

Tutorials referenced:

- 1) <https://ropenscilabs.github.io/r-docker-tutorial/04-Dockerhub.html>
- 2) <https://www.bogotobogo.com/DevOps/Docker/Docker-Compose-Nginx-Reverse-Proxy-Multiple-Containers.php>

Setup instructions:

- 1) Clone the repository from the link provided.
- 2) Run the command `docker build -t reverseproxy .` in the root folder.

```

sahilgat@MSI:~/cs3219-taska$ docker build -t reverseproxy .
[+] Building 7.0s (7/7) FINISHED
=> [internal] load build definition from Dockerfile                                0.1s
=> => transferring dockerfile: 119B                                              0.0s
=> [internal] load .dockerignore                                                  0.1s
=> => transferring context: 2B                                                    0.0s
=> [internal] load metadata for docker.io/library/nginx:1.15.7-alpine           3.7s
=> [internal] load build context                                                 0.0s
=> => transferring context: 822B                                                  0.0s
=> [1/2] FROM docker.io/library/nginx:1.15.7-alpine@sha256:2e497c294e3ba84aaeab7a0fbb1027819cd1f5f5892ed3c4a82b8 3.1s
=> => resolve docker.io/library/nginx:1.15.7-alpine@sha256:2e497c294e3ba84aaeab7a0fbb1027819cd1f5f5892ed3c4a82b8 0.0s
=> => sha256:2e497c294e3ba84aaeab7a0fbb1027819cd1f5f5892ed3c4a82b8b05010090d4 2.04kB / 2.04kB      0.0s
=> => sha256:b4776567c070a6ada8fa9963358b114cf6d645a5bbcd76d7c5c87839f04b01b 1.15kB / 1.15kB      0.0s
=> => sha256:6884a281e9a49d7fb5dec5974ffac4455d9271d9458710859ace6e7b3c320445 8.40kB / 8.40kB      0.0s
=> => sha256:cd784148e3483c2c86c50a48e535302ab0288bebd587accf40b714ffffd0646b3 2.21MB / 2.21MB      1.4s
=> => sha256:7cd9347fff112a2e320c557be540868dacc958f2b1dfa0b501b36139844152e0b 5.54MB / 5.54MB      2.3s
=> => sha256:7e58137a5d8ad4f88beca360ad5b0164ebb35319cfb3ada87b7bb5f5be909c795 492B / 492B      0.4s
=> => sha256:98c93a8e17c8455a82c56f665fa1fcc03faf6165d357134b9398ce49855716aa 629B / 629B      1.4s
=> => extracting sha256:cd784148e3483c2c86c50a48e535302ab0288bebd587accf40b714ffffd0646b3 0.1s
=> => extracting sha256:7cd9347fff112a2e320c557be540868dacc958f2b1dfa0b501b36139844152e0b 0.2s
=> => extracting sha256:7e58137a5d8ad4f88beca360ad5b0164ebb35319cfb3ada87b7bb5f5be909c795 0.1s
=> => extracting sha256:98c93a8e17c8455a82c56f665fa1fcc03faf6165d357134b9398ce49855716aa 0.0s
=> [2/2] COPY nginx.conf /etc/nginx/nginx.conf                                0.1s
=> => exporting to image                                                         0.1s
=> => exporting layers                                                            0.0s
=> => writing image sha256:fb33c68ce3ad1ab894ca3391d0612d6106f695fde84e366c964860dd83b28b52 0.0s
=> => naming to docker.io/library/reverseproxy                                0.0s

```

- 3) Run the command `docker-compose up -d`

```

[sahilgat@MSI:~/cs3219-taska$ docker-compose up -d
Creating network "cs3219-taska_default" with the default driver
Pulling nginx (nginx:alpine)...
alpine: Pulling from library/nginx
188c0c94c7c5: Pull complete
0ca72de6f957: Pull complete
9dd8e8e54998: Pull complete
f2dc206a393c: Pull complete
85defa007a8b: Pull complete
Digest: sha256:9b22bb6d703d52b079ae4262081f3b850009e80cd2fc53cdcb8795f3a7b452ee
Status: Downloaded newer image for nginx:alpine
Pulling apache (httpd:alpine)...
alpine: Pulling from library/httpd
188c0c94c7c5: Already exists
87dbd21cecbb: Pull complete
6a369e309fde: Pull complete
cf56700e8fe2: Pull complete
c4617a06d2a7: Pull complete
Digest: sha256:e0243332126bc05728d66c72e6ae1f2b8ab40133f3ddccc3c1d6c2286dee0ae3
Status: Downloaded newer image for httpd:alpine
Creating cs3219-taska_reverseproxy_1 ... done
Creating cs3219-taska_nginx_1 ... done
Creating cs3219-taska_apache_1 ... done

```

- 4) Verify the relevant images are running using the command `docker-compose ps`

```
sahilgat@MSI:~/cs3219-taska$ docker-compose ps
```

Name	Command	State	Ports
cs3219-taska_apache_1	httpd-foreground	Up	80/tcp
cs3219-taska_nginx_1	/docker-entrypoint.sh nginx ...	Up	80/tcp
cs3219-taska_reverseproxy_1	nginx -g daemon off;	Up	80/tcp, 0.0.0.0:8080->8080/tcp, 0.0.0.0:8081->8081/tcp

- 5) The nginx webpage can be viewed at localhost:8080 while the apache page can be viewed at localhost:8081 respectively.

