**Package/Module Used**

**Python Database Connectivity: -** Database connectivity refers to connection and communication between an application and a database system.

**mysql.connector-**Library or package to connect from python to MySQL.

**Command to install connectivity package:-**

pip install mysql-connector

**Command to import connector:-**

import mysql.connector

**Steps for python MySQL connectivity**

1 . Install Python

2. Install MySQL

3. Open Command prompt

4. Switch on internet connection

5. Type pip install mysql-connector-python and execute

6. Open python IDLE

7. import mysql.connector

**Multiple ways to retrieve data:**

**fetchall()-**Fetch all (remaining) rows of a query result, returning them as a sequence of sequences (e.g., a list of tuples) fetch many (size)-Fetch the next set of rows of a query result, returning a sequence of sequences. It will return number of rows that matches to the size argument.

**fetchone()-**Fetch the next row of a query result set, returning a single sequence or None when no more data is available

**fetchmany(<size>):-** MySQL Connector/Python has the fetchmany() method that returns the next number of rows (n) of the result set, which allows you to balance between retrieval time and memory space.

**rowcount()**:This is a read-only attribute and returns the number of rows that were affected by an execute( ) method

**Function to execute SQL queries**

**execute( ):-** This method executes a SQL query against the database. This is a DB API compliant call. Parameters are substituted using question marks, e.g., "SELECT name FROM table WHERE id=?". The parameter args is a tuple. It returns None on success or raises an exception in the case of an error.

**Syntax:-** cursor\_obj.execute(query [,args])

**#CREATE DATABASE CONNECTION**

import mysql.connector

mydb=mysql.connector.connect(host="localhost",database="KVNmotors",

user="root", password="2006")

mycursor=mydb.cursor()

mycursor.execute(<command>)

**#CREATE TABLE**

1. **Storing Data**

CREATE TABLE DataOfBuyers(Custmr\_Name varchar(20). Custmr\_Phone varchar(15), Custmr\_Dlicense varchar(15), Custmr\_Address varchar(30), Model varchar(15), Variant varchar(15), Cust\_In\_Def varchar(15), Sold\_Price integer, Date varchar(15), Time varchar(15));

1. **Main Use**

CREATE TABLE TataCars(ID integer Primary Key, Model varchar(20), Variants varchar(15), Engine\_cc integer, Fuel varchar(10), Mileage\_kmpl float, Ex\_showroom integer, Others integer, Onroad\_price integer, CSD integer);

**#INSERTING VALUES INTO TABLE**

identity=int(input("Enter The ID Of Car:"))

model=input("Enter The Model Of Car:")

variant=input("Enter The Variant Of Car:")

engine=int(input("Enter The Engine in CC:")

fuel=input("Enter The Fuel:")

mileage=float(input("Enter The Mileage Of Car:"))

exshowroom=int(input("Enter The Ex-showroom Price:"))

other=int(input("Enter The Other Price(Incl. RC,Insurance,etc):"))

onroad=exshowroom+other

csd=int(input("Enter CSD Amount:"))

tup=(identity,model,variant,engine,fuel,mileage,exshowroom,other,onroad,csd)

query=”Insert Into Tatacars values

(%s,%s,%s,%s,%s,%s,%s,%s,%s,%s)"

mycursor.execute(query,tup)

mydb.commit() # to make changes in table

print("Record Added Successfully!")

**#UPDATING VALUES INTO TABLE**

identity=int(input("Enter ID Of Car You Want To Edit:"))

exshowroom=int(input("Enter The New Ex-showroom Price:"))

other=int(input("Enter The New Others Price:"))

csd=int(input("Enter The CSD Ammount:"))

tup1=(exshowroom,identity)tup2=(other,identity) tup3=(csd,identity)

tup4=(exshowroom+other,identity)

query1="Update TataCars Set Ex\_showroom=%s Where ID=%s"

query2="Update TataCars Set Others=%s Where ID=%s"

query3="Update TataCars Set CSD=%s Where ID=%s"

query4="Update TataCars Set Onroad\_Price=%s Where ID=%s"

mycursor.execute(query1,tup1)

mydb.commit() # to make changes in table

mycursor.execute(query2,tup2)

mydb.commit()

mycursor.execute(query3,tup3)

mydb.commit()

mycursor.execute(query4,tup4)

mydb.commit()

**#DELETING VALUE INTO TABLE**

print("")

identity=int(input("Enter Record ID You Want To Delete:"))

tup=(identit,)

query=("DELETE From TataCars where ID=%s")

mycursor.execute(query,tup)

mydb.commit() # to make changes in table

print("Record Deleted Successfully!")

**CODE**

def supermenu():

while True:

import mysql.connector

mydb=mysql.connector.connect(host="localhost",database="KVNmotors",

user="root", password="2006")

mycursor=mydb.cursor()

print("--------------------------------------")

print("\*\*\*\*\*\*\*\*KVN MOTORS\*\*\*\*\*\*\*\*")

print("")

print("1. Customer")

print("2. Adminstrator")

print("3. Exit")

print("--------------------------------------")

choiceS = int(input("Enter your choice:"))

if choiceS==1:

print("")

usermenu()

elif choiceS==2:

password=input("Enter The Login Password :")

if (password!="KVNV"):

print("")

print("Wrong Admin Password!")

supermenu()

else:

adminmenu()

elif choiceS==3:

print("")

print("######################################")

print("")

print("!!THANK YOU FOR VISITING KVNMOTORS!!")

print("")

print("######################################")

break

else:

print("Invalid Choice !")

print("")

def usermenu():

while True:

import mysql.connector

mydb=mysql.connector.connect(host="localhost",database="KVNmotors"

,user="root", password="2006")

mycursor=mydb.cursor()

print("--------------------------------------")

print(" ##CUSTOMER##")

print("--------------------------------------")

print("")

print("1. Show Available Cars")

print("2. Get Information About A Specific Car")

print("3. Buy A Car")

print("4. Exit")

print ("--------------------------------------")

print("")

choiceU=int(input("Enter Your Choice:"))

if choiceU==1:

print("")

print("\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_")

print("| ID | MODEL | VARIANT | ENGINE IN CC | FUEL | MILEAGE

| EX-SHOWROOM PRICE | OTHERS | ONROAD PRICE | CSD |")

print("\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_")

print("")

mycursor.execute("Select \* from TataCars")

x = mycursor.fetchall()

for i in range(0,len(x)):

print("|",x[i][0]," | ",x[i][1],"| ",x[i][2]," | ",x[i][3]," |

",x[i][4]," | ",x[i][5]," | ",x[i][6]," | ",x[i][7]," |

",x[i][8], /

" | ",x[i][9],"|")

print("----------------------------------------------------------------------------

-----------------------------------------------------------")

print("")

elif choiceU==2:

infofcar()

print("")

elif choiceU==3:

conbycarname()

elif choiceU==4:

print("")

print("######################################")

break

else:

print("Invalid Choice !")

print("")

def conbycarname(): #Done

import mysql.connector

mydb=mysql.connector.connect(host="localhost",database="KVNmotors"

,user="root", password="2006")

mycursor=mydb.cursor()

print("")

global model,variant,CSD,final

model=input("Enter The Model Of Car:")

variant=input("Enter Variant Of Car:")

tup=(model,variant)

CSD=input("Enter 'Y' IF DEFENCE RELATED PERSON or 'N' for NON DEFENCE

RELATED PERSON : ")

print("")

if (CSD in "Yy"):

query= "Select

Ex\_showroom,Others,Onroad\_price,CSD,(Ex\_showroom+Others+Onroad\_price-CSD) as

Final\_Price from tatacars where Model=%s and Variants=%s"

mycursor.execute(query,tup)

records=mycursor.fetchall()

print("\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_")

print("|Ex-Showroom Price | Other | Onroad Price | CSD | Final Price|")

print("--------------------------------------------------------------")

for x in records:

print(x[0]," ",x[1]," "," ",x[2]," ",x[3]," ",x[4])

final=x[4]

print ("--------------------------------------------------------------")

bill()

print("")

print("Congratulations For Buying The Car!")

print("")

print("")

else:

query= "Select

Ex\_showroom,Others,Onroad\_price,(Ex\_showroom+Others+Onroad\_price) as Final\_Price

from tatacars where Model=%s and Variants=%s"

mycursor.execute(query,tup)

records=mycursor.fetchall()

print("\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_")

print("|Ex-Showroom Price | Other | Onroad Price | Final Price|")

print("--------------------------------------------------------")

for x in records:

print(x[0]," ",x[1]," "," ",x[2]," ",x[3])

final=x[3]

print ("--------------------------------------------------------")

bill()

print("")

print("Congratulations For Buying The Car!")

print("")

print("")

print("--------------------------------------")

def infofcar(): #Done

import mysql.connector

mydb=mysql.connector.connect(host="localhost",database="KVNmotors"

,user="root", password="2006")

mycursor=mydb.cursor()

print("")

model=input("Enter The Model Of Car:")

print("")

variant=input("Enter Variant Of Car:")

print("")

tup=(model,variant)

query= "Select Model,Variants, Engine\_cc,Fuel,Mileage\_kmpl from tatacars

where Model=%s and Variants=%s"

mycursor.execute(query,tup)

records=mycursor.fetchall()

print("\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_")

print("| Model | Variant | Engine | Fuel | Mileage|")

print("--------------------------------------------")

for x in records:

print("|",x[0]," | ",x[1]," | ",x[2]," | ",x[3]," |",x[4],"|")

print("--------------------------------------------")

print("")

def bill():

from datetime import datetime

import mysql.connector

mydb=mysql.connector.connect(host="localhost",database="KVNmotors"

,user="root", password="")

mycursor=mydb.cursor()

print("")

Custmr\_Name=input("Enter Your Name:")

print("")

Custmr\_Phone=(input("Enter Your Phone Number:"))

print("")

Custmr\_Dlicense=input("Enter Your LicenseID:")

print("")

Custmr\_Address=input("Enter Your Home Address:")

print("")

date = datetime.now().strftime("%d/%m/%y")

time = datetime.now().strftime("%H:%M:%S")

tup2=(Custmr\_Name, Custmr\_Phone, Custmr\_Dlicense, Custmr\_Address, model,

variant, CSD, final, date, time)

query="Insert Into DataOfBuyers values(%s,%s,%s,%s,%s,%s,%s,%s,%s,%s)"

mycursor.execute(query,tup2)

mydb.commit()

print("")

def adminmenu():

while True:

import mysql.connector

mydb=mysql.connector.connect(host="localhost",database="KVNmotors",

user="root", password="2006")

mycursor=mydb.cursor()

print("--------------------------------------")

print(" ##ADMIN##")

print("--------------------------------------")

print("")

print("1. Show Data in Maintable")

print("2. To Add New Car/Car Variant in Maintable")

print("3. To Updata A Price in Maintable")

print("4. Delete A Record From Maintable")

print("5. Check Cars Sold By Company:")

print("6. Exit")

print("")

print("--------------------------------------")

choiceA = int(input("Enter your choice:"))

if choiceA==1:

print("")

print("\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_")

print("| ID | MODEL | VARIANT | ENGINE IN CC | FUEL | MILEAGE

| EX-SHOWROOM PRICE | OTHERS | ONROAD PRICE | CSD |")

print("\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_")

print("")

mycursor.execute("Select \* from TataCars")

x = mycursor.fetchall()

for i in range(0,len(x)):

print("|",x[i][0]," | ",x[i][1],"| ",x[i][2]," | ",x[i][3]," |

",x[i][4]," | ",x[i][5]," | ",x[i][6]," | ",x[i][7]," |

",x[i][8]," | ",x[i][9],"|")

print("----------------------------------------------------------------------------

-----------------------------------------------------------")

print("")

elif choiceA==2:

print("")

identity=int(input("Enter The ID Of Car:"))

print("")

model=input("Enter The Model Of Car:")

print("")

variant=input("Enter The Variant Of Car:")

print("")

engine=int(input("Enter The Engine in CC:"))

print("")

fuel=input("Enter The Fuel:")

print("")

mileage=float(input("Enter The Mileage Of Car:"))

print("")

exshowroom=int(input("Enter The Ex-showroom Price:"))

print("")

other=int(input("Enter The Other Price(Incl. RC,Insurance,etc):"))

onroad=exshowroom+other

print("")

csd=int(input("Enter CSD Ammount:"))

print("")

tup=(identity,model,variant,engine,fuel,mileage,exshowroom,other,onroad,csd)

query="Insert Into TataCars values(%s,%s,%s,%s,%s,%s,%s,%s,%s,%s)"

mycursor.execute(query,tup)

mydb.commit() # to make changes in table

print("Record Added Successfully!")

print("")

elif choiceA==3:

print("")

identity=int(input("Enter ID Of Car You Want To Edit:"))

exshowroom=int(input("Enter The New Ex-showroom Price:"))

other=int(input("Enter The New Others Price:"))

csd=int(input("Enter The CSD Ammount:"))

tup1=(exshowroom,identity)

tup2=(other,identity)

tup3=(csd,identity)

tup4=(exshowroom+other,identity)

query1="Update TataCars Set Ex\_showroom=%s Where ID=%s"

query2="Update TataCars Set Others=%s Where ID=%s"

query3="Update TataCars Set CSD=%s Where ID=%s"

query4="Update TataCars Set Onroad\_Price=%s Where ID=%s"

mycursor.execute(query1,tup1)

mydb.commit() # to make changes in table

mycursor.execute(query2,tup2)

mydb.commit()

mycursor.execute(query3,tup3)

mydb.commit()

mycursor.execute(query4,tup4)

mydb.commit()

print("")

print("Record Updated Successfully!")

print("")

elif choiceA==4:

print("")

identity=int(input("Enter Record ID You Want To Delete:"))

print("")

tup=(identity,)

query=("DELETE From TataCars where ID=%s")

mycursor.execute(query,tup)

mydb.commit() # to make changes in table

print("")

print("Record Deleted Successfully!")

print("")

elif choiceA==5: #doing

print("")

query= "Select \* from DataOfBuyers"

mycursor.execute(query)

records=mycursor.fetchall()

print("\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_")

print("| Custr.Name | Custmr.Phone | Custmr.Dlicense |

Custmr.Address | Model | Variant | Cust In Def | Sold Price | Date | Time |")

print("----------------------------------------------------------------------------

------------------------------------------------------")

for x in records:

print("| ",x[0]," | ",x[1]," | ",x[2]," | ",x[3]," | ",x[4],"

| ",x[5]," | ",x[6]," | ",x[7]," | ",x[8]," | ",x[9],"|")

print("---------------------------------------------------------------------------------

-------------------------------------------------")

print("")

elif choiceA==6:

print("")

print("######################################")

break

else:

print("Invalid Choice !")

print("")

supermenu()