#Python- Employee Management System : Project

from tabulate import tabulate

import MySQLdb

#Establishing connection with Mysql database

mycon = MySQLdb.connect('localhost','root','8448122448','Employee\_Management\_System')

cursor = mycon.cursor()

if (mycon):

print("Successfull connection with employee\_mgnt\_db established..!!!")

else:

print('Error !!!, Connection not established...!')

print("\*"\*80)

print("\*\*\*\*\*\*\*\*\* PEARSON SPECTER LITT \*\*\*\*\*\*\*\*\*")

print("\*\*\*\*\* Welcome To Employee Management System \*\*\*\*\*")

print("\*\*\*\*\* Project Developed By- SHOURYA GUPTA \*\*\*\*")

print("\*"\*80)

print("")

def AddDepartmentDetails():

dept\_list = []

DeptID = input('Enter Department ID:')

dept\_list.append(DeptID)

DeptName = input('Enter Department Name:')

dept\_list.append(DeptName)

DeptLoc = input('Enter Department Location:')

dept\_list.append(DeptLoc)

Department = (dept\_list)

sqlqry = "insert into department(dept\_id,dept\_name,dept\_location) values(%s,%s,%s)"

cursor.execute(sqlqry,Department)

mycon.commit()

print('Deparment added successfully...!!!')

def DepartmentView():

print("Select the search criteria to view departments:")

print("1. Department ID")

print("2. Department Name")

print("3. Department Location")

print("4. View all records")

print("5. Exit")

choice = int(input("Enter the choice:"))

if choice==1:

dept\_id=input('Enter Department ID:')

sqlqry="select \* from department where dept\_id=%s"

cursor.execute(sqlqry,(dept\_id,))

data = cursor.fetchall()

count = cursor.rowcount

if count==0:

print("\nNo record found with entered Department ID...!!!")

else:

print("\nSearch criteria matched...!!!")

print("The details of the department with department Id ",dept\_id," are as follows:")

print(tabulate(data,headers=['Department ID','Department Name','Department Location'],tablefmt='fancy\_grid'))

elif choice==2:

dept\_nm=input('Enter Department Name:')

sqlqry="select \* from department where dept\_name=%s"

cursor.execute(sqlqry,(dept\_nm,))

data = cursor.fetchall()

count = cursor.rowcount

if count==0:

print("\nNo record found with entered Department Name...!!!")

else:

print("\nSearch criteria matched...!!!")

print("The details of the department with department Name ",dept\_nm," are as follows:")

print(tabulate(data,headers=['Department ID','Department Name','Department Location'],tablefmt='fancy\_grid'))

elif choice==3:

dept\_loc=input('Enter Department Location:')

sqlqry="select \* from department where dept\_location=%s"

cursor.execute(sqlqry,(dept\_loc,))

data = cursor.fetchall()

count = cursor.rowcount

if count==0:

print("\nNo record found with entered Department Name...!!!")

else:

print("\nSearch criteria matched...!!!")

print("The details of the department with department location ",dept\_loc," are as follows:")

print(tabulate(data,headers=['Department ID','Department Name','Department Location'],tablefmt='fancy\_grid'))

elif choice==4:

sqlqry="select \* from department"

cursor.execute(sqlqry)

data = cursor.fetchall()

count = cursor.rowcount

if count==0:

print("\nDepartment table has no records to display...!!!")

else:

print("Details of all department are as follows:")

print(tabulate(data,headers=['Department ID','Department Name','Department Location'],tablefmt='fancy\_grid'))

print("The total number of records retrieved is ",count)

elif choice==5:

print("")

runAgain()

else:

print("\nOOPS !!! \t\t Wrong choice enter by you...!!!\tPlease enter valid choice (between 1-5):\n1")

DepartmentView()

def UpdateDepartment():

dept\_id=input('Enter Department ID to update details:')

sqlqry='select \* from department where dept\_id=%s'

cursor.execute(sqlqry,(dept\_id,))

data=cursor.fetchall()

print("")

print("The current details of the department with deptartment ID :",dept\_id," are as follows:")

print('')

print(tabulate(data,headers=['Department ID','Department Name','Department Location'],tablefmt='fancy\_grid'))

print('')

field = input('Enter the field which you want to be update:')

value=input('Enter the updated value:')

updatesqlqry="update department set "+field+"=' "+value+" ' where dept\_id=' "+dept\_id+" ' "

cursor.execute(updatesqlqry)

print('Department updated successfully...!')

print('The updated department details are as follows:')

sqlqry='select \* from department where dept\_id=%s'

cursor.execute(sqlqry,(dept\_id,))

data=cursor.fetchall()

print("")

print(tabulate(data,headers=['Department ID','Department Name','Department Location'],tablefmt='fancy\_grid'))

print('')

mycon.commit()

def DeleteDepartment():

dept\_id=input('Enter Department ID to delete details:')

sqlqry='select \* from department where dept\_id=%s'

cursor.execute(sqlqry,(dept\_id,))

data=cursor.fetchall()

count=cursor.rowcount

if count==0:

print("No such record exists.Can't delete...!!!")

else:

print("")

print("The current details of the department with deptartment ID :",dept\_id," are as follows:")

print('')

print(tabulate(data,headers=['Department ID','Department Name','Department Location'],tablefmt='fancy\_grid'))

print('')

deletechoice = input('Are you sure you want to delete the above record ? y/n:')

if(deletechoice.lower()=='y' or deletechoice.lower()=='yes'):

delsqlqry="delete from department where dept\_id=%s"

cursor.execute(delsqlqry,(dept\_id,))

mycon.commit()

print("The required record has been deleted successfully...!!!")

else:

print("Record not deleted...!!!")

def AddEmployeeDetails():

Emp\_list = []

EmpID = input('Enter Employee ID:')

Emp\_list.append(EmpID)

FirstName = input('Enter Employee First Name:')

Emp\_list.append(FirstName)

LastName = input('Enter Employee Last Name:')

Emp\_list.append(LastName)

Gender = input('Enter Employee Gender:')

Emp\_list.append(Gender)

MobileNumber = input('Enter Employee Mobile Number:')

Emp\_list.append(MobileNumber)

Designation = input('Enter Designation:')

Emp\_list.append(Designation)

Salary = input('Enter Employee Salary:')

Emp\_list.append(Salary)

DeptID = input('Enter Employee Department ID:')

Emp\_list.append(DeptID)

Employee = (Emp\_list)

sqlqry = "insert into Employee(Emp\_id,Firstname,Lastname,Gender,Mobile\_number,Designation,Salary,Dept\_id) values(%s,%s,%s,%s,%s,%s,%s,%s)"

cursor.execute(sqlqry,Employee)

mycon.commit()

print('Employee added successfully...!!!')

def EmployeeView():

print("Select the search criteria to view Employees:")

print("1. Employee ID")

print("2. First Name")

print("3. Last Name")

print("4. Gender")

print("5. Mobile Number")

print("6. Designation ")

print("7. Salary")

print("8. Department ID")

print("9. View all Records")

print("10. Exit")

choice = int(input("Enter the choice:"))

if choice==1:

Emp\_id=input('Enter Employee ID:')

sqlqry="select \* from Employee where Emp\_id=%s"

cursor.execute(sqlqry,(Emp\_id,))

data = cursor.fetchall()

count = cursor.rowcount

if count==0:

print("\nNo record found with entered Employee ID...!!!")

else:

print("\nSearch criteria matched...!!!")

print("The details of the employee with employee Id ",Emp\_id," are as follows:")

print(tabulate(data,headers=['Emp\_id','Firstname','Lastname','Gender','Mobile\_number','Designation','Salary','Dept\_id'],tablefmt='fancy\_grid'))

elif choice==2:

EmpFirstname=input('Enter Employee First Name:')

sqlqry="select \* from employee where FirstName=%s"

cursor.execute(sqlqry,(EmpFirstname,))

data = cursor.fetchall()

count = cursor.rowcount

if count==0:

print("\nNo record found with entered Employee First Name...!!!")

else:

print("\nSearch criteria matched...!!!")

print("The details of the employee with employee First Name ",EmpFirstname," are as follows:")

print(tabulate(data,headers=['Emp\_id','Firstname','Lastname','Gender','Mobile\_number','Designation','Salary','Dept\_id'],tablefmt='fancy\_grid'))

elif choice==3:

EmpLastname=input('Enter Employee Last Name:')

sqlqry="select \* from employee where LastName=%s"

cursor.execute(sqlqry,(EmpLastname,))

data = cursor.fetchall()

count = cursor.rowcount

if count==0:

print("\nNo record found with entered Employee Last Name...!!!")

else:

print("\nSearch criteria matched...!!!")

print("The details of the employee with employee Last Name ",EmpLastname," are as follows:")

print(tabulate(data,headers=['Emp\_id','Firstname','Lastname','Gender','Mobile\_number','Designation','Salary','Dept\_id'],tablefmt='fancy\_grid'))

elif choice==4:

EmpGender=input('Enter Employee Gender:')

sqlqry="select \* from employee where Gender=%s"

cursor.execute(sqlqry,(EmpGender,))

data = cursor.fetchall()

count = cursor.rowcount

if count==0:

print("\nNo record found with entered Employee Gender...!!!")

else:

print("\nSearch criteria matched...!!!")

print("The details of the employee with employee Gender ",EmpGender," are as follows:")

print(tabulate(data,headers=['Emp\_id','Firstname','Lastname','Gender','Mobile\_number','Designation','Salary','Dept\_id'],tablefmt='fancy\_grid'))

elif choice==5:

EmpMobile=input('Enter Employee Mobile Number:')

sqlqry="select \* from employee where Mobile\_Number=%s"

cursor.execute(sqlqry,(EmpMobile,))

data = cursor.fetchall()

count = cursor.rowcount

if count==0:

print("\nNo record found with entered Employee Mobile Number...!!!")

else:

print("\nSearch criteria matched...!!!")

print("The details of the employee with employee Mobile Number ",EmpMobile," are as follows:")

print(tabulate(data,headers=['Emp\_id','Firstname','Lastname','Gender','Mobile\_number','Designation','Salary','Dept\_id'],tablefmt='fancy\_grid'))

elif choice==6:

EmpDesignation=input('Enter Employee Designation:')

sqlqry="select \* from employee where Designation=%s"

cursor.execute(sqlqry,(EmpDesignation,))

data = cursor.fetchall()

count = cursor.rowcount

if count==0:

print("\nNo record found with entered Employee Designation...!!!")

else:

print("\nSearch criteria matched...!!!")

print("The details of the employee with employee Designation ",EmpDesignation," are as follows:")

print(tabulate(data,headers=['Emp\_id','Firstname','Lastname','Gender','Mobile\_number','Designation','Salary','Dept\_id'],tablefmt='fancy\_grid'))

elif choice==7:

EmpSalary=input('Enter Employee Salary:')

#sqlqry="select \* from employee where Salary=%s"

#cursor.execute(sqlqry,(EmpSalary,))

sqlqry="select \* from employee where Salary "+EmpSalary

cursor.execute(sqlqry)

data = cursor.fetchall()

count = cursor.rowcount

if count==0:

print("\nNo record found with entered Employee Salary...!!!")

else:

print("\nSearch criteria matched...!!!")

print("The details of the employee with employee Salary ",EmpSalary," are as follows:")

print(tabulate(data,headers=['Emp\_id','Firstname','Lastname','Gender','Mobile\_number','Designation','Salary','Dept\_id'],tablefmt='fancy\_grid'))

elif choice==8:

DeptID=input('Enter Department ID:')

sqlqry="select \* from employee where Dept\_ID=%s"

cursor.execute(sqlqry,(DeptID,))

data = cursor.fetchall()

count = cursor.rowcount

if count==0:

print("\nNo record found with entered Dept ID...!!!")

else:

print("\nSearch criteria matched...!!!")

print("The details of the employee with Dept ID ",DeptID," are as follows:")

print(tabulate(data,headers=['Emp\_id','Firstname','Lastname','Gender','Mobile\_number','Designation','Salary','Dept\_id'],tablefmt='fancy\_grid'))

elif choice==9:

sqlqry="select \* from employee"

cursor.execute(sqlqry)

data = cursor.fetchall()

count = cursor.rowcount

if count==0:

print("\nEmployee table has no records to display...!!!")

else:

print("Details of all employee are as follows:")

print(tabulate(data,headers=['Emp\_id','Firstname','Lastname','Gender','Mobile\_number','Designation','Salary','Dept\_id'],tablefmt='fancy\_grid'))

print("The total number of records retrieved is ",count)

elif choice==10:

print("")

runAgain()

else:

print("\nOOPS !!! \t\t Wrong choice enter by you...!!!\tPlease enter valid choice (between 1-10):\n1")

EmployeeView()

def UpdateEmployee():

Emp\_ID=input('Enter Employee ID to update details:')

sqlqry='select \* from Employee where Emp\_id=%s'

cursor.execute(sqlqry,(Emp\_ID,))

data=cursor.fetchall()

print("")

print("The current details of the Employee with Employee ID :",Emp\_ID," are as follows:")

print('')

print(tabulate(data,headers=['Emp\_id','Firstname','Lastname','Gender','Mobile\_number','Designation','Salary','Dept\_id'],tablefmt='fancy\_grid'))

print('')

field = input('Enter the field which you want to be update:')

value=input('Enter the updated value:')

updatesqlqry="update Employee set "+field+"=' "+value+" ' where Emp\_id=' "+Emp\_ID+" ' "

cursor.execute(updatesqlqry)

print('Employee updated successfully...!')

print('The updated Employee details are as follows:')

sqlqry='select \* from Employee where Emp\_ID=%s'

cursor.execute(sqlqry,(Emp\_ID,))

data=cursor.fetchall()

print("")

print(tabulate(data,headers=['Emp\_id','Firstname','Lastname','Gender','Mobile\_number','Designation','Salary','Dept\_id'],tablefmt='fancy\_grid'))

print('')

mycon.commit()

def DeleteEmployee():

Emp\_ID=input('Enter Employee ID to delete details:')

sqlqry='select \* from employee where Emp\_id=%s'

cursor.execute(sqlqry,(Emp\_ID,))

data=cursor.fetchall()

count=cursor.rowcount

if count==0:

print("No such record exists.Can't delete...!!!")

else:

print("")

print("The current details of the Employee with Employee ID :",Emp\_ID," are as follows:")

print('')

print(tabulate(data,headers=['Emp\_id','Firstname','Lastname','Gender','Mobile\_number','Designation','Salary','Dept\_id'],tablefmt='fancy\_grid'))

print('')

deletechoice = input('Are you sure you want to delete the above record ? Yes/No:')

if(deletechoice.lower()=='y' or deletechoice.lower()=='yes'):

delsqlqry="delete from Employee where Emp\_id=%s"

cursor.execute(delsqlqry,(Emp\_ID,))

mycon.commit()

print("The required record has been deleted successfully...!!!")

else:

print("Record not deleted...!!!")

def DisplayMenu():

print("By this application you can :-")

data=[(1,"Add Department Details"),\

(2,"View Department Details"),\

(3,"Update Department Details"),\

(4,'Delete Department Details'),\

(5,"Add Employee Details"),\

(6,"View Employee Details"),\

(7,"Update Employee Details"),\

(8,'Delete Employee Details')\

]

print(tabulate(data,headers=['Choice No.','Function'],tablefmt='fancy\_grid'))

print("")

choice = int(input('Enter your choice:'))

if choice==1:

AddDepartmentDetails()

elif choice==2:

DepartmentView()

elif choice==3:

UpdateDepartment()

elif choice==4:

DeleteDepartment()

elif choice==5:

AddEmployeeDetails()

elif choice==6:

EmployeeView()

elif choice==7:

UpdateEmployee()

elif choice==8:

DeleteEmployee()

else:

print("Invalid Choice...!")

DisplayMenu()

def runAgain():

print("")

runAgain = input("Do you want to run program again ? Yes/No: ")

print("")

while(runAgain.lower() == 'y' or runAgain.lower()=='yes'):

DisplayMenu()

runAgain = input("Do you want to run program again ? Yes/No: ")

runAgain()