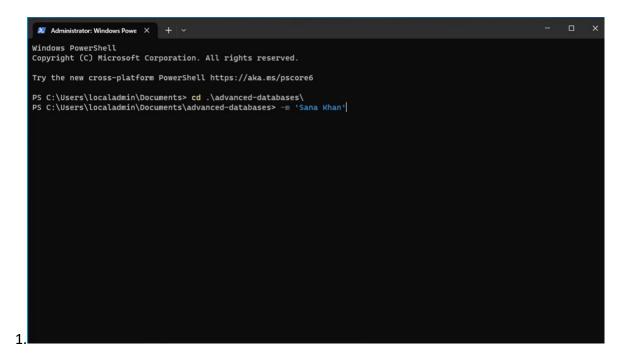Sana Khan
IST 769
Due April 17th, 2023


Homework 1



1.

2. An image is an application and all its dependencies. It contains all the software necessary to run an application. A container is the running instance of the image, and its isolated from your host computer.
3. A volume is a way to store persisted data of containers.


4.

5. The last line says " 1:M 16 Apr 2023 01:39:47.299 * Ready to accept connections" to get this command I typed **docker-compose logs redis**



6. Redis is using **0.0.0.0:6379->6379/tcp** and retwis is using **0.0.0.0:5082->80/tcp.**  To find which services and ports are being used you can type **docker-compose ps.** If the service says up it means its running and the port column will be populated.

```
PS C:\Users\localadmin\Documents\advanced-databases> ^C
PS C:\Users\localadmin\Documents\advanced-databases> docker-compose ps
                Name                              Command                   State              Ports
---------------------------------------------------------------------------------------------------------------
advanced-databases_broker_1                /etc/confluent/docker/run        Exit 0
advanced-databases_cassandra_1             docker-entrypoint.sh cassa ...   Exit 0
advanced-databases_connect_1               /etc/confluent/docker/run        Exit 0
advanced-databases_control-center_1        /etc/confluent/docker/run        Exit 0
advanced-databases_datanode_1              /entrypoint.sh /run.sh           Exit 0
advanced-databases_drill_1                 /bin/sh -c /opt/drill/bin/ ...   Exit 0
advanced-databases_elasticsearch_1         /bin/tini -- /usr/local/bi ...   Exit 0
advanced-databases_hive-metastore-postgresql_1   /docker-entrypoint.sh postgres   Exit 0
advanced-databases_hive-metastore_1        entrypoint.sh /opt/hive/bi ...   Exit 0
advanced-databases_hive-server_1           entrypoint.sh /bin/sh -c s ...   Exit 0
advanced-databases_jupyter_1               tini -g -- start-notebook.sh     Exit 0
advanced-databases_kibana_1                /bin/tini -- /usr/local/bi ...   Exit 0
advanced-databases_ksql-datagen_1          bash -c echo Waiting for K ...   Exit 0
advanced-databases_ksqldb-cli_1            /bin/sh                          Exit 0
advanced-databases_ksqldb-server_1         /etc/confluent/docker/run        Exit 0
advanced-databases_minio_1                 /usr/bin/docker-entrypoint ...   Exit 1
advanced-databases_mongo_1                 docker-entrypoint.sh mongod      Exit 0
advanced-databases_mongoapp_1              python -m flask run --host ...   Exit 0
advanced-databases_mongoexpress_1          tini -- /docker-entrypoint ...   Exit 0
advanced-databases_mssql_1                 /opt/mssql/bin/permissions ...   Exit 0
advanced-databases_namenode_1              /entrypoint.sh /run.sh           Exit 0
advanced-databases_neo4j_1                 tini -g -- /startup/docker ...   Exit 0
advanced-databases_redis_1                 docker-entrypoint.sh redis ...   Up        0.0.0.0:6379->6379/tcp
advanced-databases_rediscommander_1        /usr/bin/dumb-init -- /red ...   Exit 0
advanced-databases_rest-proxy_1            /etc/confluent/docker/run        Exit 0
advanced-databases_retwis_1                docker-php-entrypoint apac ...   Up        0.0.0.0:5082->80/tcp
advanced-databases_schema-registry_1       /etc/confluent/docker/run        Exit 0
advanced-databases_zookeeper_1             /etc/confluent/docker/run        Exit 0
PS C:\Users\localadmin\Documents\advanced-databases> -m 'Sana Khan'
```

7. To see what volumes are created by the services I used **docker volume ls**

```
advanced-databases_zookeeper_1                    /etc/confluent/docker/run          Exit 0
PS C:\Users\localadmin\Documents\advanced-databases> docker volume ls
DRIVER    VOLUME NAME
local     03f062036d05f0a356d17f1a7eb3dbbaf29825f2430d91e73fdc88f46b0cd282
local     4d2d4e1d81c4fd5b90fad7caf8489e4a5e16a82908d3154d828e6c6ac87b0766
local     5c3711af874869d1c0f9ff6b6b6ffd856c78e11335d6d3a72067e6818a405d03
local     6cd59b6b323034794153c9731d12a53f638487b6e0591b1da08354ac1df5eaed
local     7c03c03fb63ce6f48699d2ee49d739aa886c7449f1da980f97480c169cba9db0
local     8d734ad1dfed645ec2c9d5f817cf03eb185f5809eedbcca92f9f62fa36ed9f9e
local     8e0997426e3f32dcb74ed38c4b050afb862beb44482ff1b93061aa86c659c538
local     21c7423616f74cbac2dbe49022d01cda6c3fa0480ab2abe4f3bbb58a3671bb63
local     31b826094687796efaff14610c5f17bf2f30b83a27fd52770446f444ba8a75d1
local     39f45963e98b7c7743e7c0b5d01176688c13cde66d7ee6477ea492cfca7fa400
local     44ebc118e4b24eb3b5423d1d09196f6c9a2dc04d148d8d6cdf107b82fe4b1b11
local     481c64fb4086f0e98d759236a00aab10738d688c6a9f2cade2cad291fc948a39
local     2824ad5713dbabe1ecfdd5887820a3ec268214143276453e370d8a6ac882de3d
local     199829e6d986f60632bbc4e0df9fbbb6fd51a8ce9fc86fb6b7c58e15ba812a5f
local     a9a63da9b7a81bd630638cc4a053252681df11695ac5a5e014640493a086edf8
local     advanced-databases_cassandra-data
local     advanced-databases_elasticsearch-data
local     advanced-databases_hdfs-datanode
local     advanced-databases_hdfs-namenode
local     advanced-databases_metastore-postgresql
local     advanced-databases_minio-data
local     advanced-databases_mongo-data
local     advanced-databases_mssql-data
local     advanced-databases_neo4j-data
local     advanced-databases_redis-data
local     aea751eedc5b136c523c0b019898df6c88b7018fefcd221434c56e0a94283c38
local     aeea72d855db7f5278d270e1228c990baa23794ab6e86e8d3046a00aa237312a
local     b9af39f7b07c0ed1e6f01641926e4834be0fcae52fd29cbf61bbcb3b4b4fcd92
local     b46d43e0180499f6d392c3a728d1200890e253d6ca92f5164b33352b42365417
local     b2763dd859e644910bbda0a24f1531c2538b35d490f7a94d78dff901865de2e4
local     c3f99c726803ae75d32a5d5ba3ed16c7556755e82e3d618cb8e905ea8cea6d52
local     cbcb46eaca2aa86f759695027bcdd6f7fdc95cddeb432e74067fbc7a2d730c0d
local     cdf9789e4c7a5cce4c30a7428fc2708a90d18dd41d80f71275d6b36fbf693738
local     d5f6a894acae7c19210d56cf8e6ca6a3ab296fc342710e1d148977e9c81150f2
local     d26333fb52b0991b15b2a24c98e1fde40c7421be9dc645c504812cf9a5ee7db8
local     ee498f71ad28fc20a39266566498b8f9ebc5e3277a4dc7194fe4274f28d3526c
local     f1b60d3b7dcbab2b0f88417da29b0f76e0f0da3cabea0492bfaeb3f59b8cfc24
local     f280a5d4978744cc1fc288c7ca4a7f07b8fb1fa882eddf40dbdea41a58ec0563
local     f2852e9d78742909c83447c1282802ec6d790428a5e1266340fca941983dec07
local     ff5d2a5606ea7c02cb6c285c1ddcfbd498a45f22cfffdc98ac8743d68b5c181c
local     learn-databases_mssql-azuresql-edge-data
local     learn-databases_sqlpad-volume
PS C:\Users\localadmin\Documents\advanced-databases> -m 'Sana Khan'
```