Devops Qoala Assignment Report-

Issues Identified

During the setup and execution of the Dockerized application, several issues were encountered:

1. **Dockerfile Errors:**
   - In the Python Dockerfile, there were several syntax errors:
     - The `WORKDIR` path was incorrectly set as `/appp` instead of `/app`.
     - The `COPY` command referenced `appy.py` instead of `app.py`.
     - The `EXPOSE` instruction incorrectly used a string for the port instead of the port number.
     - The command `CMD ["pythn", "app.py"]` had a typo in `python`.
2. **Docker compose errors:**
   - In the `docker-compose.yml` file:
     - The `version` attribute was marked as obsolete and was ignored.
     - The Nginx service defined `ports` using "eighty:80" instead of the numeric port 80.
     - The `volumes` path to `nginx.conf` had a typo in the destination path (`nginx.confi`).
     - The `expose` field for the Python app incorrectly specified "eight thousand" instead of the port number 8000.
     - The network configuration had a typo (`bridg` instead of `bridge`) and an incorrect key (`compelex_option`).
3. **Nginx configuration errors:**
   - The `nginx.conf` file contained multiple issues:
     - The `worker_process` directive had a missing `es` which caused it to be invalid.
     - The `include` directive had a typo (`mime.typess` instead of `mime.types`).
     - The `default_typ` directive had a typo and was missing the `e`.
4. **File Structure Issues:**
   - The HTML directory referenced in the Nginx Dockerfile (`COPY ./html /usr/share/nginx/html`) was missing, which caused a failure during the build process.

Resolution Steps

To resolve the issues and ensure the application runs correctly, the following steps were taken:

1. **Fixing Python Dockerfile:**
   - Updated the `WORKDIR` to `/app`.
   - Corrected the `COPY` command to reference the correct file name (`app.py`).
   - Fixed the `EXPOSE` command to use the numeric port (8000).
   - Corrected the command to `CMD ["python", "app.py"]`.
2. **Correcting docker-compose.yml:**
   - Removed the obsolete `version` attribute.
   - Updated the `ports` mapping to use numeric values (80).
   - Corrected the volume path in the Nginx service configuration.
   - Fixed the `expose` statement to correctly reference port 8000.
   - Corrected typos in the network configuration to use `bridge`.
3. **Fixing Nginx Configuration:**
   - I corrected the `worker_process` directive.
   - Fixed the `include` directive to reference the correct `mime.types` file.
   - Updated the `default_typ` directive to `default_type`.
4. **Creating HTML Directory:**
   - Created an `html` directory under `nginx` and added a simple `index.html` file to serve as a welcome page.

After implementing these changes, I ran `docker-compose up --build` successfully, and the application was accessible in the browser at `http://localhost`. The Nginx logs confirmed that requests were being processed correctly.

This report summarizes the issues encountered and the corresponding resolution steps taken to successfully deploy the Dockerized application.