This week, I learned and worked on creating and containerizing a simple web application using Docker. I developed a basic Flask application in Python and prepared the required files such as the Dockerfile and requirements.txt. I learned how Docker images are built using a Dockerfile and how containers are run using port mapping so the application can be accessed through a web browser. I was able to successfully run the Flask app inside a Docker container and view it using localhost.

During this week tasks, I also practiced using Docker volumes to link my local project files to the container. This allowed me to update the application code on my computer and immediately see the changes reflected in the running container without rebuilding the image. I encountered common issues such as port conflicts and file naming errors, and I learned how to troubleshoot them by checking running containers, stopping unused ones, and ensuring correct file paths and configurations.

Lastly, I pushed my Docker image to Docker Hub and uploaded the complete project folder to GitHub for documentation and submission. This included the source code, Dockerfile, screenshots, and a README file explaining how to run the project. Through this task, I gained a better understanding of containerization, image management, and version control, which are important skills for real-world software development and deployment.