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**ACKNOWLEDGEMENT**

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**I express my deep sense of gratitude to the luminary The Principal, Colonel Arun Datta who has been continuously motivating and extending their helping hand to us.**

**I also thanks to my parents for their motivation and support. I must thanks to my classmates for their timely help and support for compilation of this project.**

**Last but not the least, I would like to thank all those who had helped directly or indirectly towards the completion of this project.**

**INTRODUCTION**

**PAYROLL MANAGEMENT SYSTEM** is a simple project designed in Python Programming Language with MySQL. This project uses the all MySQL commands DDL (CREATE DATABASE, TABLE) and DML (INSERT, UPDATE, DELETE, and SELECT) through Python. The Python and MySQL Connectivity are done by using mysql.connector package. The all basic operations like Insert, Update, View and Delete are done in this project.

**PROJECT TITLE- “PAYROLL MANAGEMENT SYSTEM”**

DBMS: MySQL

Host: localhost

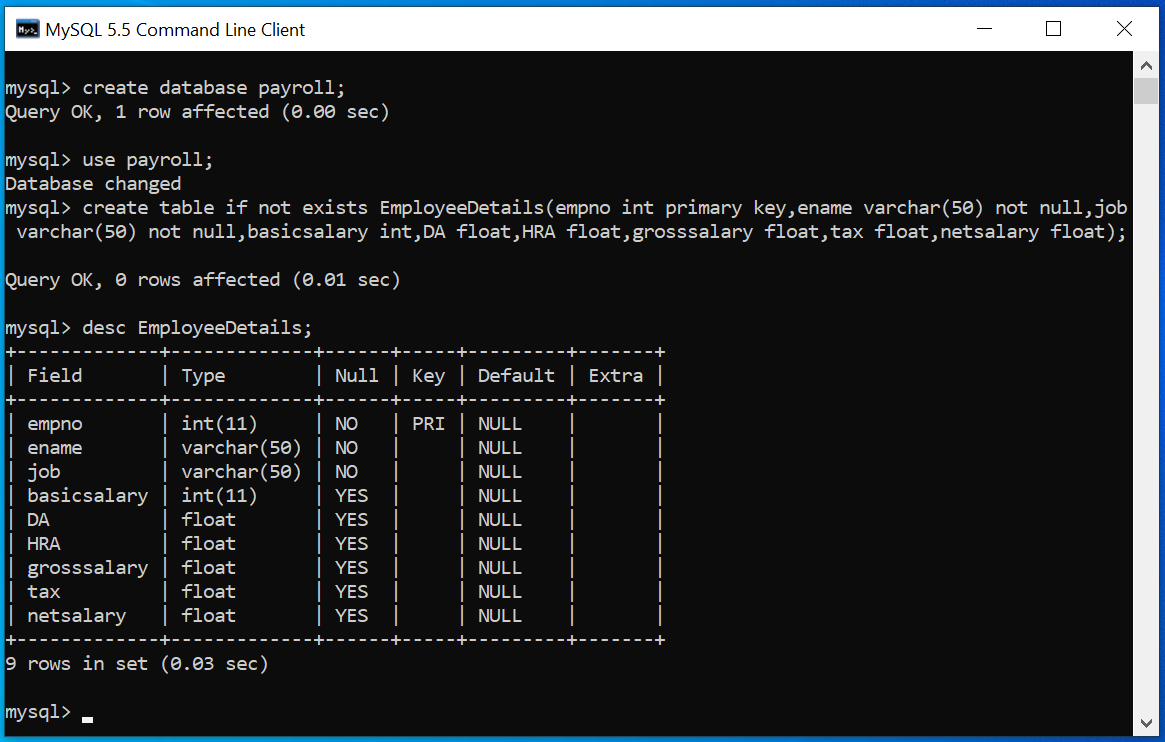
User: root

Password: root

DataBase: payroll

Table Structure: As per the screenshot given below:

**Table: EmployeeDetails**



**OBJECTIVES OF THE PROJECT**

The objective of this project is to let the students apply the programming knowledge into a real- world situation/problem and exposed the students how programming skills helps in developing a good software.

1. Write programs utilizing modern software tools.
2. Apply object oriented programming principles effectively when developing small to medium sized projects.
3. Write effective procedural code to solve small to medium sized problems.
4. Students will demonstrate a breadth of knowledge in computer science, as exemplified in the areas of systems, theory and software development.
5. Students will demonstrate ability to conduct a research or applied Computer Science project, requiring writing and presentation skills which exemplify scholarly style in computer science.

**FLOW OF EXECUTION**

**SOURCE CODE**

**#Python Module:Payroll Management**

import Module1

import Module2

import Module3

import Module4

import Module5

import Module6

import Module7

while True:

print("\t\t\*\*\*\*\*\*Payroll Management System\*\*\*\*\*\*\n")

print("==========================================")

print("1. Adding Employee Records")

print("2. For Displaying Record of All the Employees")

print("3. For Deleting Record of a particular Employee")

print("4. For Updation in a Record")

print("5. For Searching a Record")

print("6. For Displaying Salary Slip for all the Employees")

print("7. Database Setup")

print("8. Exit")

print("==========================================")

choice=int(input("Enter choice between 1 to 8 -------> :"))

if choice==1:

Module1.AddRecord()

elif choice==2:

Module2.DisplayAllRecord()

elif choice==3:

Module3.DeleteRecord()

elif choice==4:

Module4.UpdateRecord()

elif choice==5:

Module5.SearchRecord()

elif choice==6:

Module6.DisplaySalarySlip()

elif choice==7:

Module7.DataBase()

elif choice==8:

break

else:

print("Wrong choice.......Enter your choice again")

x=input("enter any key to continue")

**#Python Module: Module1**

from datetime import date,datetime,timedelta

import mysql.connector

def AddRecord():

try:

mydb=mysql.connector.connect(host="localhost",user="root",password="root",database="Payroll")

mycursor=mydb.cursor()

print("Enter Employee information......")

eno=int(input("Enter Employee No: "))

ename=input("Enter Employee Name: ")

ejob=input("Enter Employee Job: ")

ebasic=float(input("Enter Basic Salary: "))

if ejob.upper()=="OFFICER":

eda=ebasic\*0.5

ehra=ebasic\*0.35

etax=ebasic\*0.2

elif ejob.upper()=="MANAGER":

eda=ebasic\*0.45

ehra=ebasic\*0.30

etax=ebasic\*0.15

else:

eda=ebasic\*0.40

ehra=ebasic\*0.25

etax=ebasic\*0.1

egross=ebasic+eda+ehra+etax

enet=egross-etax

sql="insert into EmployeeDetails values (%s,%s,%s,%s,%s,%s,%s,%s,%s)"

val=(eno,ename,ejob,ebasic,eda,ehra,egross,etax,enet)

mycursor.execute(sql,val)

mydb.commit()

mycursor.close()

mydb.close()

print("Records Inserted Successfully..........")

except Exception as ex:

print("Something went wrong",ex)

mydb.close()

**#Python Module: Module2**

from datetime import date,datetime,timedelta

import mysql.connector

def DisplayAllRecord():

try:

mydb=mysql.connector.connect(host="localhost",user="root",password="root",database="Payroll")

mycursor=mydb.cursor()

sql="select \* from EmployeeDetails"

mycursor.execute(sql)

for (empno,ename,job,basicsalary,DA,HRA,grosssalary,tax,netsalary) in mycursor:

print("==============================================")

print("Employee No: ",empno)

print("Employee Name: ",ename)

print("Employee Job: ",job)

print("Basic Salary: ",basicsalary)

print("DA: ",DA)

print("HRA: ",HRA)

print("Gross Salary: ",grosssalary)

print("Tax:",tax)

print("Net Salary:",netsalary)

print("===============================================")

mydb.commit()

mycursor.close()

mydb.close()

except Exception as ex:

print("Spmething went wrong",ex)

mydb.close()

**#Python Module: Module3**

from datetime import date,datetime,timedelta

import mysql.connector

def DeleteRecord():

try:

mydb=mysql.connector.connect(host="localhost",user="root",password="root",database="Payroll")

mycursor=mydb.cursor()

eno=int(input("Enter Employee Number to be Deleted: "))

sql="delete from EmployeeDetails where empno=%s"

val=(eno,)

mycursor.execute(sql,val)

mydb.commit()

mycursor.close()

mydb.close()

print("Records Deleted Successfully..........")

except Exception as ex:

print(ex)

mydb.close()

**#Python Module: Module4**

from datetime import date,datetime,timedelta

import mysql.connector

def UpdateRecord():

try:

mydb=mysql.connector.connect(host="localhost",user="root",password="root",database="Payroll")

mycursor=mydb.cursor()

eno=int(input("Enter Employee Number to be Updated: "))

sql="select \* from EmployeeDetails where empno=%s"

val=(eno,)

#mycursor.execute(sql,val)

print("Enter New Record")

ename=input("Enter Employee Name: ")

ejob=input("Enter Employee Job: ")

ebasic=int(input("Enter Basic Salary: "))

if ejob.upper()=="OFFICER":

eda=ebasic\*0.5

ehra=ebasic\*0.35

etax=ebasic\*0.2

elif ejob.upper()=="MANAGER":

eda=ebasic\*0.45

ehra=ebasic\*0.30

etax=ebasic\*0.15

else:

eda=ebasic\*0.40

ehra=ebasic\*0.25

etax=ebasic\*0.1

egross=ebasic+eda+ehra+etax

enet=egross-etax

sql="update EmployeeDetails set ename=%s,job=%s,basicsalary=%s ,DA=%s, HRA=%s, grosssalary=%s, tax=%s, netsalary=%s where empno=%s"

val=(ename,ejob,ebasic,eda,ehra,egross,etax,enet,eno)

mycursor.execute(sql,val)

sql2="update EmployeeDetails set ename=%s,job=%s,basicsalary=%s where empno=%s"

val2=(ename,ejob,ebasic,eno)

mycursor.execute(sql2,val2)

mydb.commit()

mycursor.close()

mydb.close()

print("Records Updated Successfully..........")

except Exception as ex:

print("Something went wrong",ex)

mydb.close()

**#Python Module: Module5**

from datetime import date,datetime,timedelta

import mysql.connector

def SearchRecord():

try:

mydb=mysql.connector.connect(host="localhost",user="root",password="root",database="Payroll")

mycursor=mydb.cursor()

eno=int(input("Enter Employee Number to be Searched: "))

sql="select \* from EmployeeDetails where empno=%s"

val=(eno,)

mycursor.execute(sql,val)

rcount=0

for (empno,ename,job,basicsalary,DA,HRA,grosssalary,tax,netsalary) in mycursor:

rcount+=1

print("==============================================")

print("==============================================")

print("Employee No: ",empno)

print("Employee Name: ",ename)

print("Employee Job: ",job)

print("Basic Salary: ",basicsalary)

print("DA: ",DA)

print("HRA: ",HRA)

print("Gross Salary: ",grosssalary)

print("Tax:",tax)

print("Net Salary:",netsalary)

print("===============================================")

if rcount%2==0:

print(rcount,"Record(s) not found")

mydb.commit()

mycursor.close()

mydb.close()

print("Records Searched Successfully..........")

except Exception as ex:

print("Something went wrong",ex)

mydb.close()

**#Python Module: Module6**

import datetime

import mysql.connector

def DisplaySalarySlip():

try:

mydb=mysql.connector.connect(host="localhost",user="root",password="root",database="Payroll")

mycursor=mydb.cursor()

sql="select \* from EmployeeDetails"

mycursor.execute(sql)

now=datetime.datetime.now()

print("\n\n\n\t\t\tSALARY SLIP ")

print("Current Date and Time: ",end=" ")

print(now.strftime("%Y-%m-%d %H:%M:%S"))

for (empno,ename,job,basicsalary,DA,HRA,grosssalary,tax,netsalary) in mycursor:

print("==============================================")

print("Employee No: ",empno)

print("Employee Name: ",ename)

print("Employee Job: ",job)

print("Basic Salary: ",basicsalary)

print("DA: ",DA)

print("HRA: ",HRA)

print("Gross Salary: ",grosssalary)

print("Tax:",tax)

print("Net Salary:",netsalary)

print("===============================================")

mydb.commit()

mycursor.close()

mydb.close()

print("SALARY SLIP Generated Successfully..........")

except Exception as ex:

print("Something went wrong",ex)

mydb.close()

**#Python Module: Module7**

import MyDatabase

def DataBase():

while True:

print("\t\t\*\*\*\*\*Database Management\*\*\*\*\*\n")

print("=====================================")

print("1. Database Creation")

print("2. Creation of Relations")

print("3. List of Relations")

print("4. Return to Main Menu")

print("======================================")

choice=int(input("Enter choice between 1 to 4-------->: "))

if choice==1:

MyDatabase.CreateDatabase()

elif choice==2:

MyDatabase.CreateRelations()

elif choice==3:

MyDatabase.ShowRelations()

elif choice==4:

return

else:

print("Wrong choice.......Enter your choice again")

x=input("Enter any key to continue")

**#Python Module: MyDatabase**

from datetime import date,datetime,timedelta

import mysql.connector

def CreateDatabase():

try:

mydb=mysql.connector.connect(host="localhost",user="root",password="root")

mycursor=mydb.cursor()

print("Creating Payroll Database")

sql="create database if not exists Payroll"

mycursor.execute(sql)

print("Payroll Database Created Successfully....")

except Exception as ex:

print(ex)

def CreateRelations():

try:

mydb=mysql.connector.connect(host="localhost",user="root",password="root",database="Payroll")

mycursor=mydb.cursor()

print("Creating EmployeeDetails Relation")

sql="create table if not exists EmployeeDetails(empno int primary key,ename varchar(50) not null,job varchar(50) not null,basicsalary int,DA float,HRA float,grosssalary float,tax float,netsalary float)"

mycursor.execute(sql)

print("EmployeeDetails Relation Created Successfully....")

except Exception as ex:

print(ex)

def ShowRelations():

try:

mydb=mysql.connector.connect(host="localhost",user="root",password="root",database="Payroll")

mycursor=mydb.cursor()

print("Displaying List of Relations")

sql="show tables"

mycursor.execute(sql)

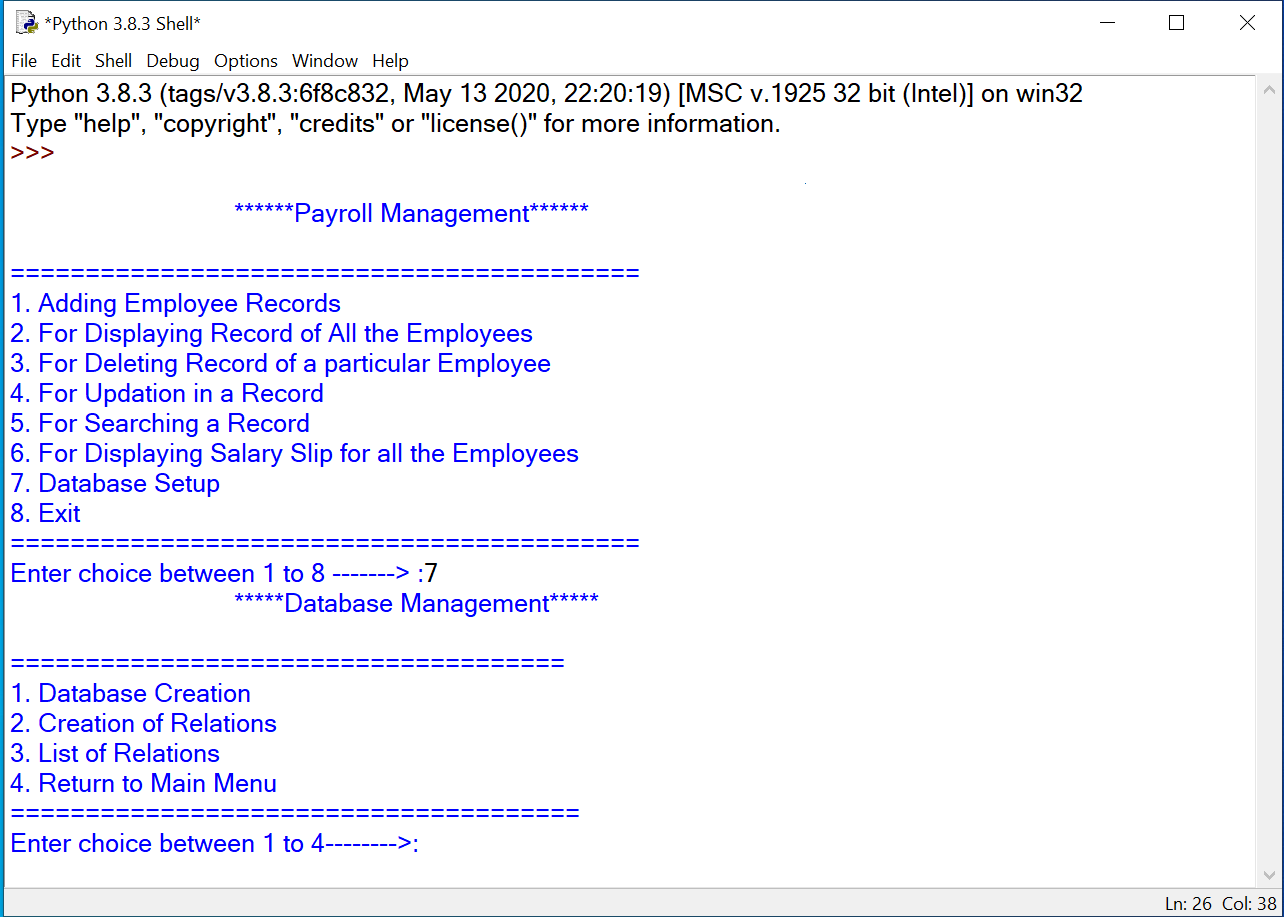
for i in mycursor:

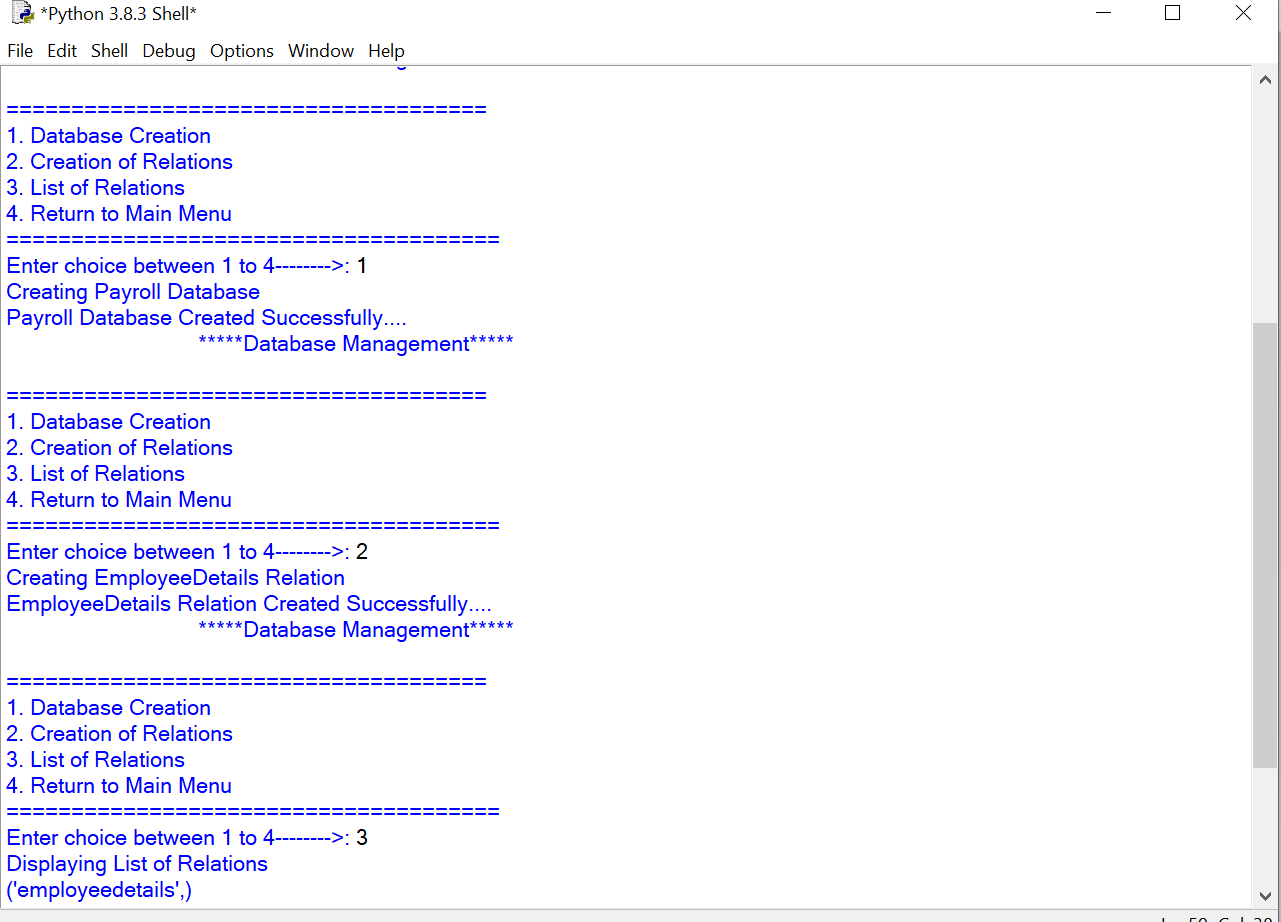
print(i)

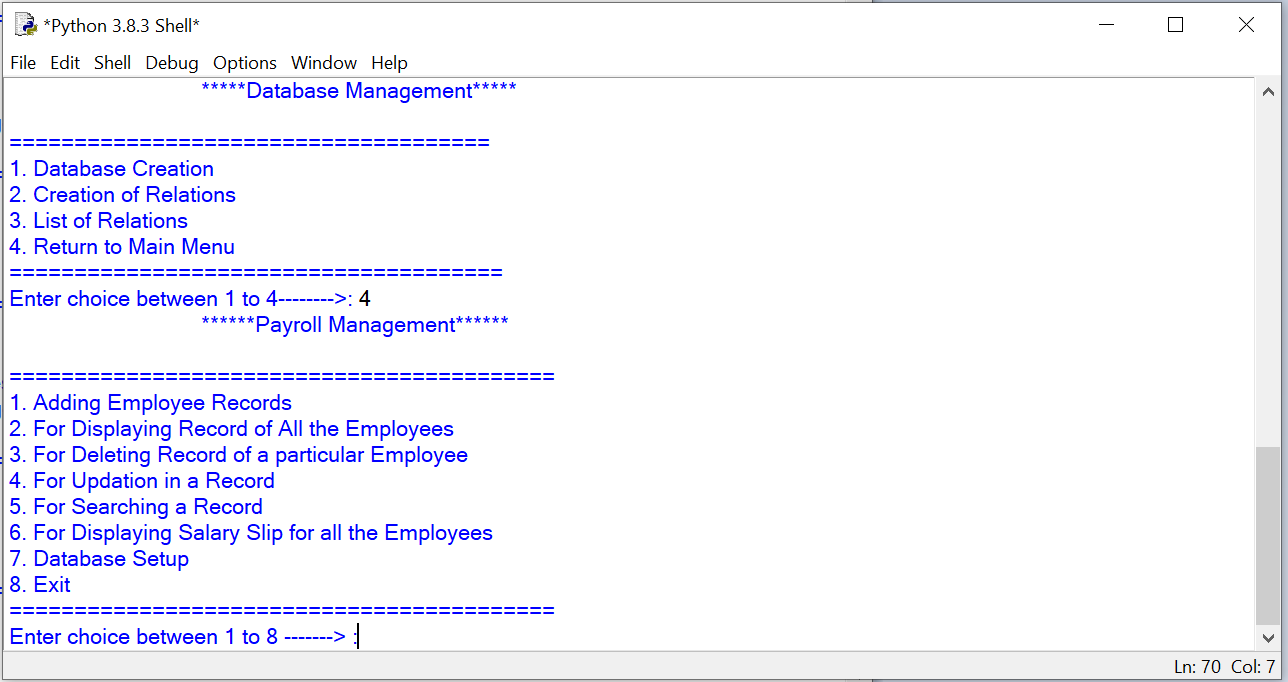
except Exception as ex:

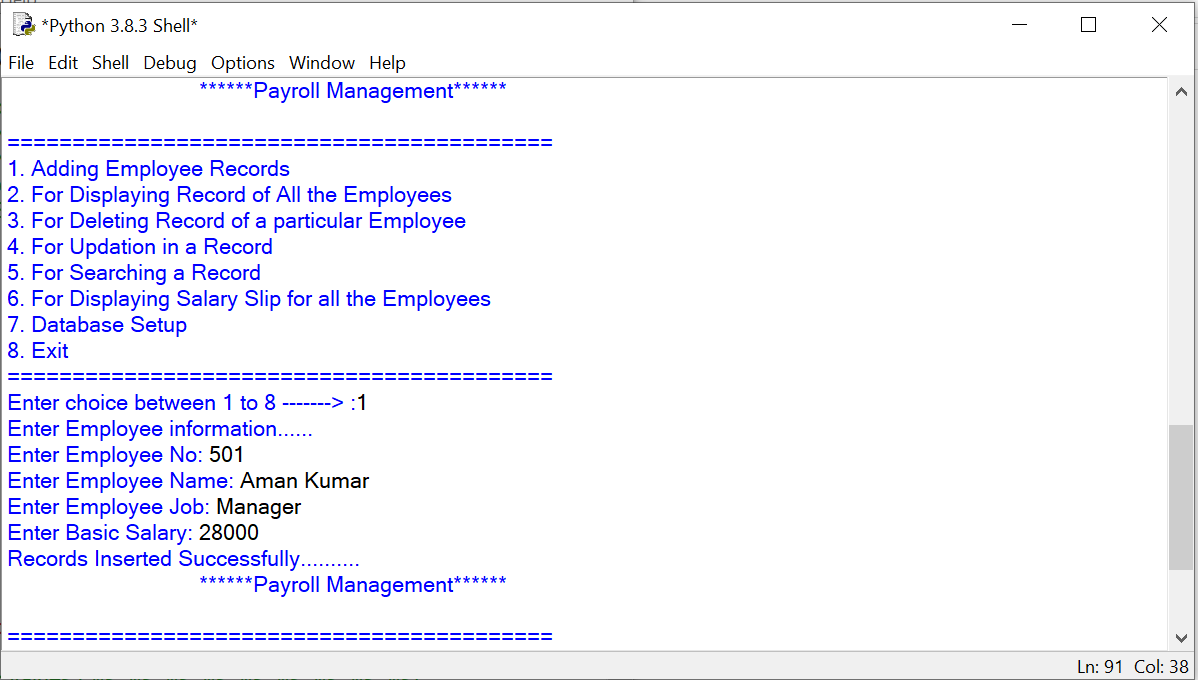
print(ex)

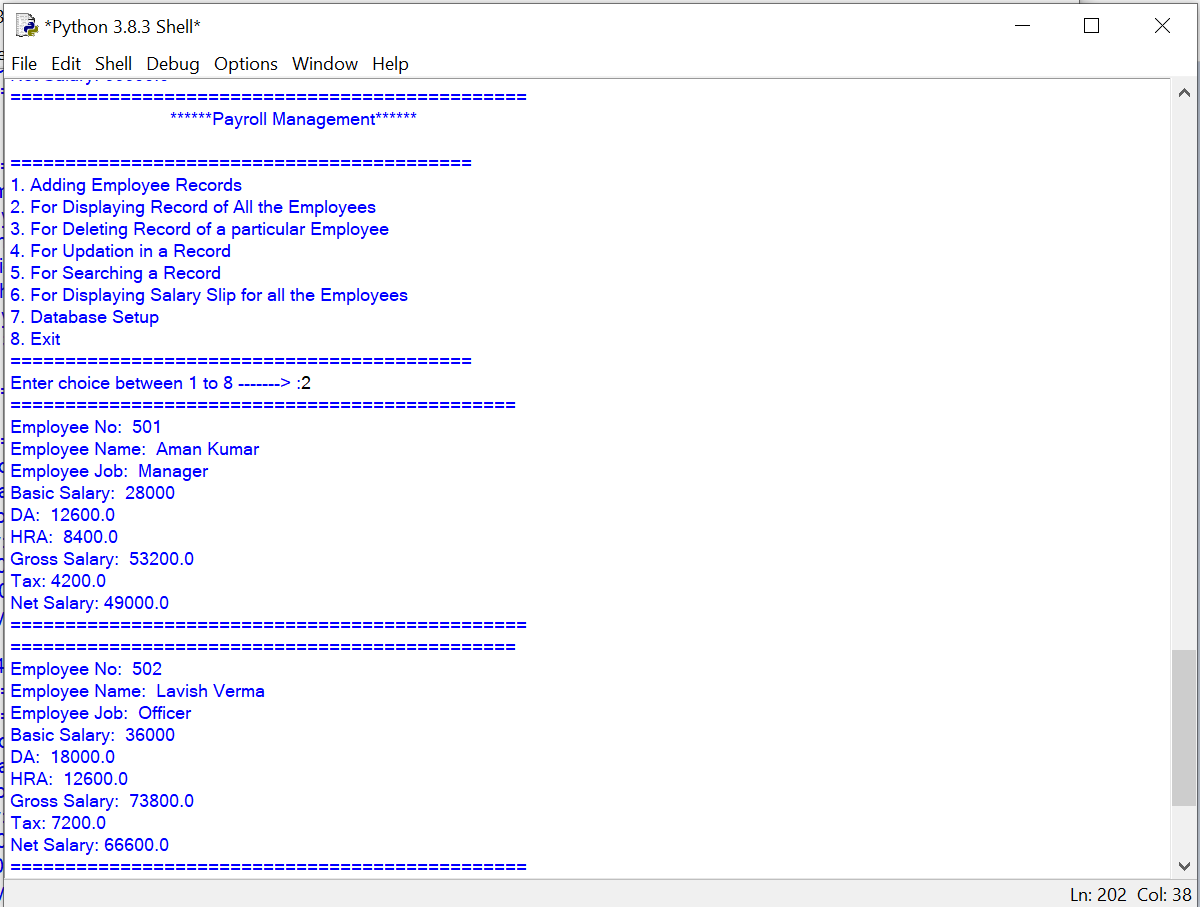
**OUTPUT**

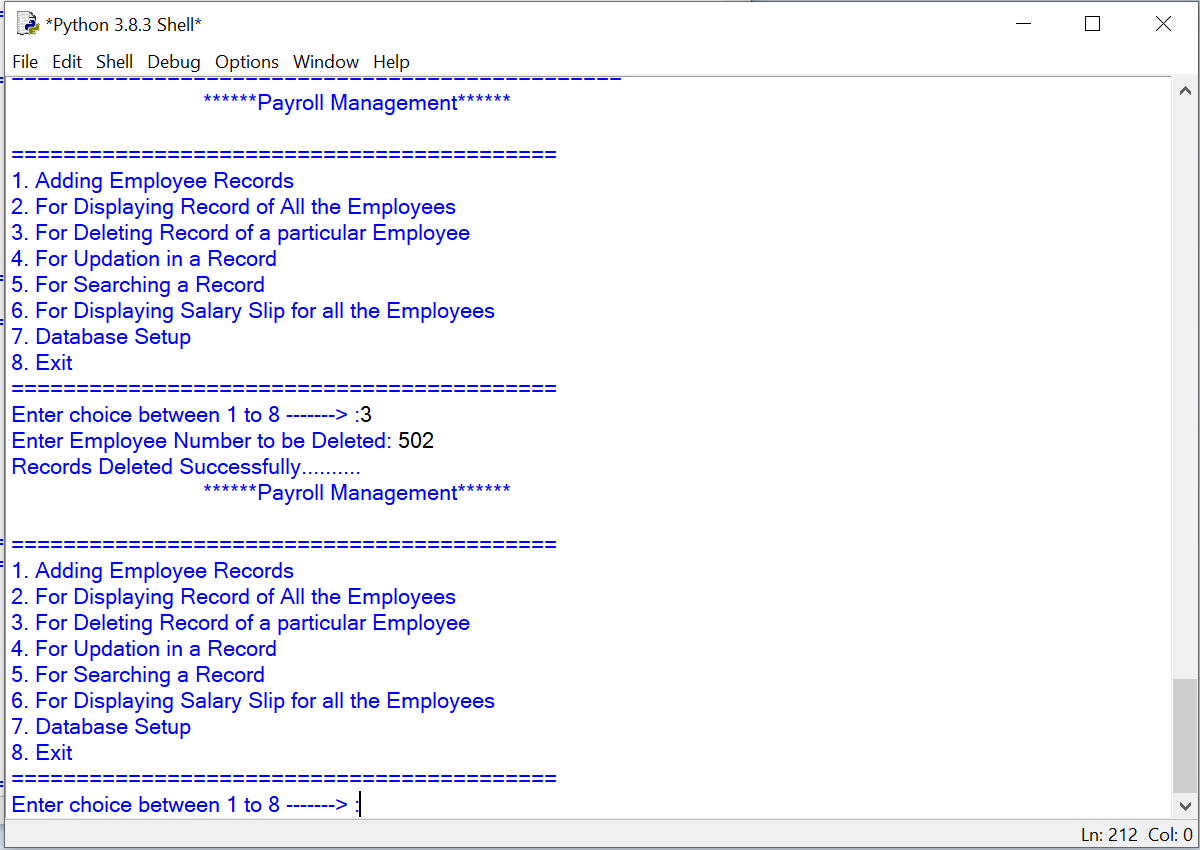


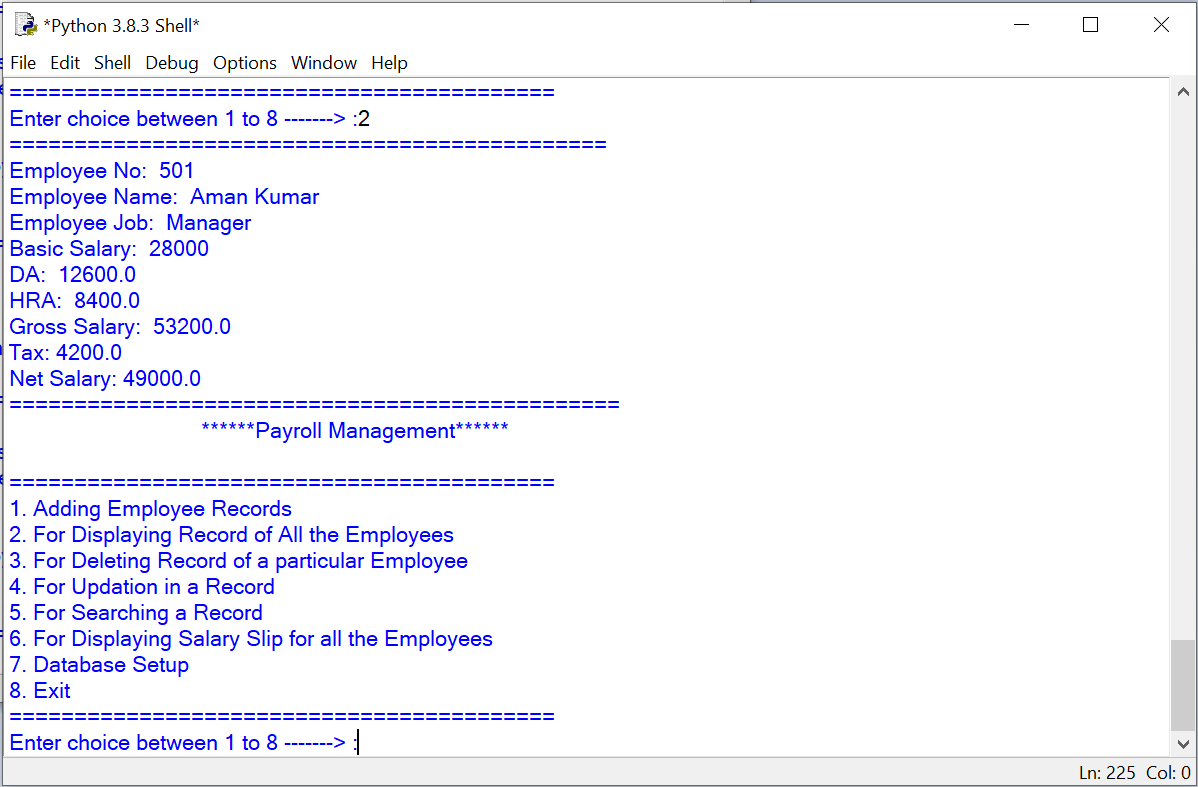


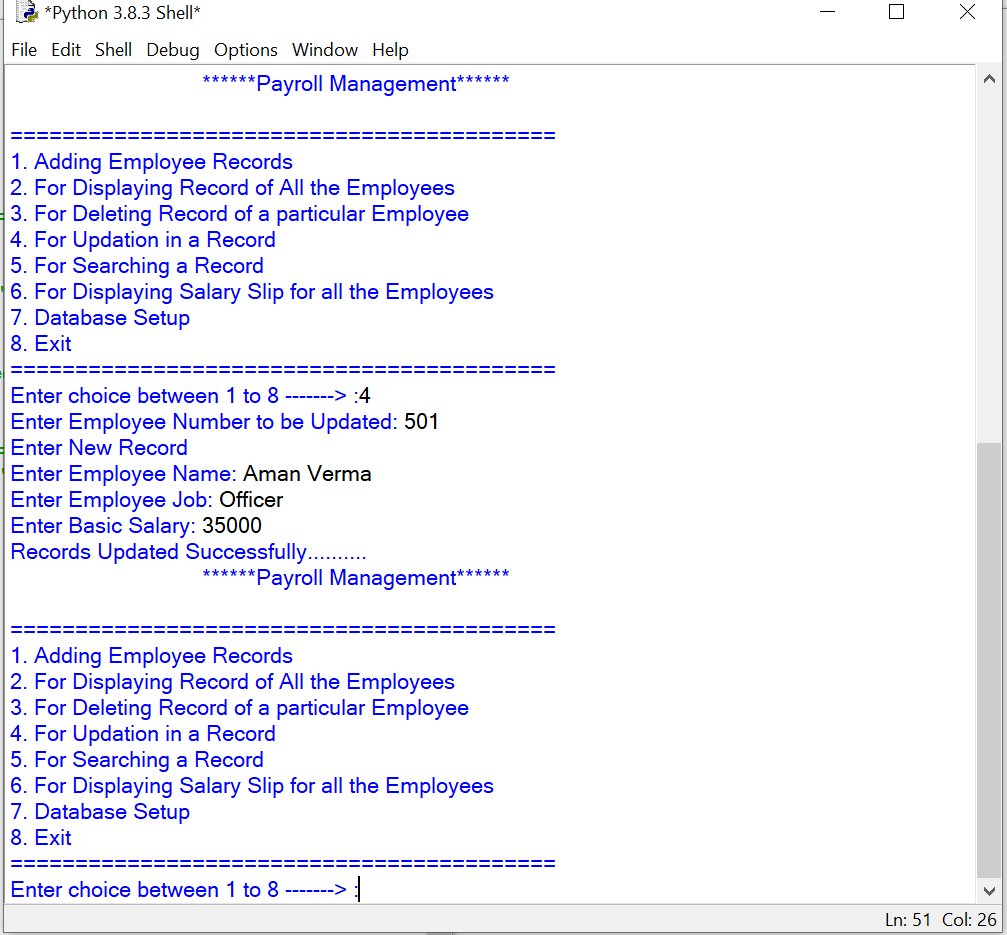


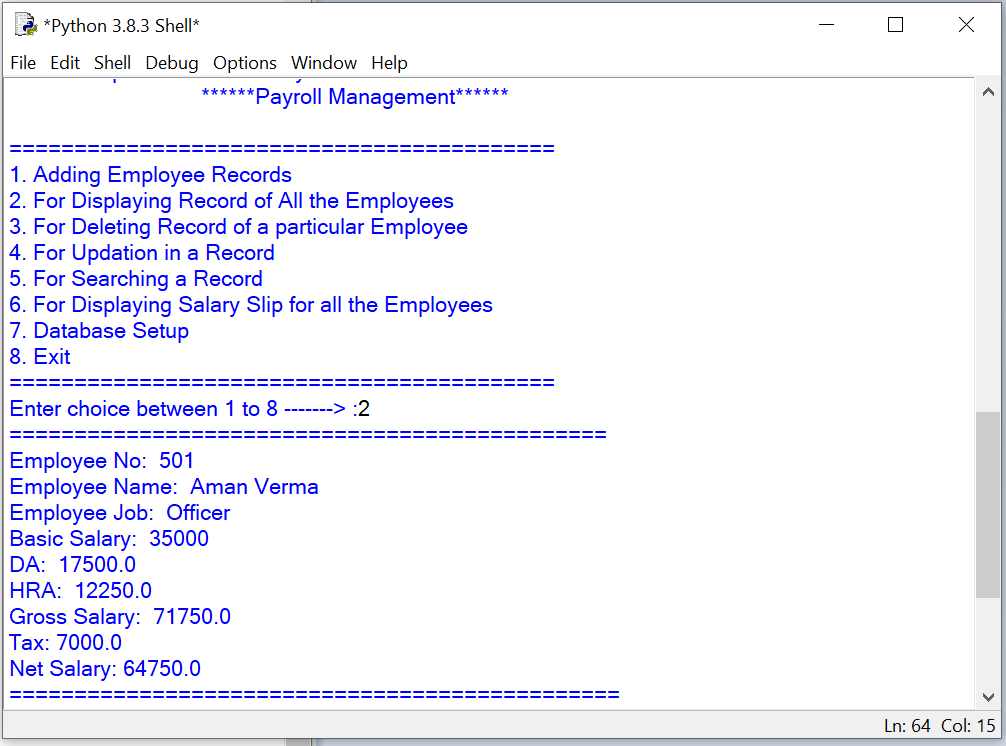


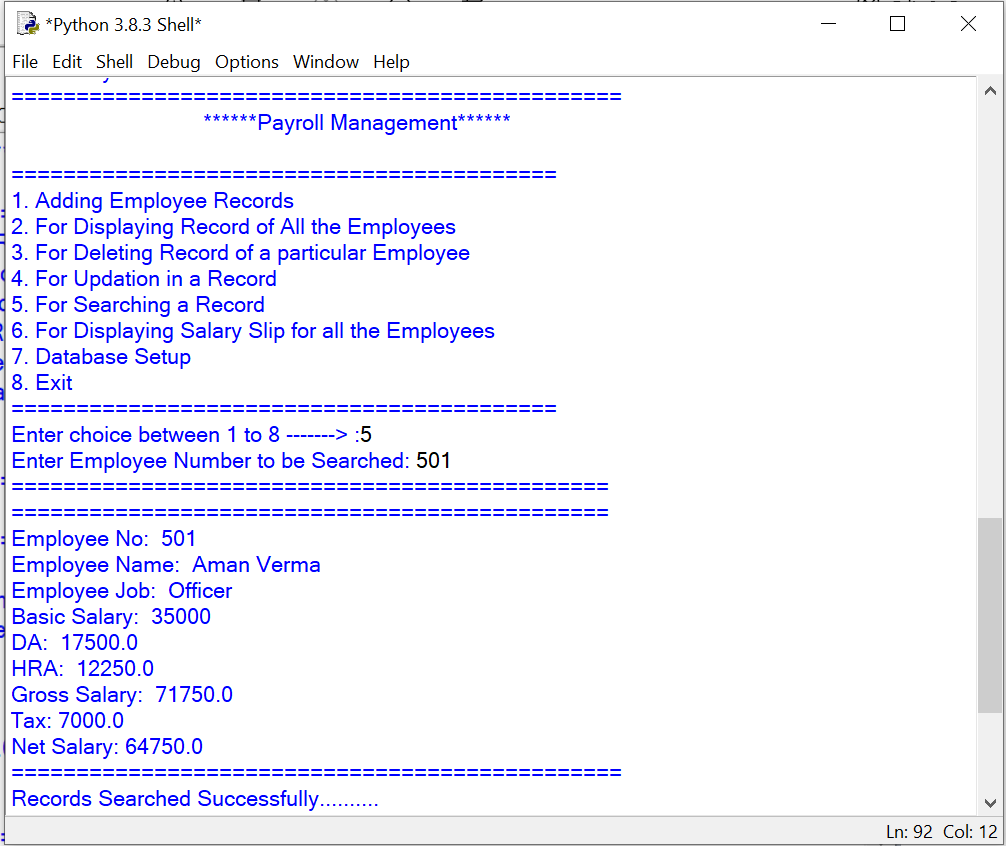


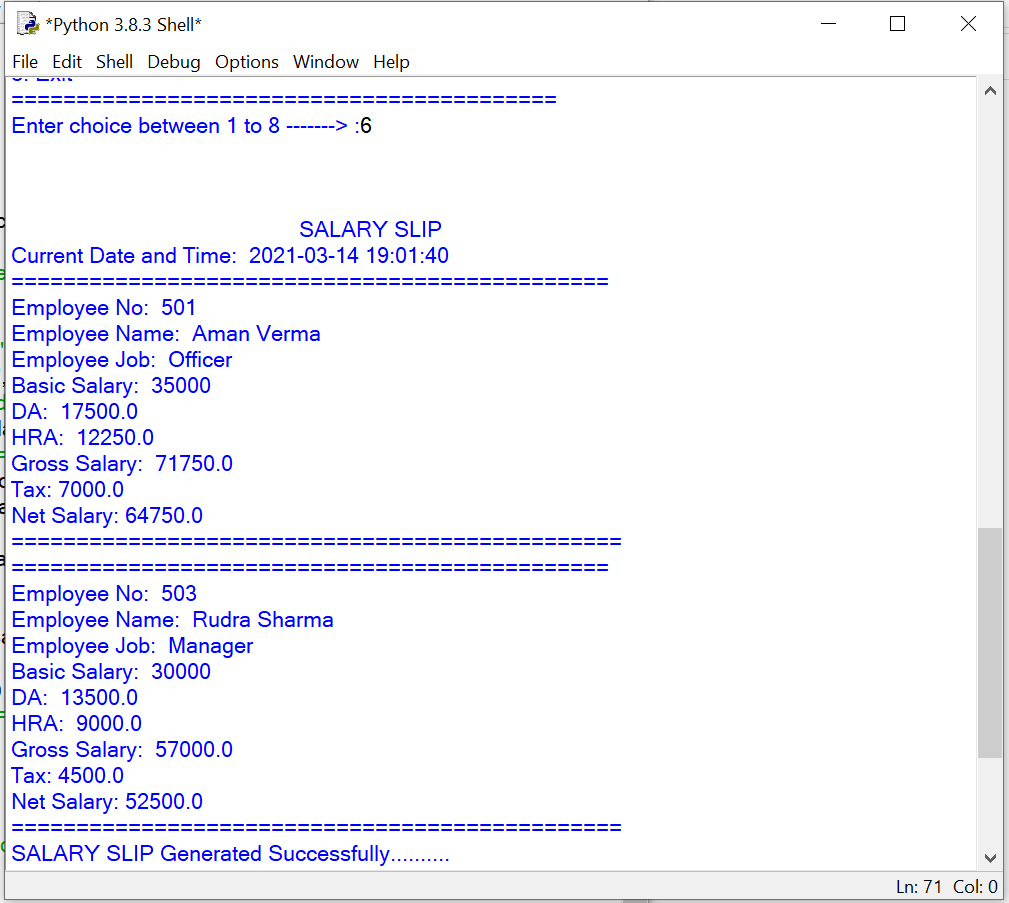


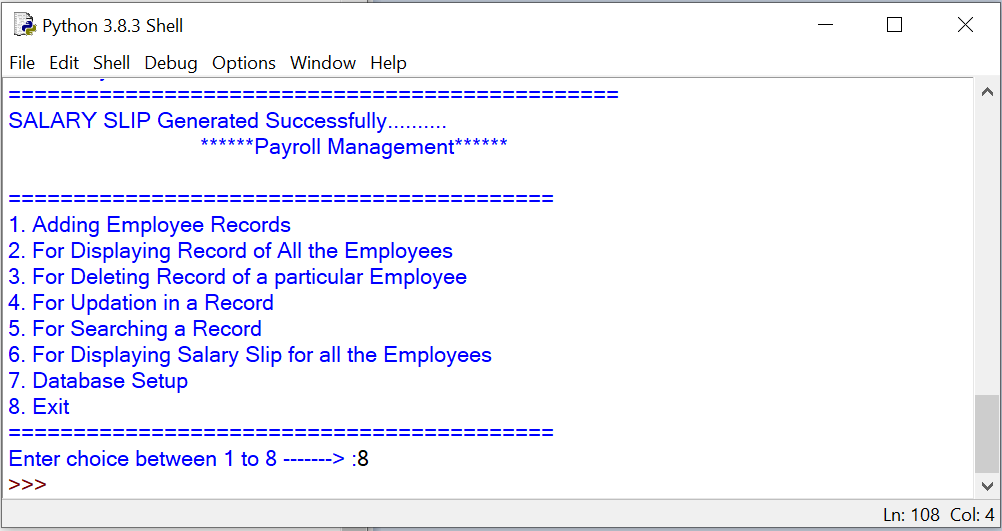






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**HARDWARE AND SOFTWARE REQUIREMENTS**

I. OPERATING SYSTEM : MICROSOFT WINDOWS 10

II. PROCESSOR : DUALCORE (ANY)

III. RAM : 4 GB

IV. HARD DISK / SSD : 500 GB / 120

V. PEN DRIVE : (If Backup Required)

VI. MONITOR 14.1 or 15 -17 inch

VI. KEY BOARD AND MOUSE

VIII. PRINTER : (If Print Required – [Hard copy])

**SOFTWARE REQUIREMENTS:**

1. WINDOWS 10 OPERATING SYSTEM
2. SETUP OF PYTHON
3. MYSQL DATABASE

**BIBLIOGRAPHY**

1. ***Computer science With Python - By: Sumita Arora***
2. ***Computer science With Python - B: Preeti Arora***
3. ***Website:*** [**https://www.w3schools.com**](https://www.w3schools.com)