

DevOps Assignment Report

Issues Identified

1. Dockerfile in Nginx Folder:

- **Typographical and Syntax Errors:**
 - **Error 1:** FROM nginx:latests specified an incorrect tag latests instead of latest.
 - **Error 2:** COPY nginx.conf /etc/nginx/nginx.conf incorrectly referenced nginx.conf instead of nginx.conf.
 - **Error 3:** COPY ./html /usr/share/nginx/html incorrectly specified html instead of html.
 - **Error 4:** EXPOSE "eighty" incorrectly used a string and the word eighty instead of the numerical port 80.
 - **Error 5:** CMD ["nginx", "-g", "daemon of;"] had a syntax error in "daemon of;" instead of "daemon off;".
- **Resolution:**
 - Corrected latests to latest in the FROM directive.
 - Updated nginx.conf to nginx.conf in the COPY command.
 - Fixed html to html to ensure correct path for static files.
 - Changed EXPOSE "eighty" to EXPOSE 80.
 - Corrected CMD ["nginx", "-g", "daemon of;"] to CMD ["nginx", "-g", "daemon off;"].

2. nginx.conf Configuration File:

- **Typographical Errors:**
 - **Error 1:** worker_connection instead of worker_connections.
 - **Error 2:** include /etc/nginx/mime.type; contained an extra "s".
 - **Error 3:** default_typ instead of default_type.
- **Resolution:**
 - Fixed worker_connection to worker_connections.
 - Corrected mime.type; to mime.types.
 - Updated default_typ to default_type.

3. Dockerfile in Python Folder:

- **Typographical and Syntax Errors:**
 - **Error 1:** WORKDIR /app specified the incorrect path app instead of app.
 - **Error 2:** COPY app.py /app incorrectly referenced app.py instead of app.py.

- **Error 3:** RUN pip install flask netiface was missing additional dependencies if any were listed in a requirements.txt file.
- **Error 4:** EXPOSE "eight thousand" incorrectly used a string "eight thousand" instead of the numerical port 8000.
- **Error 5:** CMD ["pythn", "app.py"] contained a typo in pythn instead of python.
- **Resolution:**
 - Updated WORKDIR /appp to WORKDIR /app.
 - Fixed COPY appy.py /app to COPY app.py /app.
 - Changed EXPOSE "eight thousand" to EXPOSE 8000.
 - Corrected CMD ["pythn", "app.py"] to CMD ["python", "app.py"].

4. docker-compose.yml:

- **Obsolete Version Warning:**
 - **Issue:** A warning regarding the deprecated version attribute in docker-compose.yml.
 - **Resolution:** Removed the version attribute.
- **Networking Issue:** Required explicit service names to facilitate communication.
- **Resolution:** Named the services and used python_app in the Nginx configuration to route requests.

Resolution Steps

1. **Corrected Typographical Errors in Configuration Files:**
 - Revised nginx.conf to fix errors with directives and paths, including correcting worker_connections, mime.types, default_type.
2. **Revised Dockerfiles:**
 - Addressed syntax and typographical errors in both the Nginx and Python Dockerfiles.
 - Ensured the Python Dockerfile installs dependencies from requirements.txt if necessary.
3. **Updated Docker Compose Configuration:**
 - Removed the version attribute from docker-compose.yml and set service names correctly.
4. **Rebuilt and Verified Containers:**
 - Ran docker-compose up --build to rebuild images and verify all changes.
 - Confirmed application accessibility at http://localhost and verified container logs.