DATABASE SYSTEMS AND CLOUD COMPUTING

1st Homework Assignment

Due on: November 11, 2022

In this homework, you work with the IMDb database, and you are required to answer the following questions running the SQL statement in Python script the way we did in the class:

1. Find the movies from 70s.

```
from mysql import connector

my_connection = connector.connect(
    host="localhost",
    user="root",
    password="Secret_123",
    database="imdb"
)

my_cursor = my_connection.cursor()

"""

Find the movies from 70s.
"""

my_cursor.execute("""

!!!ENTER YOUR SQL STATEMENT HERE!!!
""")

print("{:40} {:4}".format("Movie Title", "Year"))
for row in my_cursor:
    print(f"{row[0]:40} {row[1]:<4}")
```

Sample output:

Janipie output.	
Movie Title	Year
Le magnifique	1973
Dog Day Afternoon	1975
Network	1976
The Little Girl Who Lives Down the Lane	1976
Der amerikanische Freund	1977
The Last Wave	1977

2. Find the number of movies of each director and order in descending order.

```
from mysql import connector

my_connection = connector.connect(
    host="localhost",
    user="root",
    password="Secret_123",
    database="imdb"
)

my_cursor = my_connection.cursor()

"""

Find the number of movies of each director.

"""

my_cursor.execute("""
    !!!ENTER YOUR SQL STATEMENT HERE!!!
""")

print("{:24} {:16}".format("Director Name", "Number of movies"))
for row in my_cursor:
    print(f"{row[0]:24} {row[1]:<16}")</pre>
```

Sample output:

Sample output:	
Director Name	Number of movies
Ki-duk Kim	
Niels Arden Oplev	3
Sidney Lumet	3
Billy Wilder	3
Alfred Hitchcock	3
Mira Nair	2
Grant Heslov	2
Chan-wook Park	2
Lasse Hallström	2
Jae-young Kwak	2
Francis Ford Coppola	2
Peter Jackson	2

3. Find the number of genres of each director's movies and order in descending order.

```
from mysql import connector
my_connection = connector.connect(
    host="localhost",
    user="root",
    password="Secret_123",
    database="imdb"
)
my_cursor = my_connection.cursor()
Find the number of genres of each director's movies.
my_cursor.execute("""
    !!!ENTER YOUR SQL STATEMENT HERE!!!
""")
print("{:24} {:16} {:100}".format("Director Name",
                                   "Number of movies", "Genres"))
for row in my_cursor:
    print(f"{row[0]:24} {row[1]:<16} {row[2]:<100}")</pre>
```

Sample output:

Sample output:		
Director Name	Number of movies	Genres
Billy Wilder	6	Comedy,Crime,Drama,Film-Noir,Thriller,War
Carlos Saldanha	6	Action, Adventure, Animation, Comedy, Family, Romance
David Yates		Action, Adventure, Family, Fantasy, Mystery, Romance
Guy Ritchie	6	Action, Adventure, Crime, Drama, Mystery, Thriller
John Sturges	6	Action,Adventure,Drama,Horror,Thriller,War
Peter Jackson	6	Crime, Drama, Fantasy, Horror, Romance, Thriller
Albert Hughes	5	Action, Adventure, Drama, Thriller, Western
Alfred Hitchcock	5	Crime, Horror, Mystery, Romance, Thriller
Allen Hughes	5	Action, Adventure, Drama, Thriller, Western
Chan-wook Park	5	Drama, Horror, Mystery, Romance, Thriller
Chris Wedge	5	Action, Adventure, Animation, Comedy, Family
Costas Ferris	5	Biography, Drama, History, Music, War

4. Find the list of movies having the genres "Drama" and "Comedy" only.

```
from mysql import connector

my_connection = connector.connect(
    host="localhost",
    user="root",
    password="Secret_123",
    database="imdb"
)

my_cursor = my_connection.cursor()

"""

Find the list of movies having the genres "Drama" and "Comedy" only.

"""

my_cursor.execute("""
    !!!ENTER YOUR SQL STATEMENT HERE!!!

""")

print("{:32} {:4} {:100}".format("Movie Title", "Year", "Genres"))
for row in my_cursor:
    print(f"{row[0]:32} {row[1]:4} {row[2]:<100}")</pre>
```

Sample output:

Jumpic Gatpat.		
Movie Title	Year Genres	
Stalag 17	1953 Comedy	,Drama
Rembetiko	1983 Drama,	Drama
Bacheha-Ye aseman	1997 Comedy	,Drama
Yeopgijeogin geunyeo	2001 Comedy	,Drama
Jeux Denfants	2003 Comedy	,Drama
Broken English	2007 Comedy	,Drama
Ex Drummer	2007 Comedy	,Drama
Sonbahar	2008 Comedy	,Drama
Sunshine Cleaning	2008 Comedy	,Drama
500 Days Of Summer	2009 Comedy	, Drama
A Serious Man	2009 Comedy	,Drama
Away We Go	2009 Comedy	,Drama

5. Find and list the histogram of movies where bins are genres.

```
from mysql import connector

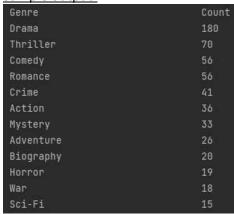
my_connection = connector.connect(
    host="localhost",
    user="root",
    password="Secret_123",
    database="imdb"
)

my_cursor = my_connection.cursor()

"""
Find and list the histogram of movies where bins are genres.
"""
my_cursor.execute("""
    !!!ENTER YOUR SQL STATEMENT HERE!!!
""")

print("{:32} {:4}".format("Genre", "Count"))
for row in my_cursor:
    print(f"{row[0]:32} {row[1]:<4}")</pre>
```

Sample output:



IMPORTANT

Academic dishonesty, including but not limited to cheating, plagiarism, and collaboration, is unacceptable and subject to disciplinary action. Any student found guilty will have a grade of F. Assignments are due in class on the due date. Late assignments will generally not be accepted. Any exception must be approved. Approved late assignments are subject to a grade penalty.