

# DevOps Assignment Report

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## Issues Identified

### Dockerfile Errors(Python App):

- Error in file naming in the Dockerfile: the app file was referenced as appy.py instead of app.py.
- Typo in the command: CMD ["pythn", "app.py"] (misspelled python).
- The EXPOSE directive used an incorrect string format ("eight thousand" instead of 8000)
- Misnamed working directory as /app instead of /app.

### Dockerfile Errors(Nginx):

- The COPY statements failed due to misnamed configuration files and folders (nginx.conf instead of nginx.conf and html instead of html).
- Port exposure was incorrectly specified as "eighty" instead of 80.
- CMD had a typo (daemon of; instead of daemon off;).

### Docker-compose.yml Issues:

- The version field warning: Docker Compose no longer requires a version field, causing a warning during deployment.
- Typo in nginx.conf file reference (nginx.confi instead of nginx.conf).
- Network driver and options fields contained misspellings (bridg instead of bridge and compelex\_option).

### Build and Deployment Errors:

- Attempted to pull local-nginx and local-python-app images from Docker Hub instead of building them locally.

## Resolution Steps

### Python App Dockerfile:

- Corrected the file reference to app.py and fixed the CMD to CMD ["python", "app.py"].
- Changed EXPOSE "eight thousand" to EXPOSE 8000.
- Renamed the working directory to /app.

**Nginx Dockerfile:**

- Fixed typos in COPY statements to correctly reference nginx.conf and html. Created the missing html directory and ensured proper files were included.
- Changed EXPOSE "eighty" to EXPOSE 80.
- Corrected the CMD statement to CMD ["nginx", "-g", "daemon off;"].

**docker-compose.yml:**

- Removed the version field to avoid warnings.
- Corrected the nginx.conf reference and the misspelled fields under networks.
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**Application Verification:**

- Verified successful application access by opening <http://localhost> and confirming the displayed IP address, MAC address, and timestamp.
- Confirmed Nginx access logs showed the requests, ensuring correct request handling by the reverse proxy.