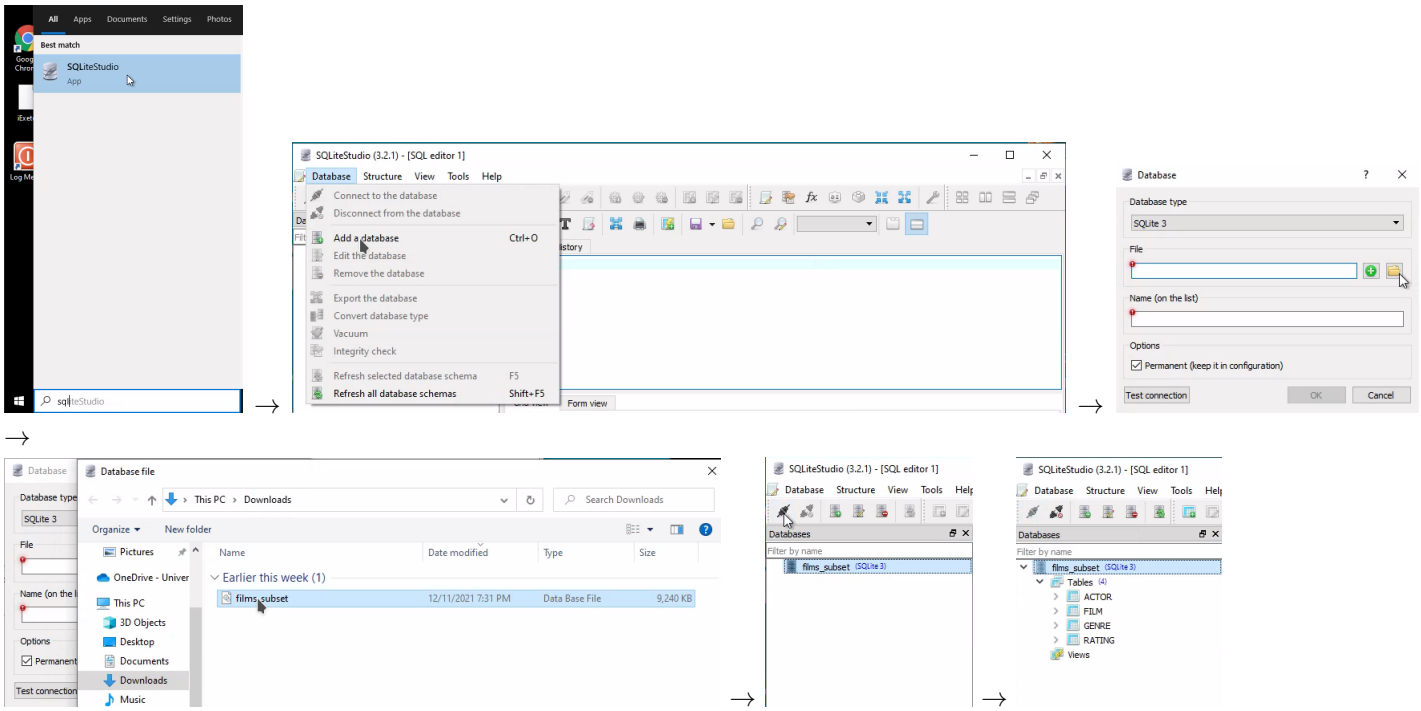
Database Technologies for Business Analytics
BEM2040
Practice Week 2

The following instructions can be followed by using university terminals, a virtual desktop or your personal computer, if the software has been installed.

1. Download the file Week2.zip. We will be using:
   - films_subset.db
   - practice_w2_start.ipynb
2. Decompress the files in your downloads folder.
3. Start SQLiteStudio and add the database:

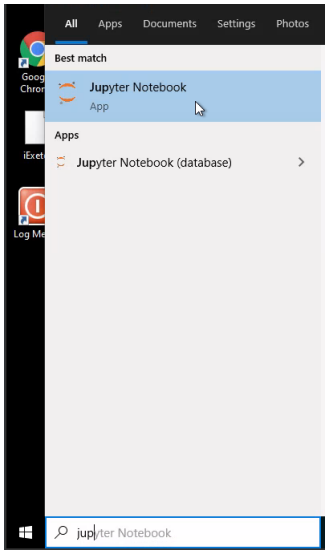


4. Follow the instruction in class. We will spend the first part of the session interacting with the SQL tool. We will be using the following instructions, or similar:

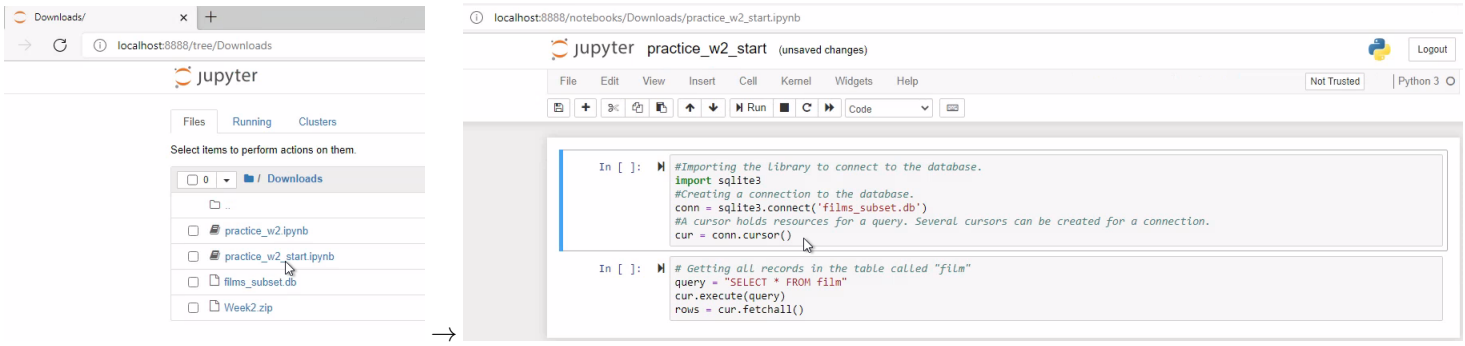
```
SELECT * FROM film;

SELECT * FROM film where film_year_start=1940;

SELECT * FROM actor;

INSERT into actor(actor_id,actor_name,actor_year_born,actor_year_dead)
VALUES ("a1", "Timothée Chalamet", 1994, null);

INSERT into actor(actor_id,actor_name,actor_year_born,actor_year_dead)
VALUES ("a2", "Rebecca Ferguson", 1983, null);
```

```
SELECT * FROM actor;

UPDATE actor SET actor_year_born = 1995 WHERE actor_id = "a1";

SELECT * FROM actor;

SELECT count(*) FROM actor;
```

5. Start Jupyter (it will open in a web browser) and browse to the download folder.



6. Open the just downloaded Jupyter notebook (practice_w2_start.ipynb).



7. Add instructions to the notebook, copying and pasting from the code below, according to guidance in the practice. Note that you already have the initial instructions.

```
#Importing the library to connect to the database.
import sqlite3
#Creating a connection to the database.
conn = sqlite3.connect('films_subset.db')
#A cursor holds resources for a query.
#Several cursors can be created for a connection.
cur = conn.cursor()

# Getting all records in the table called "film"
query = "SELECT * FROM film"
cur.execute(query)
rows = cur.fetchall()

for row in rows:
  print(row)

# Getting the films from 1940
```

```
query = "SELECT * FROM film where film_year_start=1940"
cur.execute(query)
rows = cur.fetchall()

for row in rows:
   print(row)

#Getting all the records in the table called "actor"
query = "SELECT * FROM actor"
cur.execute(query)
rows = cur.fetchall()

for row in rows:
   print(row)


#Adding some records to the table actor
query = "insert into actor( " + \
        "actor_id," + \
        "actor_name," + \
        "actor_year_born," + \
        "actor_year_dead)" + \
        "values (" + \
        "?," + \
        "?," + \
        "?," + \
        "?)"

cur.execute(query, ("a1", "Timothée Chalamet", 1994, None))

cur.execute(query, ("a2", "Rebecca Ferguson", 1983, None))

conn.commit()

#Listing all records after having added two.
query = "SELECT * FROM actor"
cur.execute(query)
rows = cur.fetchall()
for row in rows:
   print(row)


# Updating the birth year of actor with code "a1", that is, Timothée Chalamet
query = "update actor set actor_year_born = ? where actor_id = ?"
cur.execute(query, (1995, "a1"))
conn.commit()

#Listing actors after the update.
query = "SELECT * FROM actor"
cur.execute(query)
rows = cur.fetchall()
for row in rows:
   print(row)


#Counting the number of records in table actor.
query = "SELECT count(*) FROM actor"
cur.execute(query)
rows = cur.fetchall()
print(rows)
print(rows[0][0])
```

```
#Closing the connection
conn.close()
```