

## Question4

Clone: `git clone git@github.com:devanarayanantm/python-project.git`

```
root@kmaster:~# git clone git@github.com:devanarayanantm/python-project.git
Cloning into 'python-project'...
remote: Enumerating objects: 9, done.
remote: Counting objects: 100% (5/5), done.
remote: Compressing objects: 100% (4/4), done.
remote: Total 9 (delta 2), reused 1 (delta 1), pack-reused 4 (from 1)
Receiving objects: 100% (9/9), done.
Resolving deltas: 100% (2/2), done.
```

Create docker file: nano Dockerfile

```
FROM python:3.8-slim
WORKDIR /app
COPY requirements.txt .
RUN python3 -m pip install --upgrade pip
RUN pip install -r requirements.txt
COPY . .
EXPOSE 5000
CMD [ "python", "app.py" ]
```

Create image: `docker build -t devanarayanantm/simplepythonimg .`

```
root@kmaster:~/python-project# docker build -t devanarayanantm/simplepythonimg .
[+] Building 25.4s (12/12) FINISHED
=> [internal] load build definition from Dockerfile
=> => transferring dockerfile: 230B
=> [internal] load metadata for docker.io/library/python:3.8-slim
=> [auth] library/python:pull token for registry-1.docker.io
=> [internal] load .dockerignore
=> => transferring context: 2B
=> [1/6] FROM docker.io/library/python:3.8-slim@sha256:1d52838af602b4b5a831beb13a0e4d073280665ea7be7f09ce2382f29c5a613f
=> [internal] load build context
=> => transferring context: 29.9kB
=> CACHED [2/6] WORKDIR /app
=> [3/6] COPY requirements.txt .
=> [4/6] RUN python3 -m pip install --upgrade pip
=> [5/6] RUN pip install -r requirements.txt
=> [6/6] COPY . .
=> exporting to image
=> exporting layers
=> writing image sha256:c764506b025661f6cf61077c420b2e2315d7972360855c158a92eb174c261a9d
=> naming to docker.io/devanarayanantm/simplepythonimg
```

Activate Win

Run the container: `docker run -d --name=simplepythoncont -p 5050:5000 devanarayanantm/simplepythonimg`

```
root@kmaster:~/python-project# docker run -d --name=simplepythoncont -p 5050:5000 devanarayanantm/simplepythonimg
c3856230c5986b04457a286be72150e92b913087398829231f11c5c375633279
```

Container id: docker

```
root@kmaster:~/python-project# docker ps
CONTAINER ID   IMAGE                                COMMAND                  CREATED        STATUS        PORTS
c3856230c598   devanarayanantm/simplepythonimg     "python app.py"         47 seconds ago Up 47 seconds 0.0.0.0:5050->5000/tcp, [::]:5050->5000/tcp
```

Working dir inside the container:

```
root@kmaster:~/python-project# docker exec -it c3856230c598 /bin/bash
root@c3856230c598:/app# pwd
/app
root@c3856230c598:/app#
```

To check the current working dir: `pwd`

Writable layer: `cd /var/lib/docker/overlay2/`

```
root@kmaster:~# cd /var/lib/docker/overlay2/
root@kmaster:/var/lib/docker/overlay2# ls
005be3873b50d899175a09ac81aece493a9ca66b2b7ff389994e747ee049aa07e
0c0ecb9c0f5e3c1e4cfe688467cb83d19c7955da290c5dfb8394ba52d27ea571
0cc1214f4395c06b174e68a5b18854e8167d0534e88a76e5735ff848e0046a86
1e0db74df83041b3d964341d521f7f7f5d30691c756fbc0f243523f8ef06d0c9e
231k0qv44k12vjypm8l7yhml
2474c28c41488a3ff6d1129428ae509693db20433c881a57953791f89e1583fb
2b86ba2a6054d89c371ae9127dedecbe0f578e455e5077629db7cb29eafa992d
39e113ab7278e1d593e88f3be1d7203d4967aae0daacb97e9488544925542a52
3a0ab30a92347f224042d02b9d9a89730d3aace1448e4074e31476306adaa6d
3j807zzmq7jvtswtm1e11066
461093faea99d927d76e36a885ca4b33711013226db3dbc04986d6e698336b2c
4bo7l1jg5choz25g1qzsvtgifn
4s1gdyq58onmrubhiirtk90r
535828cd6d7b832f5588b4d6d3d68eb9b8473c8585d89065ddd1ce8f639adc2f
54vpx797edrc094yrcwq4bpu9
57c9a02afbea9ec5b3cdaa47df3088eb946bea0d501ffb63875f4679552d130
5e14bd8db2a5bb73bc669b47fee71504eff3db4a1d23c139fd1a1be18b68f6ce
642e89455838c9d0f965e0af8753fd33f5be99eb4e1e55f10c48a804ebbec7cc
686fedf0cde55ef05f5df63829158f70e00a9b5a43f015178f438b1863cf3c3f
686fedf0cde55ef05f5df63829158f70e00a9b5a43f015178f438b1863cf3c3f- init
6xx1x1l199ljnvtjv8u9gokt
729af33a22e0c36e223416dedb5be67796b1dce9f33287e4a0e79dc7c1e49c2
79jgdozeggg96cnsf3k5v2p
7uet15s19kn6uzn8j5wkzwp
8074d76ee88a499ceb8df1c4c9e3c1246bba470f1465ee881d3823eef30e884
84b622edd5549c4c413c13c7af3d193cdd2bd8e99b75e65f268c093c3598ee07
84c6v457lbb7gcw32lhinjvm
8or43k53sfllyh4urn7gs81v4e
8swon9mbve2133f4dpexgh5k
98b8fde2b892b41cb6855799720e347c1b9d10f7274aec2b156d31e7fa4ee91
99833f14923420960d36b089921b2b4735f38588170079d69b0efbab7bfc757
9cd72b803648e1adb466017c839d3630dd2c34199d221c72cf23f7ca1e890b66
99f6gds4ehaveg82tqtckrr
9ldeudt9yur746xusu77trtab
a0jyqj1po1bsfhhkxked48dv
a9f99a0ed6dcd5b325fe6334162212e3174e25bdf08b3275799d58616257579e
root@kmaster:/var/lib/docker/overlay2#
aff1067ef0a12e7c4442e910a941e11471c1233f97c1913c73e2ce38c5cf9a0b
ao1seso10ovst622hu3svp15t
ax8ayrn707mpmljtkb642xgh3
ax1o1ct7qvqj45e1y2nk4p8etw
b9q6gmmdha2pkuy966phsrxn
bb83a7b55f31ad73ef05ebb728410dde5375d198e4389c82da5e2125a174ef1a
bgwkjvqcwv8wj6dlnxpp7rsk
buyxyl0swle1r6efibe0c1345
c90fce7941ce594286b5389cfda18d4c78f794a252daf3f4e3947fb1a3aa69e6
ccdfbf1f0b2af573a09cca1f820e7960f56544e85d3b94a49d862748db98ff83a
cvwjrpqjxhwe9yhbcvzavth3
dfv6th9kz2rlyr27t7wuz67
divltvfv25r3vpp1cl9i2xxnf
e0813258c754be5687f731ab60518f8767791ee5fa25336d7f498dcaef00ec5e
eab75e4bf4ferde408adb99ee67c7e25fd8ad362d6f0bda2e03851f687eb8fb957
ede6dgp1fpa1vee8qcl50e0w
edej2hac58kjdgcp0p9q0yau
eqj6x1uj9lpeb7wphv9u6wqx
fec6xp1yvgk2wq807hjeats69r
fa4542fef4d913103a7a5e08cca48fad04258fda07e5bbd7441a8e7b7fb40ab
fa4542fef4d913103a7a5e08cca48fad04258fda07e5bbd7441a8e7b7fb40ab- init
fb099d3eaaacd2ac1cfb8a6c8fc14197a54e066fb0d19cc4dc0b7dcf9ec619
fcsizw7rql82nvnv10uwhcxd7
ffrfvuz28fatn97j)uhew8bpz
fwneru042ip0kn91lmbmd4lez
ga58f25zju0etopbl1zse8p84
hpskxcp75gfczawj10uopq28
hz3mqb7pevatgl1gaqphpx4
i382bhqtnk14vqjljddqld7w
iohw5ijgjk4d2dov91d752to
j3mw140u7mxm47a6cc59fvxtj
jouc5up588hk66e1v17zofyvy
jqbfbl1qyqkz225kpm0xqgri
jts74s0vzz4tsrv7hocaub65
kqn3m7d5krr1h1z28s0arudw
l
laobcbuzr152fhn1wxubvg4z
ldzrirdy7bs3og3q9mogxqkxz
lj9xaf63y0qjqlsrujsqn01c3
ltumwals1f4k3tvyz2wvjhhbyv
m8l13ql61j23lklueh8mhdsv
mbjhft3tb158xqbmkhbgpvfxa0
ms8f1jpkxyhltm4rt8v11i6kc
msv7yht77gltf5hrrz05owow
nucqzgzgm4fbb38fue51l21
nwoobh22f1x3d73cc07h3555
ow91a0m5tu4mtysb491s22c9r
p4mqb1vo263xpb5dnnmy7kw
ppdx6x1z1248nn38qn3sa93q
q0pwnx710uc5kq7zwpv0u02kd
q9f3ul19e7cnwgcstf6ek61a
qojnzz1kqg51edo0qy54d3g
qy3y8xbs4fdsetc4kfy59mss
rq8ae7gg57do5ictm07unqik
sdcicvyst5ejhs9lzh0fqbmd
trcp8655h1xxsb4etane4h0g3
ul3xmd1j04ogep17806veclt
uq173top4bctnmw19sz1byof
vzds6gvzpt4z33oap7dqp7qu
vzx2uc4g5y43zoap7dqp7qu
w1mj3h9b8seu8h6p16nrj9fqg
w6wv3v4twfge099zbl1m80vfi
w4q84z2bmk0dnz4mtmpra9j
wtokae48tr1h04u21fd4d6x2h
wum7t9tf1qawl9zpbag1256g
x1twc7w2r5bqbm647qsw18f7
xf2obr1e2z42gmq7yz0y9aonh
xpj8018cfsntgvjuars2azgh
y07w4tos46j7f1n9d0lhttc
yt10rlg1897lwl5p0omldtw3
ywhw1w4t6fgrt9howsqkg6i
root@kmaster:/var/lib/docker/overlay2#
```

Activate Windows  
Go to Settings to activate Windows.