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BSCS C204

FINALS LAB TASK 5: CLI using MySQL and Python

Finals Lab Task 5. CLI using Mysql and Python

1. Make sure you have installed the following pre-requisites before proceeding:

- a. Mysql-connector
- b. Mysql-connector-python
- c. Xampp is running along with Apache and Mysql in the background

2. Create the following database in Mysql;

- a. Database name: **moviesDB** with the ff: fields:

```
movie_id      int(10) Primary Key  
title         varchar(50) NOT NULL  
main_actor    varchar(50) NOT NULL  
director      varchar(50) NOT NULL  
genre         varchar(25) NOT NULL  
gross_sales   float  
ratings (G, PG, R13, R16,X) varchar(5)
```

- b. Insert at_least 5 records

- c. Create a user named **test_user** and assign a **password** and give it an admin access by checking necessary

3. Guided by the Demo code attached in this task. **test_DemoDB.py**

4. Kindly continue working on the code that will allow the user to navigate through the Database and perform simple CRUD operations. Follow the following **CLI Menu Options:**

```
----- MOVIE DATABASE CLI -----  
1. Add Employee  
2. View Employees  
3. Update Employee  
4. Delete Employee  
5. Search Employee  
6. Display Total Records  
7. Exit  
Select an option (1-6): |
```

5. The user should be able perform the ff: in your program.

MOVIE DATABASE CRUD APP

- 1- Add New Record
- 2- View all records,
- 3- Update a Record and show the updates,
- 4- Delete a record
- 5- **Search A Record**
- 6- Display **Total Numbers** of Movies stored in the database
- 7- Exit
- For additional challenge, Task – You are to add a **SEARCH option** in the MENU that will allow the user to search by Name or emp_id, then display the information about the record being search. You may use Like statement and fetchOne method in my SQL to do this,
- You are also going to add a method that will display the the **total number of records** in your database – You may use SQL count statement for this.
- What to submit:
 - a. UI Menu
 - b. Sample Output
 - c. Source Code
 - d. Exported sql file

Source Code:

```
import mysql.connector

conn = mysql.connector.connect(
    host="localhost",
    user="test_user",
    password="passwordis101010",
    database="moviesDB"
)

cursor = conn.cursor()

def add_movie():
    print("\n==== ADD NEW MOVIE ====")
    movie_id = input("Movie ID: ")
    title = input("Title: ")
    actor = input("Main Actor: ")
    director = input("Director: ")
    genre = input("Genre: ")
    sales = float(input("Gross Sales: "))
    rating = input("Rating (G, PG, R13, R16, X): ")

    sql = "INSERT INTO movies (movie_id, title, main_actor, director, genre, gross_sales, ratings) VALUES (%s,%s,%s,%s,%s,%s)"
    cursor.execute(sql, (movie_id, title, actor, director, genre, sales, rating))
    conn.commit()
    print("\nMovie added successfully!\n")

def view_movies():
    print("\n==== MOVIE LIST ====")
    cursor.execute("SELECT * FROM movies")
    rows = cursor.fetchall()
    for row in rows:
        print(row)
    print("\nTotal Records:", len(rows))

def update_movie():
    print("\n==== UPDATE MOVIE ====")
    movie_id = input("Enter Movie ID to update: ")

    title = input("New Title: ")
    actor = input("New Main Actor: ")
    director = input("New Director: ")
    genre = input("New Genre: ")
    sales = float(input("New Gross Sales: "))
    rating = input("New Rating: ")

    sql = """UPDATE movies SET
              title=%s, main_actor=%s, director=%s, genre=%s,
              gross_sales=%s, ratings=%s WHERE movie_id=%s"""
    cursor.execute(sql, (title, actor, director, genre, sales, rating, movie_id))
    conn.commit()

    print("\nMovie updated successfully!\n")
```

```

def delete_movie():
    print("\n==== DELETE MOVIE ====")
    movie_id = input("Enter Movie ID to delete: ")

    cursor.execute("DELETE FROM movies WHERE movie_id=%s", (movie_id,))
    conn.commit()

    print("\nMovie deleted successfully!\n")

def search_movie():
    print("\n==== SEARCH MOVIE ====")
    keyword = input("Enter movie title or actor to search: ")

    sql = "SELECT * FROM movies WHERE title LIKE %s OR main_actor LIKE %s"
    search_key = "%" + keyword + "%"

    cursor.execute(sql, (search_key, search_key))
    result = cursor.fetchone()

    if result:
        print("\nRecord Found:")
        print(result)
    else:
        print("\nNo record found.")

def count_movies():
    cursor.execute("SELECT COUNT(*) FROM movies")
    count = cursor.fetchone()[0]
    print(f"\nTotal Movies in Database: {count}\n")

def menu():
    while True:
        print("""
=====
        MOVIE DATABASE CRUD APP
=====
1 - Add New Record
2 - View All Records
3 - Update a Record
4 - Delete a Record
5 - Search a Record
6 - Display Total Number of Movies
7 - Exit
=====
""")

        choice = input("Enter choice: ")

        if choice == "1":
            add_movie()
        elif choice == "2":
            view_movies()
        elif choice == "3":
            update_movie()
        elif choice == "4":
            delete_movie()
        elif choice == "5":
            count_movies()

```

```
        search_movie()
    elif choice == "6":
        count_movies()
    elif choice == "7":
        print("Exiting program...")
        break
    else:
        print("Invalid input! Try again.\n")

menu()
conn.close()
```

Sample Output:

SELECT * FROM `movies`

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

	movie_id	title	main_actor	director	genre	gross_sales	ratings
<input type="checkbox"/>	1	Justice League	Ben Affleck	Zack Snyder	Action	657.9	PG
<input type="checkbox"/>	2	Zack Snyder's Justice League	Henry Cavill	Zack Snyder	Action	0	R13
<input type="checkbox"/>	3	Batman v Superman	Ben Affleck	Zack Snyder	Action	873.6	PG
<input type="checkbox"/>	4	Man of Steel	Henry Cavill	Zack Snyder	Action	668	PG
<input type="checkbox"/>	5	Wonder Woman	Gal Gadot	Patty Jenkins	Action	821.8	PG

Check all With selected: Edit Copy Delete Export

Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

Query results operations

```
=====
      MOVIE DATABASE CRUD APP
=====

1 - Add New Record
2 - View All Records
3 - Update a Record
4 - Delete a Record
5 - Search a Record
6 - Display Total Number of Movies
7 - Exit
=====

Enter choice: 2

== MOVIE LIST ==
(1, 'Justice League', 'Ben Affleck', 'Zack Snyder', 'Action', 657.9, 'PG')
(2, "Zack Snyder's Justice League", 'Henry Cavill', 'Zack Snyder', 'Action', 0.0, 'R13')
(3, 'Batman v Superman', 'Ben Affleck', 'Zack Snyder', 'Action', 873.6, 'PG')
(4, 'Man of Steel', 'Henry Cavill', 'Zack Snyder', 'Action', 668.0, 'PG')
(5, 'Wonder Woman', 'Gal Gadot', 'Patty Jenkins', 'Action', 821.8, 'PG')

Total Records: 5
```

```
=====
      MOVIE DATABASE CRUD APP
=====

1 - Add New Record
2 - View All Records
3 - Update a Record
4 - Delete a Record
5 - Search a Record
6 - Display Total Number of Movies
7 - Exit
=====

Enter choice: 1

== ADD NEW MOVIE ==
Movie ID: 090
Title: Spider-Man 2
Main Actor: Tobey Maguire
Director: Sam Raimi
Genre: Action
Gross Sales: 719.9
Rating (G, PG, R13, R16, X): PG

Movie added successfully!
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 Filter rows: Search this table Sort by key: None

Extra options

		movie_id	title	main_actor	director	genre	gross_sales	ratings
<input type="checkbox"/>	<input type="button" value="Edit"/> <input type="button" value="Copy"/> <input type="button" value="Delete"/>	1	Justice League	Ben Affleck	Zack Snyder	Action	657.9	PG
<input type="checkbox"/>	<input type="button" value="Edit"/> <input type="button" value="Copy"/> <input type="button" value="Delete"/>	2	Zack Snyder's Justice League	Henry Cavill	Zack Snyder	Action	0	R13
<input type="checkbox"/>	<input type="button" value="Edit"/> <input type="button" value="Copy"/> <input type="button" value="Delete"/>	3	Batman v Superman	Ben Affleck	Zack Snyder	Action	873.6	PG
<input type="checkbox"/>	<input type="button" value="Edit"/> <input type="button" value="Copy"/> <input type="button" value="Delete"/>	4	Man of Steel	Henry Cavill	Zack Snyder	Action	668	PG
<input type="checkbox"/>	<input type="button" value="Edit"/> <input type="button" value="Copy"/> <input type="button" value="Delete"/>	5	Wonder Woman	Gal Gadot	Patty Jenkins	Action	821.8	PG
<input type="checkbox"/>	<input type="button" value="Edit"/> <input type="button" value="Copy"/> <input type="button" value="Delete"/>	90	Spider-Man 2	Tobey Maguire	Sam Raimi	Action	719.9	PG

Check all With selected:

Show all | Number of rows: 25 Filter rows: Search this table Sort by key: None