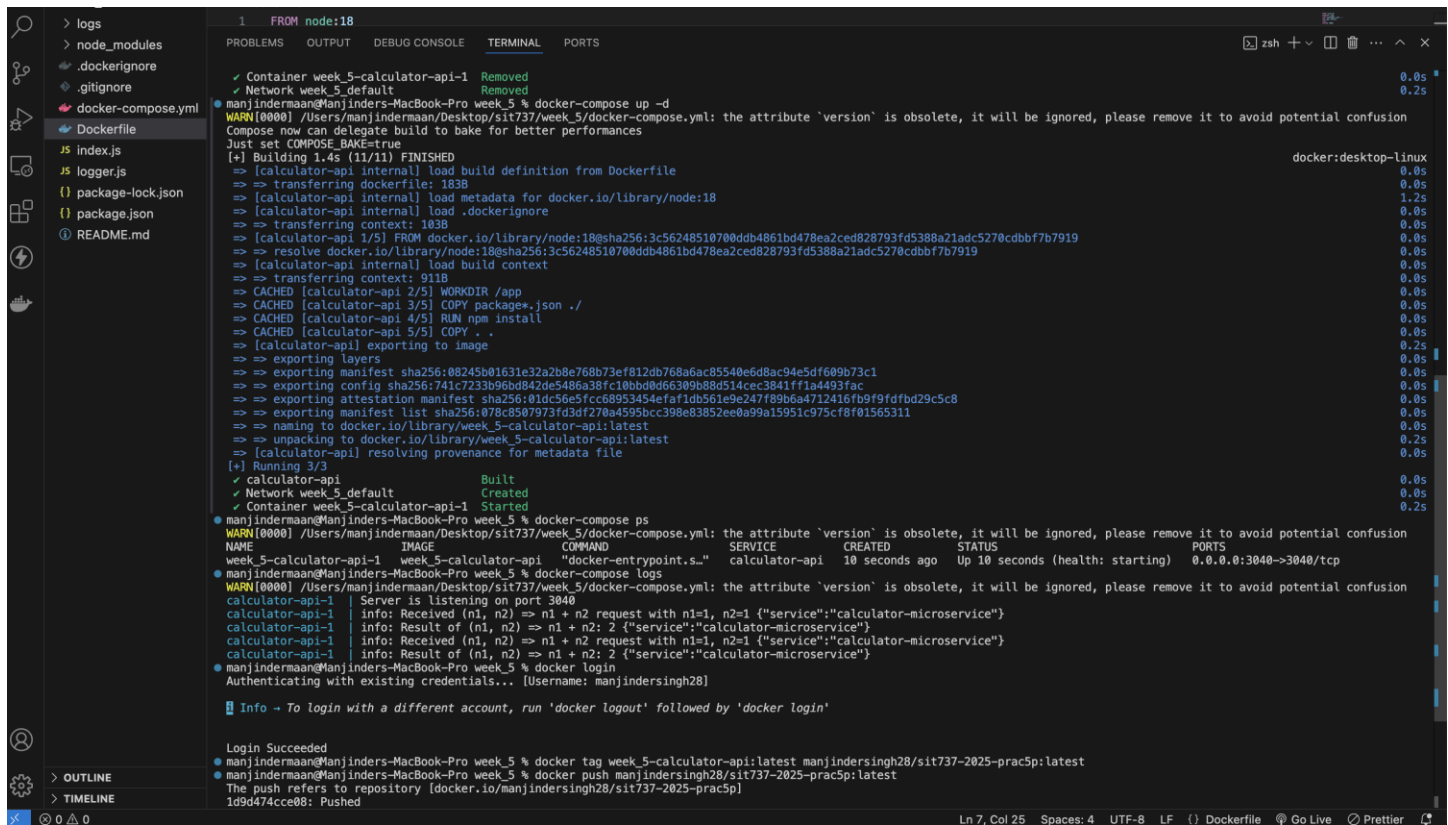
npm install

Step 4: Create Dockerfile
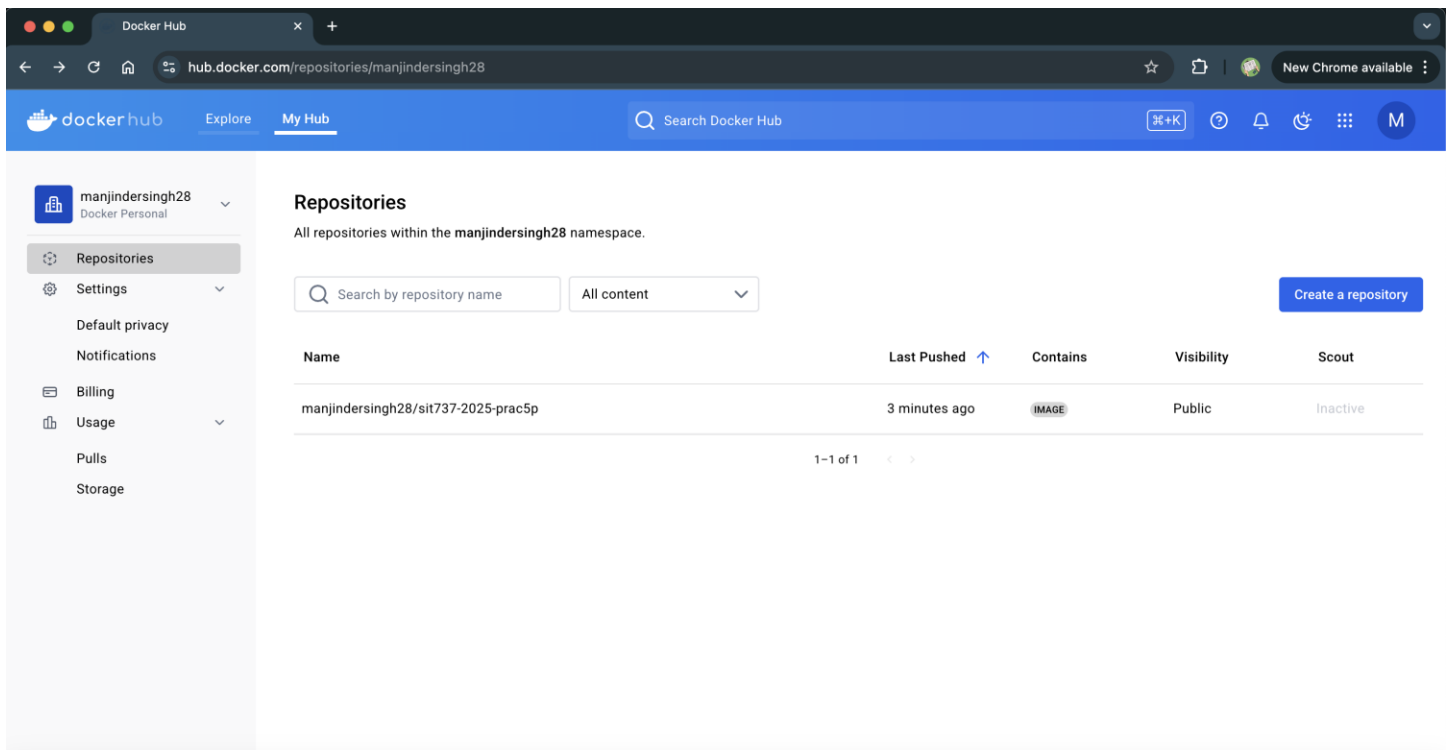

Step 5: Create docker-compose.yml

Step 6: built the Docker image and started the containers using Docker Compose.

docker-compose up-d

"statusCode": 200,
"data": 88

Step 7: Validated the health check by inspecting the container status.

docker ps => to know the container's ID

docker inspect --format='{{json .State.Health}}' <container_id>

Step 8: Push the Docker image to a registry

Step 9: Push to GitHub Repository

GitHub URL: https://github.com/Manjindersingh28/sit737-2025-prac5p.git