import pandas as pd

import matplotlib.pyplot as plt

import numpy as np

import mysql.connector as sq

#Connect Mysql

con=sq.connect(host='localhost',user='root',passwd='root')

m=con.cursor()

#DATABASE MANAGEMENT AND VISUALIZATION SYSTEM

while True:

print('\_\_'\*40)

print('''

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

| |

| |

| DATABASE MANAGEMENT AND VISUALIZATION SYSTEM |

| |

|\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_|\n''')

print('\_\_'\*40)

mke=int(input('''\n\nWhat Do You Wants To Make :

Enter 1 For DataFrame

Enter 2 For Graph

Enter 3 For Student Data In Mysql

Enter 4 For Exit

Enter Choice Number : '''))

print('''\n''')

print('\_\_'\*30)

#DataFrame All Creation

def dtaframe():

while True:

print('''

++++++++++++++++++++++++

+ +

+ DATAFRAME DATABASE +

+ +

++++++++++++++++++++++++\n''')

print('\_\_'\*30)

print('''\n''')

dta\_in=int(input('''What You Want.....

Enter 1 Create New DataFrame

Enter 2 For Read Csv File

Enter 3 For Main Menu

Enter Your Choice : '''))

print('''\n''')

if dta\_in==1:

print(dta\_dtaframe())

elif dta\_in==2:

print(read\_dta())

elif dta\_in==3:

break

else:

print('Invalid Argument')

return ''

#Created def Functin For Dataframe

def dta\_dtaframe():

print('''\n''')

#Access How Many Values And Columns For Users

print('\_\_'\*30)

print('\n')

print('--'\*30)

n=int(input('Enter How Many Column : '))

print('--'\*30)

v=int(input('Enter How Many Values : '))

a=[]

b=[]

d={}

#Enter Value And Column Name

for i in range(n):

print('--'\*30)

key=input('Enter Column Name : ')

a=[]

for k in range(v):

print('--'\*30)

val=input('Enter Values : ')

a.append(val)

d[key]=a

#Enter Label Index For DataFrame

print('--'\*30)

print('\n')

print('\_\_'\*30)

ind=int(input('''\nIf You Wants To Add Label Index :

Enter 1 For Yes

Enter 2 For No

Enter Choice Number : '''))

print('''\n''')

print('\_\_'\*30)

for p in range(v):

if ind==1:

print('--'\*30)

va=input('Enter Label Name : ')

print('--'\*30)

b.append(va)

elif ind==2:

break

else:

print('Noooo...You...Are...Wrong...Please..Correct..Yourself')

if ind==1:

print('\n')

print('\_\_'\*30)

print('\n')

df=pd.DataFrame(d,index=b)

print(df)

else:

print('\n')

print('\_\_'\*30)

print('\n')

df=pd.DataFrame(d)

print(df)

#Save DataFrame File In csv

print('\_\_'\*30)

print('\n')

s=int(input('''\nDo You Wants To Save It :

Enter 1 For Yes

Enter 2 For No

Enter Choice Number : '''))

print('''\n''')

print('\_\_'\*30)

if s==1:

print('\n')

print('--'\*30)

fname=input('Enter File Name : ')

df.to\_csv(fname+'.csv')

print('--'\*30)

print('\_\_'\*40)

print('''Check Path: C:\\Users\\Admin\\AppData\\Local\\Programs\\Python\\Python37-32\\'''+fname+'.csv')

print('\_\_'\*40)

print('\n')

elif s==2:

print('>>'\*30)

print("Be Happy....:")

print('>>'\*30)

#Save File Read

else:

print("Be Happy....:)....Please Choose Correct Option")

return ''

#Read Dataframe File

def read\_dta():

print('''\n''')

print('--'\*30)

f\_name=input('Enter File Name : ')

print('--'\*30)

rea=pd.read\_csv(f\_name+'.csv',index\_col=[0])

print('\_\_'\*30)

print('''\n''')

print(rea)

print('''\n''')

print('\_\_'\*30)

return ''

#Created Graph Function

def graph():

while True:

print('\_\_'\*30)

print('''

#>>>>>>>>>>>>>>>>>>>>>>>>>#

# #

# MATPLOTLIB GRAPH #

# #

#>>>>>>>>>>>>>>>>>>>>>>>>>#\n''')

print('\_\_'\*30)

print('''\n''')

x=[]

y=[]

g=int(input('''Which Graph You Makes :

Enter 1 For Line Graph

Enter 2 For Bar Graph

Enter 3 For Barh Graph

Enter 4 For Main Menu

Enter Choice Number : '''))

if g==1 or g==2 or g==3:

print('--'\*30)

n=int(input('Enter How Many Values : '))

#Add X And Y Axis Values In Graph

for i in range(n):

print('--'\*30)

val=input("Enter Values For X-Axis : ")

print('--'\*30)

va=eval(input("Enter Values For Y-Axis : "))

print('--'\*30)

x.append(val)

y.append(va)

#Access Values Which User Input

if g==1:

plt.plot(x,y)

elif g==2:

plt.bar(x,y)

elif g==3:

plt.barh(x,y)

elif g==4 :

break

else:

print("Invalid Number Argument")

ti=int(input('''Do You Want To Enter Title :

Enter 1 For Yes

Enter 2 For No

Enter Choice Number : '''))

print('\_\_'\*30)

print('''\n''')

#Add Title In Graph

if ti==1:

print('--'\*30)

title=input('Enter Title Name : ')

print('--'\*30)

plt.title(title.upper())

elif ti==2:

print('\_\_'\*30)

print('Keep...Smile...')

print('\_\_'\*30)

else:

print("Don't Worry...Try It Again....")

print(label\_graph())

print(sav\_graph())

plt.show()

return ''

#label For Graph

def label\_graph():

#Add X And Y Axis Labels In Graph

print('\_\_'\*30)

print('''\n''')

rt =int(input('''\nDo you Want To Enter Axis Label Or Not :

Enter 1 For Yes

Enter 2 For No

Enter choice Number : '''))

print('\_\_'\*30)

print('''\n''')

if rt==1:

print('--'\*30)

x1=input('Enter X-Axis Label Name : ')

print('--'\*30)

y1=input('Enter Y-Axis Label Name : ')

print('--'\*30)

plt.xlabel(x1.upper())

plt.ylabel(y1.upper())

elif rt==2:

print('''\n''')

print('\_\_'\*30)

print("I'm...With...You....")

print('\_\_'\*30)

print('''\n''')

else:

print("I'm With You....Please Do It Again....")

return ''

#Save Graph

def sav\_graph():

print('\_\_'\*30)

sav=int(input('''Do You Want To Save Graph :

Enter 1 For yes

Enter 2 For no

Enter Choice Number : '''))

print('''\n''')

print('\_\_'\*30)

if sav==1:

print('--'\*30)

fi=input('Enter File Name : ')

print('--'\*30)

plt.savefig(fi+'.png')

print('--'\*40)

print('''Check Path: C:\\Users\\Admin\\AppData\\Local\\Programs\\Python\\Python37-32\\'''+fi+'.png')

print('--'\*40)

else:

print('\_\_'\*30)

print('As Your Wish!....')

print('\_\_'\*30)

return ''

#Update Mysql Data

def update\_dta():

change=int(input('''\nWhat You Want To Change

Enter 1 For Name

Enter 2 For Class

Enter 3 For DOB

Enter 4 For Father Name

Enter 5 For Mobile Number

Enter Your Choice : '''))

print('\_\_'\*30)

print('''\n''')

if change==1:

print('..'\*30)

new\_name=input('Enter New Name : ')

print('..'\*30)

ad\_no=int(input('Enter Admission Number : '))

print('..'\*30)

sql\_1='update student\_data set Name=%s Where AdmissionNo=%s'

new\_val=(new\_name,ad\_no)

m.execute(sql\_1,new\_val)

con.commit()

print(m.rowcount,'Record Updated')

print('..'\*30)

elif change==2:

print('..'\*30)

new\_clss=input('Enter New Class Format(Int) : ')

print('..'\*30)

ad\_no=int(input('Enter Admission Number : '))

print('..'\*30)

sql\_2='update student\_data set Class=%s Where AdmissionNo=%s'

new\_val2=(new\_clss,ad\_no)

m.execute(sql\_2,new\_val2)

con.commit()

print(m.rowcount,'Record Updated')

print('..'\*30)

elif change==3:

print('..'\*30)

new\_dob=input('''Enter New DOB Format('YYYY-MM-DD') : ''')

print('..'\*30)

ad\_no=int(input('Enter Admission Number : '))

print('..'\*30)

sql\_3='update student\_data set dob=%s Where AdmissionNo=%s'

new\_val3=(new\_dob,ad\_no)

m.execute(sql\_3,new\_val3)

con.commit()

print(m.rowcount,'Record Updated')

print('..'\*30)

elif change==4:

print('..'\*30)

new\_fname=input('Enter Changed Father Name : ')

print('..'\*30)

ad\_no=int(input('Enter Admission Number : '))

print('..'\*30)

sql\_4='update student\_data set FatherName=%s Where AdmissionNo=%s'

new\_val4=(new\_fname,ad\_no)

m.execute(sql\_4,new\_val4)

con.commit()

print(m.rowcount,'Record Updated')

print('..'\*30)

elif change==5:

print('..'\*30)

new\_mob=input('Enter New Mobile Number : ')

print('..'\*30)

ad\_no=int(input('Enter Admission Number : '))

print('..'\*30)

sql\_5='update student\_data set mobileNo=%s Where AdmissionNo=%s'

new\_val5=(new\_mob,ad\_no)

m.execute(sql\_5,new\_val5)

con.commit()

print(m.rowcount,'Record Updated')

print('..'\*30)

else:

print('KEEP SMILE :).....Please Choose Correct Option.... ')

return ''

#Insert Data Send To Mysql

def insert\_dta():

print('\*\*'\*30)

n\_data=int(input('Enter How Many Data : '))

for i in range(n\_data):

print('\*\*'\*30)

admin=int(input('Enter Your Admission Number : '))

print('\*\*'\*30)

nam=input('Enter Your Name : ')

print('\*\*'\*30)

clss=input('Enter Your Class Format(Int) : ')

print('\*\*'\*30)

dob=input('Enter Your Data Of Birth Format(YYYY-MM-DD) : ')

print('\*\*'\*30)

father=input('Enter Your Father Name : ')

print('\*\*'\*30)

mob=int(input('Enter Your Mobile Number : '))

print('\*\*'\*30)

print('''\n''')

print('\_\_'\*30)

sql='insert into student\_data(AdmissionNo,Name,class,dob,FatherName,mobileNo) values(%s,%s,%s,%s,%s,%s)'

val=(admin,nam,clss,dob,father,mob)

m.execute(sql,val)

con.commit()

print('Record Inserted....')

print('\_\_'\*30)

return ''

#Delete Record

def delete\_record():

del\_dta=int(input('''How Many Record You Want To Delete

Enter 1 For Specific Record

Enter 2 For Delete All Record

Enter Your Choice : '''))

print('\_\_'\*30)

print('''\n''')

if del\_dta==1:

cls\_dta=int(input('''How You Want To Delete

Enter 1 For Admission Number

Enter 2 For Class Wise

Enter Your choice : '''))

print('\_\_'\*30)

print('''\n''')

if cls\_dta==1:

print('<>'\*30)

ad\_in=int(input('Enter Admission Number : '))

print('<>'\*30)

sql\_del='delete from student\_data Where AdmissionNo=%s'

ad\_del=(ad\_in,)

m.execute(sql\_del,ad\_del)

con.commit()

print(m.rowcount,'Record Deleted By Admission Number....')

print('<>'\*30)

elif cls\_dta==2:

print('<>'\*30)

ad\_cl=int(input('Enter Class Name Format(Int) : '))

print('<>'\*30)

sql\_del2='delete from student\_data Where class=%s'

print('<>'\*30)

ad\_del=(ad\_cl,)

m.execute(sql\_del2,ad\_del)

con.commit()

print(m.rowcount,'Record Deleted By Class....')

print('<>'\*30)

else:

print('Invalid Argument....')

elif del\_dta==2:

sql\_del3='delete from student\_data'

m.execute(sql\_del3,)

con.commit()

print('<>'\*30)

print(m.rowcount,'Record Deleted....')

print('<>'\*30)

else:

print('Invalid Argument....')

return ''

#Tuple Convert Into List

def f(t):

if type(t)==list or type(t)==tuple:

return [f(i) for i in t]

return t

#Serach Record

def serch\_dta():

ser\_dta=int(input('''Search Record You Want

Enter 1 For Admission Number

Enter 2 For Class

Enter Your Choice : '''))

print('\_\_'\*30)

print('''\n''')

if ser\_dta==1:

print('::'\*30)

admi=int(input('Enter Admission Number : '))

print('::'\*30)

sel='select \* from student\_data where AdmissionNo=%s'

sel\_val=(admi,)

m.execute(sel,sel\_val)

fall=m.fetchall()

x=f(fall)

lst2=['AdmissionNo','Name','Class','DOB','FatherName','MobileNo']

dfx=pd.DataFrame(x,columns=lst2)

dfx=dfx.to\_string(index=False)

print(dfx)

print('::'\*30)

elif ser\_dta==2:

print('::'\*30)

sel\_cls=int(input('Enter Class Name : '))

print('::'\*30)

sel2='select \* from student\_data where class=%s'

sel\_val2=(sel\_cls,)

m.execute(sel2,sel\_val2)

fall2=m.fetchall()

c3=f(fall2)

lst3=['AdmissionNo','Name','Class','DOB','FatherName','MobileNo']

df3=pd.DataFrame(c3,columns=lst3)

df3=df3.to\_string(index=False)

print(df3)

print('::'\*30)

else:

print('Oo Noo...Invalid Argument....')

return ''

#Show All Data

def show\_dta():

sel3='select \* from student\_data'

m.execute(sel3)

al=m.fetchall()

c=f(al)

lst=['AdmissionNo','Name','Class','DOB','FatherName','MobileNo']

print('zz'\*30)

print('All Records Are.....')

print('''\n''')

df=pd.DataFrame(c,columns=lst)

df=df.to\_string(index=False)

print(df)

print('zz'\*30)

return ''

#Marks Insert

def marks\_dta():

print('\*\*'\*30)

m\_data=int(input('Enter How Many Data : '))

for i in range(m\_data):

print('\*\*'\*30)

admin2=int(input('Enter Your Admission Number : '))

print('\*\*'\*30)

t\_1=int(input('Enter Total Term I Marks : '))

print('\*\*'\*30)

t\_2=int(input('Enter Total Term II Marks : '))

print('\*\*'\*30)

total=t\_1+t\_2

print('''\n''')

print('\_\_'\*30)

m\_sql='insert into marks(AdmissionId,TermI,TermII,Total) values(%s,%s,%s,%s)'

m\_val=(admin2,t\_1,t\_2,total)

m.execute(m\_sql,m\_val)

con.commit()

print('Record Inserted....')

print('\_\_'\*30)

return ''

#marks Base Graph

def m\_graph():

mr=pd.read\_sql('select name,TermI,TermII,Total from student\_data,marks where AdmissionNo=AdmissionId',con)

x1=mr['name']

y1=mr['TermI']

y2=mr['TermII']

y3=mr['Total']

ls=np.arange(len(x1))

plt.bar(x1,y1,width=.15,label='Term I')

plt.bar(ls+0.15,y2,width=.15,label='Term II')

plt.bar(ls+0.30,y3,width=.15,label='Total Marks')

plt.title('Student Academic Performance'.upper())

plt.xlabel('Student Name'.upper())

plt.ylabel('Student Marks'.upper())

plt.legend(loc='upper right')

print(sav\_graph())

plt.show()

return ''

#ALL RECORD

def std\_data():

print('''

|================================|

| |

| STUDENT DATABASE MANAGEMENT |

| |

|================================|

''')

m.execute('create database if not exists school;')

m.execute('use school;')

m.execute('create table if not exists student\_data(AdmissionNo int primary key,Name varchar(50),class int(2),DOB date,FatherName varchar(50),MobileNo varchar(10))')

m.execute('create table if not exists marks(AdmissionId int primary key,TermI int(3) not null,TermII int(3) not null,Total int(3),foreign key(AdmissionId) references student\_data(AdmissionNo) on delete cascade on update cascade)')

while True:

record=int(input('''\nWhat To Do.........

Enter 1 For Insert Record

Enter 2 For Update Record

Enter 3 For Delete Record

Enter 4 For Search Record

Enter 5 For Show All Student Record

Enter 6 For Add Student Marks

Enter 7 For Show Graph Student Marks Based

Enter 8 For Going Back To Main Menu

Enetr Your Choice : '''))

print('''\_\_'''\*30)

print('''\n''')

try:

if record==1:

print(insert\_dta())

else:

pass

except:

print('Invalid...Data...Please...Check...?')

print('Also...Check...Admission...Number...Already...Exits...Or...Not...?')

print('\_\_'\*30)

try:

if record==2:

print(update\_dta())

elif record==3:

print(delete\_record())

elif record==4:

print(serch\_dta())

elif record==5:

print(show\_dta())

elif record==6:

print(marks\_dta())

elif record==7:

print(m\_graph())

elif record==8:

break

else:

pass

except:

print('Invalid...Data...Please...Check...?')

print('Also...Check...Admission...Number...Already...Exits...Or...Not...?')

print('\_\_'\*30)

return ''

#Call DataFrame,Matplotlib,Mysql Student Management

if mke==1:

print(dtaframe())

elif mke==2:

print(graph())

elif mke==3:

print(std\_data())

elif mke==4:

print('''

!!============================================!!

!! !!

!! Bye...Bye...Have...A...Good...Day....:) !!

!! !!

!!============================================!!\n''')

print('\_\_'\*30)

break

else:

print('Oo...So...Sorry...Invalid Argument....')

print('\_\_'\*30)