**DevOps Assignment Report**

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**Repository Link:** <https://github.com/SHREYAGANOTRA08/devops-qoala-assignment-ShreyaGanotra-102115247>

1. **INTRODUCTION**

This report documents the process of setting up a Docker application using Nginx, troubleshooting issues, and deploying it using Docker Compose.

**Steps to Accomplish the Task:**

1. Clone the GitHub Repository:
2. Build Docker Images:
3. Running the Docker Compose File
4. **ISSUES IDENTIFIED**
5. **Problems in Dockerfile:**
6. XPOSE should be a valid port number, not a string. In the original file it was "eighty" instead of the numerical port 80, which is the standard port for HTTP.

**Resolved:**

COPY nginx.conf /etc/nginx/nginx.conf

COPY ./html /usr/share/nginx/html

EXPOSE 80

CMD ["nginx", "-g", "daemon off;"]

1. Typo in the COPY command: It was given nginix.conf instead of nginx.conf in Dockerfile.
2. Missing html directory

**Resolved:**

1. Correct the typo: Update nginix.conf to nginx.conf in the Dockerfile.
2. Created an html folder
3. **Problems in nginx.conf file:**
   1. Typo in mime.types: It should be mime.types instead of mime.typess.
   2. worker\_processes directive: This should be worker\_processes instead of worker\_process

**Resolved:**

worker\_processes auto;

events {

worker\_connections 1024;

}

http {

include /etc/nginx/mime.types;

default\_type application/octet-stream;

server {

listen 80;

server\_name localhost;

location / {

proxy\_pass http://python\_app:8000;

proxy\_set\_header Host $host;

proxy\_set\_header X-Real-IP $remote\_addr;

proxy\_set\_header X-Forwarded-For $proxy\_add\_x\_forwarded\_for;

proxy\_set\_header X-Forwarded-Proto $scheme;

}}}

1. **Python Dockerfile Issues**

**Error**: The Dockerfile in the Python directory had some missing dependencies or incorrect configurations.:

* 1. Missing necessary packages (Flask, requests, numpy, and later netifaces).
  2. Possible lack of setting a working directory (WORKDIR /app) and copying the necessary files.

**Resolved:**

* 1. Created a requirements.txt with the necessary dependencies.
  2. Updated the Dockerfile to include:

dockerfile

Copy code

WORKDIR /app

COPY . /app

COPY requirements.txt /app/requirements.txt

RUN pip install --no-cache-dir -r requirements.txt

1. **Dockerfile Content:**

FROM nginx:latest

COPY nginx.conf /etc/nginx/nginx.conf

COPY ./html /usr/share/nginx/html

EXPOSE 80

CMD ["nginx", "-g", "daemon off;"]

1. **Corrected Docker-compose.yaml:**

version: '3.8'

services:

nginx:

image: local-nginx

ports:

- "80:80"

volumes:

- ./nginx/nginx.conf:/etc/nginx/nginx.conf

networks:

- nginx-network

python-app:

image: local-python-app

container\_name: python\_app

expose:

- "8000"

networks:

- nginx-network

networks:

nginx-network:

driver: bridge

1. **Python Dockerfile:**

FROM python:3.10-slim

WORKDIR /app

COPY . /app

COPY requirements.txt /app/requirements.txt

RUN pip install --no-cache-dir -r requirements.txt

CMD ["python", "app.py"]