Intro to databases

Using docker to install sql server and postgreSQL server on my pc.This helps installing the RDBMS w/o affecting the OS or making any significant changes to the computer

<https://docs.docker.com/get-docker/>

Installing the docker image using below commands:

For MS sql server

Windows PC:

docker run --name sqlserver2019 -e "ACCEPT\_EULA=Y" -e "MSSQL\_SA\_PASSWORD=Adam123456" -p 1401:1433 -d mcr.microsoft.com/mssql/server:2019-latest

MacOS & Linux:

docker run --name sqlserver2019 -e 'ACCEPT\_EULA=Y' -e 'MSSQL\_SA\_PASSWORD=Adam123456' -p 1401:1433 -d mcr.microsoft.com/mssql/server:2019-latest

For PostgreSQL

docker run --name postgresql -p 5401:5432 -e POSTGRES\_PASSWORD=Adam123456 -d postgres:14.8

### Docker Commands ###

# view all running containers

docker ps

# view all containers regardless of status

docker ps -a

# stop a container

docker stop sqlserver2019

# start a container

docker start sqlserver2019

# remove a container

docker rm sqlserver2019

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

### Microsoft SQL Server ###

# Log into sqlserver2019 docker container

docker exec -it sqlserver2019 bash

# View OS information

cat /etc/os-release

# Log into SQL Server using SQLCMD command line tool

/opt/mssql-tools/bin/sqlcmd -U sa -P Adam123456

# View version information

SELECT @@Version;

GO

# List databases currently on the server

SELECT name FROM sys.databases;

GO

# Create a new database

CREATE DATABASE mytestdb;

# Quit SQLCMD CLI tool

exit

# Exit out of the docker container

exit

##################

### PostgreSQL ###

# Log into postgresql docker container

docker exec -it postgresql bash

# View OS information

cat /etc/os-release

# Log into PosgreSQL server using PSQL command line tool

psql -U postgres

# View help documentation

help

# List databases currently on the server

\l

# Create a new database

CREATE DATABASE mytestdb;

# Quit PSQL CLI tool

\q

# Exit out of the docker container

exit

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Using azure data studio as a dbms client and connecting to the servers using port number and account details

