CBSE
Computer Science Project

Blockbuster:
Database Management system for movies

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Acknowledgement

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Story behind the name

Blockbuster was a business founded by David Cook in 1985 as a single home video rental shop. As the company saw growth it became a public store chain featuring video game rentals, DVD-by-mail, streaming, video on demand and cinema theater.

Poor leadership and the residual effects of the Great Recession were major factors leading to Blockbuster's decline. The competition from Netflix's mail order service and Redbox automated kiosks ultimately led to the company filing for bankruptcy in 2010.

In 2011, its remaining 1700 stores were bought by Dish Network, a satellite television provider. By 2014, the last 300 company-owned stores were closed.

Dish retained a small number of franchise agreements, enabling some privately owned franchises to remain open irrespective of the termination of the corporate support for the brand.

Following a series of further closures in 2019, only one franchise store remains open in Bend, Oregon, United States.

The Last Blockbuster, Bend, Oregon, USA

Purpose of the project

I decided to create this project so that I would be able to maintain a database for movies which allowed me to store information pertaining to the movie and let me access it easily.

Although such services are already available, creating this project also helped learn about working with user interfaces while using Tkinter to create the UI for my project.

Creating this project also helped me become more familiar with Python and its connectivity with MySQL.

Requirements

1. Hardware requirements:

Component	Minimum	Recommended
Processor	Dual-core CPU	Quad-core CPU or better
RAM	2 GB	4 GB or higher
Storage	2 GB free space	10 GB or more
Operating System	Windows 7/Linux/macOS	Latest OS version

2. Software requirements:
   Python Version 3.13
   Tkinter Version 8.6
   MySQL Command line client Version 8.0

Implementation

1. Attributes used:
   Movie Name
   Genre
   Date of Release
   IMDB ID
   Director
   Rating

2. Features available:
   Insert records
   Update a record using name or IMDB ID of the movie
   Delete a record using name or IMDB ID of the movie
   Check availability of a record using name or IMDB ID of the movie
   Display all the records available
   Exit the applet

3. Source code:

```
#Importing required libraries
import tkinter as tk
from tkinter import StringVar
from tkinter import messagebox
import mysql.connector as sq


#Creating the database Movie_database and a table inside it called Movies
def create():
    mydb = sq.connect(host="localhost",user="root",password="root")
    mycursor = mydb.cursor()
    sql = "Create database Movie_database"
    mycursor.execute(sql)
    mycursor.execute("Use Movie_database")
    mydb.commit()
    mycursor.execute("Create table Movies (Movie_Name VARCHAR(500), Genre
VARCHAR(100), date_of_release DATE, IMDB_id INTEGER,Director VARCHAR(500),
Rating VARCHAR(500))")
    mydb.commit()

#Checking the existence of the database and creating it if the database does
not exist
def check_database_existence():
    try:
        mydb =
sq.connect(host="localhost",user="root",password="root",database="Movie_databas
e")
    except sq.Error as e:
        if e.errno == 1049:  #1049 is the MySQL error code for "Unknown
database"
            create()
        else:
            print(f"Error: {e}")
check_database_existence()

#Re-opening the menu window whenever the close button is clicked.
def recreate_root():
    global root
    root=tk.Tk()
    root.geometry('690x350')
    root.configure(bg='#42c8f5')
    root.title('Menu')
    lab3=tk.Label(root, text="WELCOME TO BLOCKBUSTER: A Movie
Database",font=('Cascadia Mono SemiLight',16,'bold'),bg='#42c8f5')
    lab6=tk.Label(root, text="Made By: Atharava Srivastava",font=('Cascadia
Mono SemiLight',16,'bold'),bg='#42c8f5')
    lab3.pack()
```

```
    lab6.pack()

    lin1=tk.Label(root,text="1.Insert new records",font=('Cascadia Mono SemiLight',14),bg='#42c8f5')
    lin2=tk.Label(root,text="2.Update a record",font=('Cascadia Mono SemiLight',14),bg='#42c8f5')
    lin3=tk.Label(root,text="3.Delete a record",font=('Cascadia Mono SemiLight',14),bg='#42c8f5')
    lin4=tk.Label(root,text="4.Search a record",font=('Cascadia Mono SemiLight',14),bg='#42c8f5')
    lin5=tk.Label(root,text="5.Display the data",font=('Cascadia Mono SemiLight',14),bg='#42c8f5')
    lin6=tk.Label(root,text="6.Quit",font=('Cascadia Mono SemiLight',14),bg='#42c8f5')

    lin1.place(x=10,y=80)
    lin2.place(x=10,y=110)
    lin3.place(x=10,y=140)
    lin4.place(x=10,y=170)
    lin5.place(x=10,y=200)
    lin6.place(x=10,y=230)

    ch=StringVar()

    lab1=tk.Label(root,text="Which function do you want to apply?:",font=('Cascadia Mono SemiLight',14),bg='#42c8f5')
    lab1.place(x=10,y=260)

    en1=tk.Entry(root, textvariable=ch, font=('Cascadia Mono SemiLight',14))
    en1.place(x=420,y=263)

    #Function to ask for confirmation from user if quiting
    def on_closing():
            if messagebox.askyesno(title='QUIT?',message='Are you sure you want to quit'):
                root.destroy()
            else:
                pass

    #Function to accept the choice from user of menu items
    def choicefunc(event=None):
        choice=ch.get()
        #To insert new records
        if choice=='1':
            insert()
        #To update a record
        elif choice=='2':
            update()
        #To delete a record
        elif choice=='3':
```

```
            delete()
        #To search a record
        elif choice=='4':
            search()
        #To display the data
        elif choice=='5':
            display()
        #To exit the program
        elif choice=='6':
            exit_=tk.Tk()
            exit_.geometry('500x100')
            exit_.config(bg='#42c8f5')
            exit_.title('Exit')
            label_0=tk.Label(exit_, text="Thank You!",font=('Cascadia Mono
SemiLight',16,'bold'),bg='#42c8f5')
            label_1=tk.Label(exit_, text="Hope you have a nice
day!",font=('Cascadia Mono SemiLight',16,'bold'),bg='#42c8f5')
            label_0.pack()
            label_1.pack()
            root.destroy()
               #Invaild input
               else:
                   lab2=tk.Label(root,text="Please Enter Valid
Input!",font=('Cascadia Mono SemiLight',15),bg='#42c8f5')
                   lab2.place(x=170,y=300)
                   ch.set('')

           en1.bind ('<Return>',choicefunc)

           #Recreating the option window
           root.mainloop()


       #Function for inserting data
       def insert():

           #Closing menu window
           root.destroy()

           #Creating window to insert data
           insertk=tk.Tk()
           insertk.geometry('850x380')
           insertk.configure(bg='#42c8f5')
           insertk.title('Insert Record')

           #Creating labels
           lab0=tk.Label(insertk,text='Fill out the below
information',bg='#42c8f5',font=('Cascadia Mono SemiLight',18,'bold'))
           lab1=tk.Label(insertk,text="Name of the Movie
:",bg='#42c8f5',font=('Cascadia Mono SemiLight',14))
```

```
127.            lab2=tk.Label(insertk,text="Genre of the
    Movie:",bg='#42c8f5',font=('Cascadia Mono SemiLight',14))
128.            lab3=tk.Label(insertk,text="Date of Releae of the Movie (in YYYY-MM-
    DD format):",bg='#42c8f5',font=('Cascadia Mono SemiLight',14))
129.            lab4=tk.Label(insertk,text="IMDB ID:",bg='#42c8f5',font=('Cascadia
    Mono SemiLight',14))
130.            lab5=tk.Label(insertk,text="Movie
    Director:",bg='#42c8f5',font=('Cascadia Mono SemiLight',14))
131.            lab6=tk.Label(insertk,text="IMDB
    Rating:",bg='#42c8f5',font=('Cascadia Mono SemiLight',14))
132.
133.            #Placing labels
134.            lab0.pack()
135.            lab1.place(x=10,y=60)
136.            lab2.place(x=10,y=100)
137.            lab3.place(x=10,y=140)
138.            lab4.place(x=10,y=180)
139.            lab5.place(x=10,y=220)
140.            lab6.place(x=10,y=260)
141.
142.            #Initializing variables to read the entry box data
143.            nm=StringVar()
144.            genre=StringVar()
145.            dor=StringVar()
146.            code=StringVar()
147.            dr=StringVar()
148.            rt=StringVar()
149.
150.            #Creating entry boxes
151.            en1=tk.Entry(insertk,textvariable=nm,font=('Cascadia Mono
    SemiLight',14))
152.            en2=tk.Entry(insertk,textvariable=genre,font=('Cascadia Mono
    SemiLight',14))
153.            en3=tk.Entry(insertk,textvariable=dor,font=('Cascadia Mono
    SemiLight',14))
154.            en4=tk.Entry(insertk,textvariable=code,font=('Cascadia Mono
    SemiLight',14))
155.            en5=tk.Entry(insertk,textvariable=dr,font=('Cascadia Mono
    SemiLight',14))
156.            en6=tk.Entry(insertk,textvariable=rt,font=('Cascadia Mono
    SemiLight',14))
157.            en7=tk.Entry(insertk)
158.
159.            #Placing entry boxes
160.            en1.place(x=225,y=62)
161.            en2.place(x=225,y=102)
162.            en3.place(x=575,y=142)
163.            en4.place(x=105,y=182)
164.            en5.place(x=180,y=222)
165.            en6.place(x=145,y=262)
```

```
166.
167.          #Function to execute query for entering data in MySQL table
168.          def insertin(event=None):
169.
170.              #Getting information from entry boxes
171.              Name=nm.get()
172.              Genre=genre.get()
173.              DOR=dor.get()
174.              Movie_code=code.get()
175.              Director=dr.get()
176.              Rating=rt.get()
177.
178.              #Connecting to MySQL and executing the query
179.              mydb =
    sq.connect(host="localhost",user="root",password="root",database="movie_databas
    e")
180.              mycursor = mydb.cursor()
181.              sql = "INSERT INTO Movies (Movie_Name, Genre, Date_of_release,
    IMDB_id, Director, Rating) VALUES (%s,%s,%s,%s,%s,%s)"
182.              val = (Name,Genre,DOR,Movie_code,Director,Rating)
183.              mycursor.execute(sql, val)
184.              mydb.commit()
185.
186.              #Displaying message for successful insert
187.              added=tk.Label(insertk,text='Record Inserted',font=('Cascadia
    Mono SemiLight',20),bg='#42c8f5')
188.              added.place(x=300,y=295)
189.
190.              #Setting all entry boxes to blank so that new data can be
    entered
191.              nm.set('')
192.              genre.set('')
193.              dor.set('')
194.              code.set('')
195.              dr.set('')
196.              rt.set('')
197.
198.          insertk.bind_all('<Return>', insertin)
199.
200.          #Function to ask confirmation from user for quiting
201.          def on_closing():
202.              if messagebox.askyesno(title='QUIT?',message='Are you sure you
    want to quit'):
203.                  insertk.destroy() #Closing this window
204.                  recreate_root() #Re-opening root window
205.              else:
206.                  pass
207.
208.          insertk.protocol('WM_DELETE_WINDOW',on_closing)
209.          insertk.mainloop()
```

```
210.
211.       #Function for updating a record
212.       def update(event=None):
213.
214.           #Closing menu window
215.           root.destroy()
216.
217.           #Creating window to update a record
218.           updatetk=tk.Tk()
219.           updatetk.geometry('1000x100')
220.           updatetk.configure(bg='#42c8f5')
221.           updatetk.title('Update Record')
222.
223.           #Asking user if they want to use the movie name or IMDB ID to update
   the record
224.           #Creating labels
225.           lab0=tk.Label(updatetk,text='Update Record',font=('Cascadia Mono
   SemiLight',18,'bold'),bg='#42c8f5')
226.           lab1=tk.Label(updatetk,text='Enter 1 to use movie name or 2 to use
   IMDB ID to update the data:',font=('Cascadia Mono SemiLight',14),bg='#42c8f5')
227.
228.           #Placing labels
229.           lab0.pack()
230.           lab1.place(x=10,y=50)
231.
232.           #Initializing variable to read the entry box data
233.           val=StringVar()
234.
235.           #Creating and placing entry box
236.           en1=tk.Entry(updatetk,textvariable=val,font=('Cascadia Mono
   SemiLight',14))
237.           en1.place(x=740,y=50)
238.
239.           #Function to ask for confirmation and close the window
240.           def on_closing():
241.                   if messagebox.askyesno(title='QUIT?',message='Are you sure
   you want to quit'):
242.                       nonlocal updatetk
243.                       updatetk.destroy() #Closing this window
244.                       recreate_root() #Re-opening root window
245.                   else:
246.                       pass
247.           updatetk.protocol('WM_DELETE_WINDOW',on_closing)
248.
249.           #Checking whether user wants to update using movie name or IMDB ID
250.           def updateit(event=None):
251.               char=val.get()
252.               while char!='':
253.                   if char=='1':
254.                       updatewithname()
```

```
                    break
                elif char=='2':
                    updatewithid()
                    break

        #Function to update using movie name
        def updatewithname():

            #Closing choice window
            nonlocal updatetk
            updatetk.destroy()

            #Creating window to update using movie name
            nametk=tk.Tk()
            nametk.geometry('750x380')
            nametk.configure(bg='#42c8f5')
            nametk.title('Updating Record using name')

            #Creating labels
            lab0=tk.Label(nametk,text='Update Record',font=('Cascadia Mono SemiLight',18,'bold'),bg='#42c8f5')
            lab1=tk.Label(nametk,text='--> 1. Movie name ',font=('Cascadia Mono SemiLight',14),bg='#42c8f5')
            lab2=tk.Label(nametk,text='--> 2. Genre',font=('Cascadia Mono SemiLight',14),bg='#42c8f5')
            lab3=tk.Label(nametk,text='--> 3. Date of Release',font=('Cascadia Mono SemiLight',14),bg='#42c8f5')
            lab4=tk.Label(nametk,text='--> 4. IMDB Id',font=('Cascadia Mono SemiLight',14),bg='#42c8f5')
            lab5=tk.Label(nametk,text='--> 5. Director',font=('Cascadia Mono SemiLight',14),bg='#42c8f5')
            lab9=tk.Label(nametk,text='--> 6. IMDB Rating',font=('Cascadia Mono SemiLight',14),bg='#42c8f5')
            lab6=tk.Label(nametk,text="Movie name whose record you want to update:",font=('Cascadia Mono SemiLight',14),bg='#42c8f5')
            lab7=tk.Label(nametk,text="Record you want to update:",font=('Cascadia Mono SemiLight',14),bg='#42c8f5')
            lab8=tk.Label(nametk,text="Enter the change:",font=('Cascadia Mono SemiLight',14),bg='#42c8f5')

            #Placing labels
            lab0.pack()
            lab6.place(x=10,y=50)
            lab1.place(x=10,y=80)
            lab2.place(x=10,y=110)
            lab3.place(x=10,y=140)
            lab4.place(x=10,y=170)
            lab5.place(x=10,y=200)
            lab9.place(x=10,y=230)
            lab7.place(x=10,y=260)
```

```
295.                lab8.place(x=10,y=290)
296.
297.                #Initialising variables to read entry box
298.                upe=StringVar()
299.                fi=StringVar()
300.                fich=StringVar()
301.
302.                #Creating entry boxes
303.                en1=tk.Entry(nametk,textvariable=upe,font=('Cascadia Mono
    SemiLight',14))
304.                en2=tk.Entry(nametk,textvariable=fi,font=('Cascadia Mono
    SemiLight',14))
305.                en3=tk.Entry(nametk,textvariable=fich,font=('Cascadia Mono
    SemiLight',14))
306.
307.                #Placing entry boxes
308.                en1.place(x=490,y=52)
309.                en2.place(x=300,y=262)
310.                en3.place(x=200,y=294)
311.
312.                #Function to execute query for updating record using movie name
313.                def finallyupdating(event=None):
314.
315.                    #Getting information from entry boxes
316.                    up=upe.get()
317.                    fields=int(fi.get())
318.                    fieldch=fich.get()
319.
320.                    #Checking for which data is to be updated
321.                    if fields==1:
322.                        field='Movie_Name'
323.                    elif fields==2:
324.                        field='Genre'
325.                    elif fields==3:
326.                        field='Date_of_release'
327.                    elif fields==4:
328.                        field='IMDB_id'
329.                    elif fields==5:
330.                        field='Director'
331.                    elif fields==6:
332.                        field='Rating'
333.
334.                    #Connecting to MySQL and executing the query
335.                    mydb=
    sq.connect(host="localhost",user="root",passwd="root",database="Movie_database"
    )
336.                    cursor=mydb.cursor()
337.                    update="UPDATE Movies set {} = '{}' WHERE Movie_Name like
    '{}'".format(field,fieldch,up)
338.                    cursor.execute(update)
```

```
339.                     mydb.commit()
340.
341.                     #Displaying message for successful update
342.                     lab0=tk.Label(nametk,text="Record Updated!",font=('Cascadia
    Mono SemiLight',24),bg='#42c8f5')
343.                     lab0.place(x=240,y=325)
344.
345.                     #Setting all entry boxes to blank so that more updates can
    be done
346.                     upe.set('')
347.                     fi.set('')
348.                     fich.set('')
349.
350.                 #Function to ask confirmation from user for quiting
351.                 def on_closingname():
352.                     if messagebox.askyesno(title='QUIT?',message='Are you sure
    you want to quit'):
353.                         nonlocal nametk
354.                         nametk.destroy() #Closing this window
355.                         recreate_root() # Re-opening root window
356.                     else:
357.                         pass
358.                 nametk.bind_all('<Return>', finallyupdating)
359.                 nametk.protocol('WM_DELETE_WINDOW',on_closingname)
360.
361.             #Function to update using IMDB ID
362.             def updatewithid():
363.
364.                 #Closing choice window
365.                 nonlocal updatetk
366.                 updatetk.destroy()
367.
368.                 #Creating window to update using IMDB ID
369.                 idtk=tk.Tk()
370.                 idtk.geometry('850x380')
371.                 idtk.configure(bg='#42c8f5')
372.                 idtk.title('Updating Record using IMDB ID')
373.
374.                 #Creating labels
375.                 lab0=tk.Label(idtk,text='Update Record',font=('Cascadia Mono
    SemiLight',18,'bold'),bg='#42c8f5')
376.                 lab1=tk.Label(idtk,text='--> 1. Movie name ',font=('Cascadia
    Mono SemiLight',14),bg='#42c8f5')
377.                 lab2=tk.Label(idtk,text='--> 2. Genre',font=('Cascadia Mono
    SemiLight',14),bg='#42c8f5')
378.                 lab3=tk.Label(idtk,text='--> 3. Date of Release',font=('Cascadia
    Mono SemiLight',14),bg='#42c8f5')
379.                 lab4=tk.Label(idtk,text='--> 4. IMDB Id',font=('Cascadia Mono
    SemiLight',14),bg='#42c8f5')
```

```
380.                lab5=tk.Label(idtk,text='--> 5. Director',font=('Cascadia Mono
    SemiLight',14),bg='#42c8f5')
381.                lab9=tk.Label(idtk,text='--> 6. IMDB Rating',font=('Cascadia
    Mono SemiLight',14),bg='#42c8f5')
382.                lab6=tk.Label(idtk,text="IMDB ID of the movie whose record you
    want to update:",font=('Cascadia Mono SemiLight',14),bg='#42c8f5')
383.                lab7=tk.Label(idtk,text="Record you want to
    update:",font=('Cascadia Mono SemiLight',14),bg='#42c8f5')
384.                lab8=tk.Label(idtk,text="Enter the change:",font=('Cascadia Mono
    SemiLight',14),bg='#42c8f5')
385.
386.                #Placing labels
387.                lab0.pack()
388.                lab6.place(x=10,y=50)
389.                lab1.place(x=10,y=80)
390.                lab2.place(x=10,y=110)
391.                lab3.place(x=10,y=140)
392.                lab4.place(x=10,y=170)
393.                lab5.place(x=10,y=200)
394.                lab9.place(x=10,y=230)
395.                lab7.place(x=10,y=260)
396.                lab8.place(x=10,y=290)
397.
398.                #Initialising variables to read entry box
399.                upe=StringVar()
400.                fi=StringVar()
401.                fich=StringVar()
402.
403.                #Creating entry boxes
404.                en1=tk.Entry(idtk,textvariable=upe,font=('Cascadia Mono
    SemiLight',14))
405.                en2=tk.Entry(idtk,textvariable=fi,font=('Cascadia Mono
    SemiLight',14))
406.                en3=tk.Entry(idtk,textvariable=fich,font=('Cascadia Mono
    SemiLight',14))
407.
408.                #Placing entry boxes
409.                en1.place(x=600,y=52)
410.                en2.place(x=300,y=262)
411.                en3.place(x=200,y=294)
412.
413.                #Function to execute query for updating record using IMDB ID
414.                def finallyupdating(event=None):
415.
416.                    #Getting information from entry boxes
417.                    up=upe.get()
418.                    fields=int(fi.get())
419.                    fieldch=fich.get()
420.
421.                    #Checking for which data is to be updated
```

```
                    if fields==1:
                        field='Movie_Name'
                    elif fields==2:
                        field='Genre'
                    elif fields==3:
                        field='Date_of_release'
                    elif fields==4:
                        field='IMDB_id'
                    elif fields==5:
                        field='Director'
                    elif fields==6:
                        field='Rating'

                    #Connecting to MySQL and executing the query
                    mydb=
    sq.connect(host="localhost",user="root",passwd="root",database="Movie_database"
    )
                    cursor=mydb.cursor()
                    update="UPDATE Movies set {} = '{}' WHERE IMDB_ID=
    '{}'".format(field,fieldch,up)
                    cursor.execute(update)
                    mydb.commit()

                    #Displaying message for successful update
                    lab0=tk.Label(idtk,text="Record Updated!",font=('Cascadia
    Mono SemiLight',24),bg='#42c8f5')
                    lab0.place(x=240,y=325)

                    #Setting all entry boxes to blank so that more updates can
    be made
                    upe.set('')
                    fi.set('')
                    fich.set('')

                #Function to ask confirmation from user for quiting
                def on_closingid():
                    if messagebox.askyesno(title='QUIT?',message='Are you sure
    you want to quit'):
                        nonlocal idtk
                        idtk.destroy() #Closing this window
                        recreate_root() #Re-opening root window
                    else:
                        pass
                idtk.bind_all('<Return>', finallyupdating)
                idtk.protocol('WM_DELETE_WINDOW',on_closingid)

            updatetk.bind_all('<Return>', updateit)
            updateit()
            updatetk.protocol('WM_DELETE_WINDOW',on_closing)
            updatetk.mainloop()
```

```
466.
467.       #Function for deleting a record
468.       def delete():
469.
470.           #Closing menu window
471.           root.destroy()
472.
473.           #Creating window to delete a record
474.           deletetk=tk.Tk()
475.           deletetk.geometry('1000x100')
476.           deletetk.configure(bg='#42c8f5')
477.           deletetk.title('Delete Record')
478.
479.           #Asking user if they want to use the movie name or IMDB ID to delete
   the record
480.           #Creating labels
481.           lab0=tk.Label(deletetk,text='Delete Record',font=('Cascadia Mono
   SemiLight',18,'bold'),bg='#42c8f5')
482.           lab1=tk.Label(deletetk,text='Enter 1 to use movie name or 2 to use
   IMDB ID to delete the data:',font=('Cascadia Mono SemiLight',14),bg='#42c8f5')
483.
484.           #Placing labels
485.           lab0.pack()
486.           lab1.place(x=10,y=50)
487.
488.           #Initializing variable to read the entry box data
489.           val=StringVar()
490.
491.           #Creating and placing entry box
492.           en1=tk.Entry(deletetk,textvariable=val,font=('Cascadia Mono
   SemiLight',14))
493.           en1.place(x=730,y=53)
494.
495.           #Function to ask for confirmation and close the window
496.           def on_closing():
497.                   if messagebox.askyesno(title='QUIT?',message='Are you sure
   you want to quit'):
498.                       nonlocal deletetk
499.                       deletetk.destroy() #Closing this window
500.                       recreate_root() #Re-opening root window
501.                   else:
502.                       pass
503.           deletetk.protocol('WM_DELETE_WINDOW',on_closing)
504.
505.           #Checking whether user wants to delete using movie name or IMDB ID
506.           def deleteit(event=None):
507.               char=val.get()
508.               while char!='':
509.                   if char=='1':
510.                       deletewithname()
```

```
                    break
                elif char=='2':
                    deletewithid()
                    break

        #Function to delete using movie name
        def deletewithname():

            #Closing choice window
            nonlocal deletetk
            deletetk.destroy()

            #Creating window to delete using movie name
            nametk=tk.Tk()
            nametk.geometry('1060x130')
            nametk.configure(bg='#42c8f5')
            nametk.title('Deleting Record using name')

            #Creating labels
            lab0=tk.Label(nametk,text='Delete Record',font=('Cascadia Mono SemiLight',18,'bold'),bg='#42c8f5')
            lab1=tk.Label(nametk,text='Enter the name of the movie whose data you want to delete: ',font=('Cascadia Mono SemiLight',18),bg='#42c8f5')

            #Placing labels
            lab0.pack()
            lab1.place(x=10,y=50)

            #Initialising variable to read entry box
            de=StringVar()

            #Creating and placing entry box
            en1=tk.Entry(nametk,textvariable=de,font=('Cascadia Mono SemiLight',14))
            en1.place(x=825,y=59)

            #Function to execute query for deleteing record using movie name
            def finallydeleting(event=None):
                #Getting information from entry box
                dele=de.get()

                #Connecting to MySQL and executing the query
                c=sq.connect(host="localhost",user="root",passwd="root",database="movie_database")
                cursor=c.cursor()
                sql="DELETE FROM Movies WHERE Movie_Name like '%{}%'".format(dele)
                cursor.execute(sql)
                c.commit()

```

```
                    #Displaying message for successful delete
                    lab2=tk.Label(nametk,text="Record Deleted!",font=('Cascadia Mono SemiLight',15,'bold'),bg='#42c8f5')
                    lab2.place(x=400,y=90)

                    #Setting all entry boxes to blank so that more updates can be done
                    de.set('')

                #Function to ask confirmation from user for quiting
                def on_closingname():
                    if messagebox.askyesno(title='QUIT?',message='Are you sure you want to quit'):
                        nonlocal nametk
                        nametk.destroy() #Closing this window
                        recreate_root() #Re-opening root window
                    else:
                        pass
                nametk.bind_all('<Return>', finallydeleting)
                nametk.protocol('WM_DELETE_WINDOW',on_closingname)

            #Function to delete using IMDB ID
            def deletewithid():

                #Closing choice window
                nonlocal deletetk
                deletetk.destroy()

                #Creating window to delete using movie name
                idtk=tk.Tk()
                idtk.geometry('1150x110')
                idtk.configure(bg='#42c8f5')
                idtk.title('Deleting Record using IMDB ID')

                #Creating labels
                lab0=tk.Label(idtk,text='Delete Record',font=('Cascadia Mono SemiLight',18,'bold'),bg='#42c8f5')
                lab1=tk.Label(idtk,text='Enter the IMDB ID of the movie whose data you want to delete: ',font=('Cascadia Mono SemiLight',18),bg='#42c8f5')

                #Placing labels
                lab0.pack()
                lab1.place(x=10,y=50)

                #Initialising variable to read entry box
                de=StringVar()

                #Creating and placing entry boxes
                en1=tk.Entry(idtk,textvariable=de,font=('Cascadia Mono SemiLight',14))
```

```
600.                en1.place(x=870,y=59)
601.
602.                #Function to execute query for deleteing record using IMDB ID
603.                def finallydeleting(event=None):
604.                    #Getting information from entry box
605.                    dele=de.get()
606.
607.                    #Connecting to MySQL and executing the query
608.                    c=sq.connect(host="localhost",user="root",passwd="root",data
    base="movie_database")
609.                    cursor=c.cursor()
610.                    sql="DELETE FROM Movies WHERE IMDB_id like
    '%{}%'".format(dele)
611.                    cursor.execute(sql)
612.                    c.commit()
613.
614.                    #Displaying message for successful delete
615.                    lab2=tk.Label(idtk,text="Record Deleted!",font=('Cascadia
    Mono SemiLight',15,'bold'),bg='#42c8f5')
616.                    lab2.place(x=320,y=80)
617.
618.                    #Setting all entry boxes to blank so that more updates can
    be done
619.                    de.set('')
620.
621.                #Function to ask confirmation from user for quiting
622.                def on_closingid():
623.                    if messagebox.askyesno(title='QUIT?',message='Are you sure
    you want to quit'):
624.                        nonlocal idtk
625.                        idtk.destroy() #Closing this window
626.                        recreate_root() #Re-opening root window
627.                    else:
628.                        pass
629.                idtk.bind_all('<Return>', finallydeleting)
630.                idtk.protocol('WM_DELETE_WINDOW',on_closingid)
631.
632.            deletetk.bind_all('<Return>',deleteit)
633.            deleteit()
634.            deletetk.mainloop()
635.
636.
637.        #Function for searching a record
638.        def search():
639.
640.            #Closing menu window
641.            root.destroy()
642.
643.            #Creating window to search a record
644.            searchtk=tk.Tk()
```

```
645.            searchtk.geometry('1000x100')
646.            searchtk.configure(bg='#42c8f5')
647.            searchtk.title('Search Record')
648.
649.            #Asking user if they want to use the movie name or IMDB ID to search
    the record
650.            #Creating labels
651.            lab0=tk.Label(searchtk,text='Search Record',font=('Cascadia Mono
    SemiLight',18,'bold'),bg='#42c8f5')
652.            lab1=tk.Label(searchtk,text='Enter 1 to use movie name or 2 to use
    IMDB ID to search the data:',font=('Cascadia Mono SemiLight',14),bg='#42c8f5')
653.
654.            #Placing labels
655.            lab0.pack()
656.            lab1.place(x=10,y=50)
657.
658.            #Initializing variable to read the entry box data
659.            val=StringVar()
660.
661.            #Creating and placing entry box
662.            en1=tk.Entry(searchtk,textvariable=val,font=('Cascadia Mono
    SemiLight',14))
663.            en1.place(x=730,y=53)
664.
665.            #Function to ask for confirmation and close the window
666.            def on_closing():
667.                    if messagebox.askyesno(title='QUIT?',message='Are you sure
    you want to quit'):
668.                        nonlocal searchtk
669.                        searchtk.destroy() #Closing this window
670.                        recreate_root() #Re-opening root window
671.                    else:
672.                        pass
673.            searchtk.protocol('WM_DELETE_WINDOW',on_closing)
674.
675.            #Checking whether user wants to search using movie name or IMDB ID
676.            def searchit(event=None):
677.                char=val.get()
678.                while char!='':
679.                    if char=='1':
680.                        searchwithname()
681.                        break
682.                    elif char=='2':
683.                        searchwithid()
684.                        break
685.
686.            #Function to search using movie name
687.            def searchwithname():
688.
689.                #Closing choice window
```

```
690.                nonlocal searchtk
691.                searchtk.destroy()
692.
693.                #Creating window to search using movie name
694.                nametk = tk.Tk()
695.                nametk.geometry('950x100')
696.                nametk.configure(bg='#42c8f5')
697.                nametk.title('Searching Record using name')
698.
699.                #Creating labels
700.                lab0 = tk.Label(nametk, text='Search Record', font=('Cascadia
    Mono SemiLight', 18, 'bold'), bg='#42c8f5')
701.                lab1 = tk.Label(nametk, text='Enter the name of the movie whose
    data you want to search: ', font=('Cascadia Mono SemiLight', 14), bg='#42c8f5')
702.
703.                #Placing labels
704.                lab0.pack()
705.                lab1.place(x=10,y=50)
706.
707.                #Initializing variable to read entry box
708.                search = StringVar()
709.
710.                #Creating and placing entry box
711.                en1 = tk.Entry(nametk, textvariable=search, font=('Cascadia Mono
    SemiLight', 14))
712.                en1.place(x=650,y=53)
713.
714.                #Function to execute query for searching record using movie name
    and displaying it
715.                def finallysearching(event=None):
716.                    try:
717.                        #Getting information from entry box
718.                        name = search.get()
719.
720.                        #Connecting to MySQL and executing the query
721.                        mydb = sq.connect(host='localhost', user='root',
    password='root', database='movie_database')
722.                        cursor = mydb.cursor()
723.                        cursor.execute("SELECT * FROM Movies WHERE Movie_Name
    LIKE '%{}%'".format(name))
724.
725.                        #Reading the output provied by MySQL
726.                        result = cursor.fetchall()
727.
728.                        #Displaying output according to the result obtained from
    the query
729.                        #If record exists
730.                        if result:
731.
732.                            #New window to display data
```

```
                            display_window = tk.Tk()
                            display_window.geometry('600x100')
                            display_window.configure(bg='#42c8f5')
                            display_window.title('Search Results for Movie
    Name')

                            #Creating header labels for the table
                            header_labels = ['Movie Name', 'IMDB ID',
    'Director', 'Year', 'Genre']
                            for i, header in enumerate(header_labels):
                                tk.Label(display_window, text=header,
    font=('Cascadia Mono SemiLight', 16), bg='#42c8f5').grid(row=0, column=i,
    padx=10, pady=10)

                            #Adding movie records in rows
                            for i, record in enumerate(result):
                                for j, value in enumerate(record[1:]):
                                    tk.Label(display_window, text=value,
    font=('Cascadia Mono SemiLight', 14), bg='#42c8f5').grid(row=i + 1, column=j,
    padx=10, pady=5)

                            display_window.mainloop()

                        #If record does not exist
                        else:
                            messagebox.showinfo("No Results", "No records found
    for the given movie name.")

                    except Exception as e:
                        print(f"Error: {e}")

                #Function to ask confirmation from user for quiting
                def on_closingname():
                    if messagebox.askyesno(title='QUIT?',message='Are you sure
    you want to quit'):
                        nonlocal nametk
                        nametk.destroy() #Closing this window
                        recreate_root() #Re-opening root window
                    else:
                        pass
                nametk.bind_all('<Return>', finallysearching)
                nametk.protocol('WM_DELETE_WINDOW', on_closingname)

            #Function to search using movie name
            def searchwithid():

                #Closing choice window
                nonlocal searchtk
                searchtk.destroy()

```

```
775.                #Creating window to search using IMDB ID
776.                idtk = tk.Tk()
777.                idtk.geometry('950x100')
778.                idtk.configure(bg='#42c8f5')
779.                idtk.title('Searching Record using IMDB ID')
780.
781.                #Creating labels
782.                lab0 = tk.Label(idtk, text='Search Record', font=('Cascadia Mono
    SemiLight', 18, 'bold'), bg='#42c8f5')
783.                lab1 = tk.Label(idtk, text='Enter the IMDB ID of the movie whose
    data you want to search: ', font=('Cascadia Mono SemiLight', 14), bg='#42c8f5')
784.
785.                #Placing labels
786.                lab0.pack()
787.                lab1.place(x=10,y=50)
788.
789.                #Initializing variable to read entry box
790.                search = StringVar()
791.
792.                #Creating and placing entry box
793.                en1 = tk.Entry(idtk, textvariable=search, font=('Cascadia Mono
    SemiLight', 14))
794.                en1.place(x=690,y=53)
795.
796.                #Function to execute query for searching record using movie name
    and displaying it
797.                def finallysearching(event=None):
798.                    try:
799.                        #Getting information from entry box
800.                        idd = search.get()
801.
802.                        #Connecting to MySQL and executing the query
803.                        mydb = sq.connect(host='localhost', user='root',
    password='root', database='movie_database')
804.                        cursor = mydb.cursor()
805.                        cursor.execute("SELECT * FROM Movies WHERE IMDB_id LIKE
    '%{}%'".format(idd))
806.
807.                        #Reading the output provied by MySQL
808.                        result = cursor.fetchall()
809.
810.                        #Displaying output according to the result obtained from
    the query
811.                        #If record exists
812.                        if result:
813.
814.                            #New window to display data
815.                            display_window = tk.Tk()
816.                            display_window.geometry('600x100')
817.                            display_window.configure(bg='#42c8f5')
```

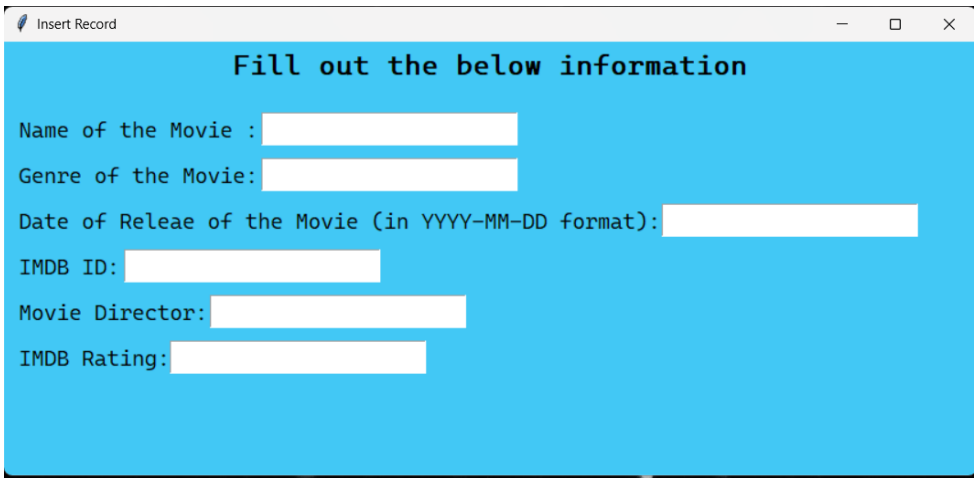
```
                            display_window.title('Search Results for Movie Name')

                            #Creating header labels for the table
                            header_labels = ['Movie Name', 'IMDB ID', 'Director', 'Year', 'Genre']
                            for i, header in enumerate(header_labels):
                                tk.Label(display_window, text=header, font=('Cascadia Mono SemiLight', 16), bg='#42c8f5').grid(row=0, column=i, padx=10, pady=10)

                            #Adding movie records in rows
                            for i, record in enumerate(result):
                                for j, value in enumerate(record[1:]):
                                    tk.Label(display_window, text=value, font=('Cascadia Mono SemiLight', 14), bg='#42c8f5').grid(row=i + 1, column=j, padx=10, pady=5)

                            display_window.mainloop()
                        else:
                            messagebox.showinfo("No Results", "No records found for the given IMDB ID.")
                    except Exception as e:
                        print(f"Error: {e}")

                #Function to ask confirmation from user for quiting
                def on_closingid():
                    if messagebox.askyesno(title='QUIT?',message='Are you sure you want to quit'):
                        nonlocal idtk
                        idtk.destroy() #Closing this window
                        recreate_root() #Re-opening root window
                    else:
                        pass
                idtk.bind_all('<Return>', finallysearching)
                idtk.protocol('WM_DELETE_WINDOW', on_closingid)

            searchtk.bind_all('<Return>',searchit)

        #Function for displaying the data
        def display():

            #Closing menu window
            root.destroy()

            #Creating window to search a record
            displaytk=tk.Tk()
            displaytk.configure(bg='#42c8f5')
            displaytk.geometry('1000x550')
            displaytk.title('Display Record')
```

```
860.
861.           #Connecting to MySQL and executing the query
862.           mydb=sq.connect(host="localhost", user="root", password="root",
   database="movie_database")
863.           cursor=mydb.cursor()
864.           sql="SELECT * FROM Movies ORDER BY Movie_Name"
865.           cursor.execute(sql)
866.           myresult=cursor.fetchall()
867.
868.           #Creating a frame
869.           container=tk.Frame(displaytk, bg='#42c8f5')
870.           container.pack(fill='both', expand=True)
871.
872.           #Creating the canvas and the scrollbar
873.           canvas = tk.Canvas(container, bg='#42c8f5')
874.           scrollbar = tk.Scrollbar(container, orient='vertical',
   command=canvas.yview)
875.           scrollable_frame = tk.Frame(canvas, bg='#42c8f5')
876.
877.           #Configuring the scrollable frame
878.           scrollable_frame.bind("<Configure>",lambda e:
   canvas.configure(scrollregion=canvas.bbox("all")))
879.           canvas.create_window((0, 0), window=scrollable_frame, anchor="nw")
880.           canvas.configure(yscrollcommand=scrollbar.set)
881.
882.           #Adding the header labels
883.           header_labels = ['Movie Name', 'Genre', 'Date of Release', 'IMDB
   Id', 'Director', 'Rating']
884.           for i, header in enumerate(header_labels):
885.               tk.Label(scrollable_frame, text=header, font=('Cascadia Mono
   SemiLight', 16), bg='#42c8f5').grid(row=0, column=i, padx=10, pady=10)
886.
887.           #Adding movie records in rows
888.           for i, record in enumerate(myresult):
889.               for j, value in enumerate(record):
890.                   tk.Label(scrollable_frame, text=value, font=('Cascadia Mono
   SemiLight', 14), bg='#42c8f5').grid(row=i+1, column=j, padx=10, pady=5)
891.
892.           #Placing the canvas and the scrollbar
893.           canvas.pack(side="left", fill="both", expand=True)
894.           scrollbar.pack(side="right", fill="y")
895.
896.           #Function to ask confirmation from user for quitting
897.           def on_closing():
898.               if messagebox.askyesno(title='QUIT?', message='Are you sure you
   want to quit'):
899.                   displaytk.destroy()  #Closing this window
900.                   recreate_root()  #Re-opening root window
901.               else:
902.                   pass
```

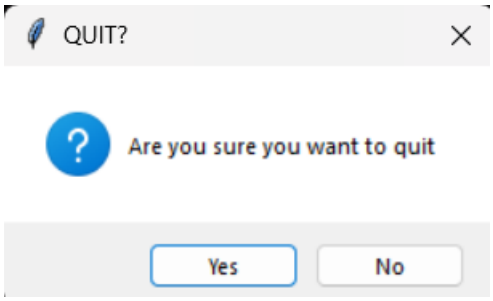
```
903.
904.           displaytk.protocol('WM_DELETE_WINDOW', on_closing)
905.           displaytk.mainloop()
906.
907.       #Root window
908.       root=tk.Tk()
909.       root.geometry('690x350')
910.       root.configure(bg='#42c8f5')
911.       root.title('Menu')
912.       lab3=tk.Label(root, text="WELCOME TO BLOCKBUSTER: A Movie
   Database",font=('Cascadia Mono SemiLight',16,'bold'),bg='#42c8f5')
913.       lab6=tk.Label(root, text="Made By: Atharava Srivastava",font=('Cascadia
   Mono SemiLight',16,'bold'),bg='#42c8f5')
914.       lab3.pack()
915.       lab6.pack()
916.
917.       lin1=tk.Label(root,text="1.Insert new data ",font=('Cascadia Mono
   SemiLight',14),bg='#42c8f5')
918.       lin2=tk.Label(root,text="2.Update the table",font=('Cascadia Mono
   SemiLight',14),bg='#42c8f5')
919.       lin3=tk.Label(root,text="3.Delete the record from the
   table",font=('Cascadia Mono SemiLight',14),bg='#42c8f5')
920.       lin4=tk.Label(root,text="4.Search a record from the
   table",font=('Cascadia Mono SemiLight',14),bg='#42c8f5')
921.       lin5=tk.Label(root,text="5.Display the table",font=('Cascadia Mono
   SemiLight',14),bg='#42c8f5')
922.       lin6=tk.Label(root,text="6.Quit",font=('Cascadia Mono
   SemiLight',14),bg='#42c8f5')
923.
924.       lin1.place(x=10,y=80)
925.       lin2.place(x=10,y=110)
926.       lin3.place(x=10,y=140)
927.       lin4.place(x=10,y=170)
928.       lin5.place(x=10,y=200)
929.       lin6.place(x=10,y=230)
930.
931.       ch=StringVar()
932.
933.       lab1=tk.Label(root,text="Which function do you want to
   apply?:",font=('Cascadia Mono SemiLight',14),bg='#42c8f5')
934.       lab1.place(x=10,y=260)
935.       en1=tk.Entry(root, textvariable=ch, font=('Cascadia Mono SemiLight',14))
936.       en1.place(x=420,y=263)
937.
938.       #Function to ask confirmation from user for quiting
939.       def on_closing():
940.               if messagebox.askyesno(title='QUIT?',message='Are you sure you
   want to quit'):
941.                   root.destroy() #Closing root window
942.               else:
```

```
                    pass

        #Function to accept the choice user from menu items
        def choicefunc(event=None):
            choice=ch.get()
            #To insert new data
            if choice=='1':
                insert()
            #To update a record
            elif choice=='2':
                update()
            #To delete a record
            elif choice=='3':
                delete()
            #To search a record
            elif choice=='4':
                search()
            #To display the data
            elif choice=='5':
                display()
            #To exit the program
            elif choice=='6':
                exit_=tk.Tk()
                exit_.geometry('500x100')
                exit_.config(bg='#42c8f5')
                exit_.title('Exit')
                label_0=tk.Label(exit_, text="Thank You!",font=('Cascadia Mono SemiLight',16,'bold'),bg='#42c8f5')
                label_1=tk.Label(exit_, text="Hope you have a nice day!",font=('Cascadia Mono SemiLight',16,'bold'),bg='#42c8f5')
                label_0.pack()
                label_1.pack()
                root.destroy()
            #Invaild input
            else:
                lab2=tk.Label(root,text="Please Enter Valid Input!",font=('Cascadia Mono SemiLight',15),bg='#42c8f5')
                lab2.place(x=170,y=300)
                ch.set('')

        en1.bind('<Return>',choicefunc)
```

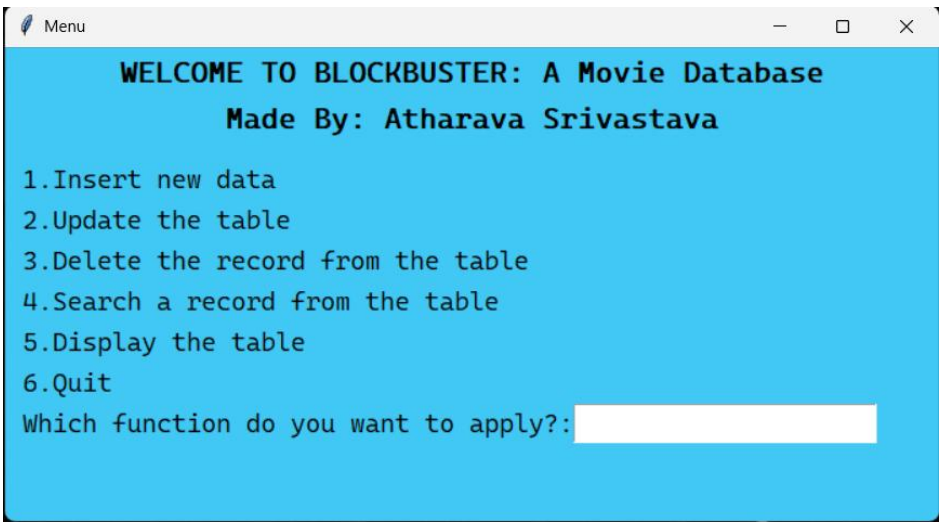
4. User Interface:



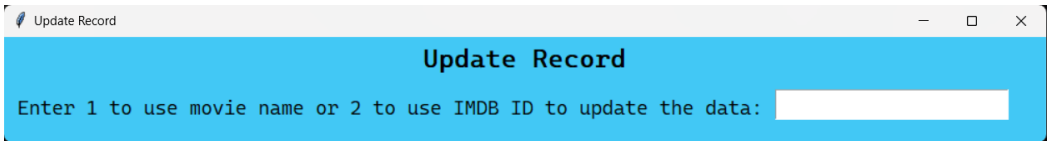
Main Menu



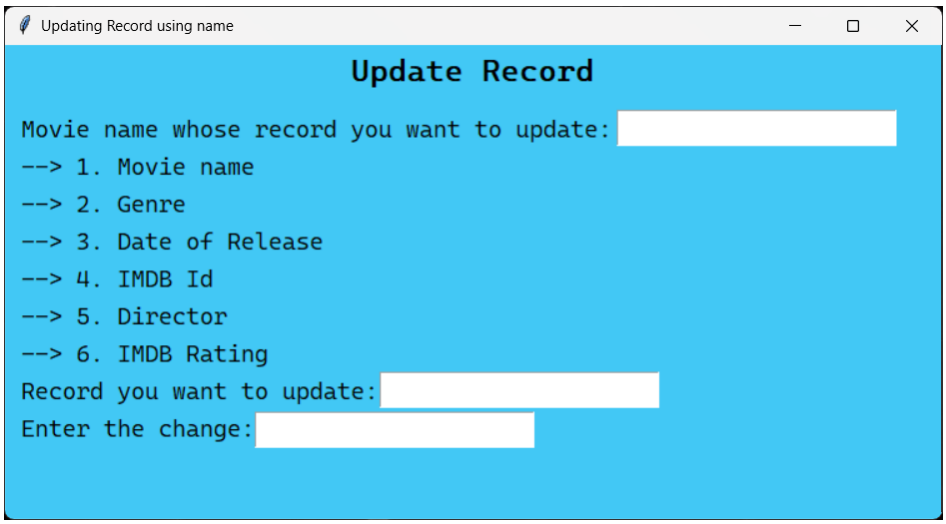
Exit Confirmation



Inserting record

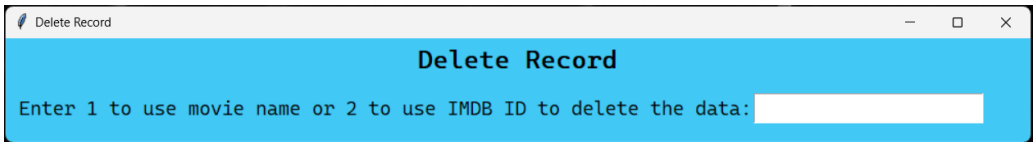


Update choice

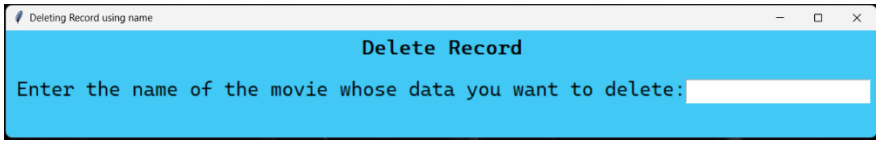


Updating with name

Updating with IMDB ID



Delete choice



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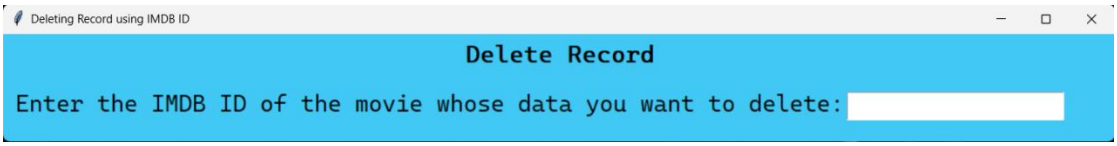

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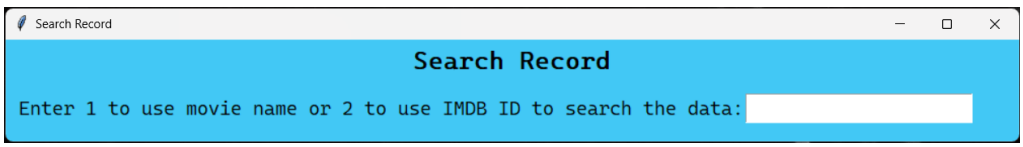
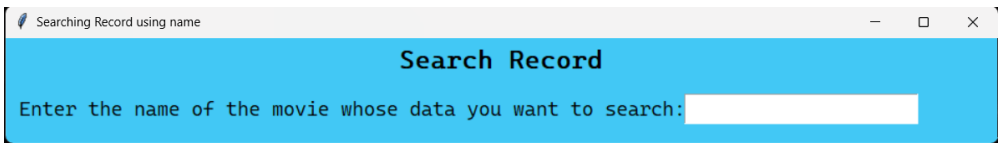


Search choice



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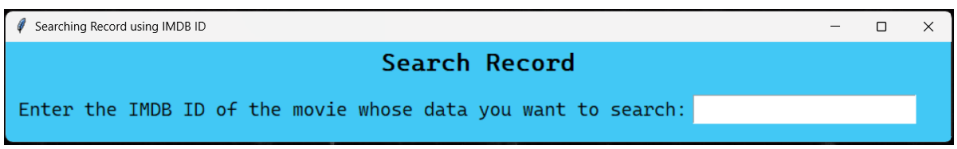

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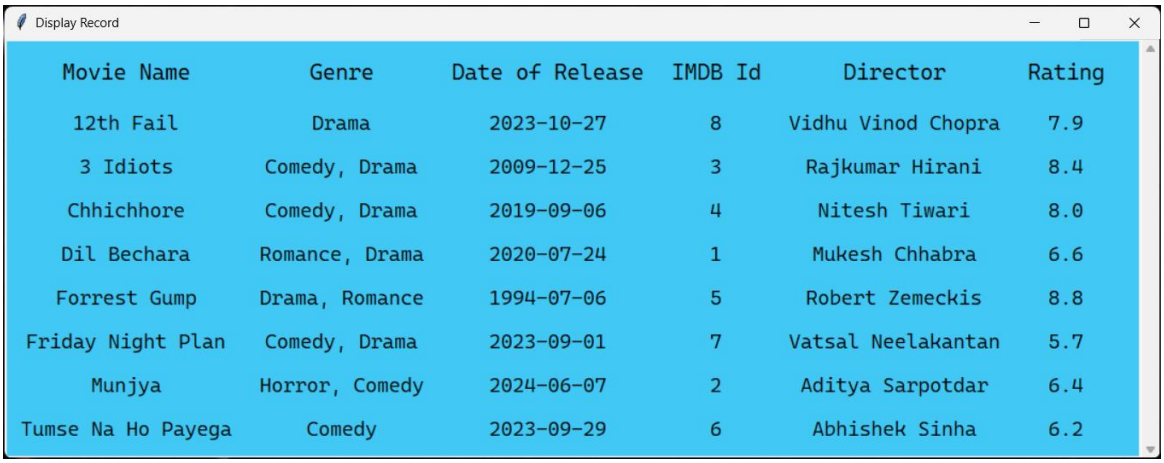
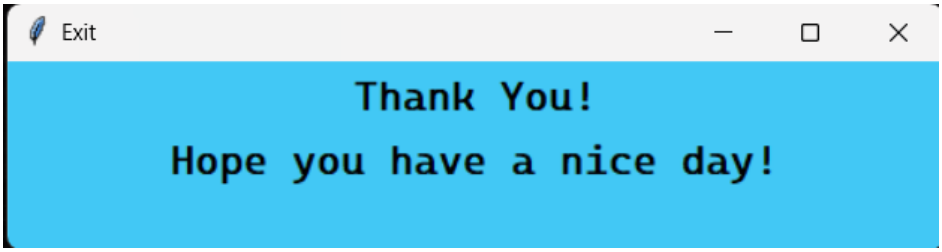


Display



Exit

5. MySQL Table:

Field	Type	Null	Key	Default	Extra
Movie_Name	varchar(500)	YES		NULL	
Genre	varchar(100)	YES		NULL	
date_of_release	date	YES		NULL	
IMDB_id	int	YES		NULL	
Director	varchar(500)	YES		NULL	
Rating	varchar(500)	YES		NULL	

Table Properties

Movie_Name	Genre	date_of_release	IMDB_id	Director	Rating
Dil Bechara	Romance, Drama	2020-07-24	1	Mukesh Chhabra	6.6
Munjya	Horror, Comedy	2024-06-07	2	Aditya Sarpotdar	6.4
3 Idiots	Comedy, Drama	2009-12-25	3	Rajkumar Hirani	8.4
Chhichhore	Comedy, Drama	2019-09-06	4	Nitesh Tiwari	8.0
Forrest Gump	Drama, Romance	1994-07-06	5	Robert Zemeckis	8.8
Tumse Na Ho Payega	Comedy	2023-09-29	6	Abhishek Sinha	6.2
Friday Night Plan	Comedy, Drama	2023-09-01	7	Vatsal Neelakantan	5.7
12th Fail	Drama	2023-10-27	8	Vidhu Vinod Chopra	7.9

Dummy Database

Recommendations

1. More features can be added to this project like:
    i. Ability to add whether the movie has been watched yet or not
    ii. Ability to add personal reviews for the movie
2. The UI can be improved by using advanced functions of Tkinter.
3. The code can be optimized further to reduce its time complexity.

Conclusion

This applet can be used for personal use to store information about movies locally on computer systems.

Creating this project helped me explore the world of UI and Python connectivity with MySQL.

Bibliography

1. Information about Blockbuster and logo: https://en.wikipedia.org/wiki/Blockbuster_(retailer)
2. The Last Blockbuster image 1: https://news.airbnb.com/store-manager-lists-worlds-last-blockbuster-on-airbnb-for-local-residents/
3. The Last Blockbuster image 2: https://www.businessinsider.com/inside-last-blockbuster-in-the-world-photo-tour-bend-oregon#the-last-open-blockbuster-store-is-located-in-a-plaza-in-bend-oregon-1