

Date :

Experiment No: 1

Program 1: Input any number from user and calculate factorial of a number

```
# Program to calculate factorial of entered number
num = int(input("Enter any number :"))
fact = 1
n = num          # storing num in n for printing
while num>1:    # loop to iterate from n to 2
    fact = fact * num
    num-=1

print("Factorial of ", n , " is :",fact)
```

OUTPUT

```
Enter any number :6
Factorial of 6 is : 720
```

Program 1: Input any number from user and check it is Prime no. or not

```
#Program to input any number from user
#Check it is Prime number of not
import math
num = int(input("Enter any number :"))
isPrime=True
for i in range(2,int(math.sqrt(num))+1):
    if num % i == 0:
        isPrime=False

if isPrime:
    print("## Number is Prime ##")
else:
    print("## Number is not Prime ##")
```

OUTPUT

```
Enter any number :117
## Number is not Prime ##
>>>
Enter any number :119
## Number is not Prime ##
>>>
Enter any number :113
## Number is Prime ##
>>>
Enter any number :7
## Number is Prime ##
>>>
Enter any number :19
## Number is Prime ##
```

Program : Write a program to find sum of elements of List recursively

```
#Program to find sum of elements of list recursively
def findSum(lst,num):
    if num==0:
        return 0
    else:
        return lst[num-1]+findSum(lst,num-1)

mylist = []          # Empty List
#Loop to input in list
num = int(input("Enter how many number :"))
for i in range(num):
    n = int(input("Enter Element "+str(i+1)+":"))
    mylist.append(n)  #Adding number to list

sum = findSum(mylist,len(mylist))
print("Sum of List items ",mylist, " is :",sum)
```

OUTPUT

```
Enter how many number :6
Enter Element 1:10
Enter Element 2:20
Enter Element 3:30
Enter Element 4:40
Enter Element 5:50
Enter Element 6:60
Sum of List items [10, 20, 30, 40, 50, 60] is : 210
```

Program 1: Write a program to calculate the n^{th} term of Fibonacci series

```
#Program to find 'n'th term of fibonacci series
#Fibonacci series : 0,1,1,2,3,5,8,13,21,34,55,89,...
#nth term will be counted from 1 not 0

def nthfiboterm(n):
    if n<=1:
        return n
    else:
        return (nthfiboterm(n-1)+nthfiboterm(n-2))

num = int(input("Enter the 'n' term to find in fibonacci :"))
term =nthfiboterm(num)
print(num,"th term of fibonacci series is :",term)
```

OUTPUT

```
Enter the 'n' term to find in fibonacci :10
10 th term of fibonacci series is : 55
```

Program : Program to search any word in given string/sentence

```
#Program to find the occurrence of any word in a string
def countWord(str1,word):
    s = str1.split()
    count=0
    for w in s:
        if w==word:
            count+=1
    return count

str1 = input("Enter any sentence :")
word = input("Enter word to search in sentence :")
count = countWord(str1,word)
if count==0:
    print("## Sorry! ",word," not present ")
else:
    print("## ",word," occurs ",count," times ## ")
```

OUTPUT

```
Enter any sentence :my computer your computer our computer everyones computer
Enter word to search in sentence :computer
## computer occurs 4 times ##
```

```
Enter any sentence :learning python is fun
Enter word to search in sentence :java
## Sorry! java not present
```

Program 1: Program to read and display file content line by line with each word separated by '#'

*#Program to read content of file line by line
#and display each word separated by '#'*

```
f = open("file1.txt")  
  
for line in f:  
    words = line.split()  
    for w in words:  
        print(w+'#',end="")  
    print()  
f.close()
```

NOTE : if the original content of file is:

*India is my country
I love python
Python learning is fun*

OUTPUT

India#is#my#country#
I#love#python#
Python#learning#is#fun#

Program 1: Program to read the content of file and display the total number of consonants, uppercase, vowels and lower case characters'

#Program to read content of file
#and display total number of vowels, consonants, lowercase and uppercase characters

```
f = open("file1.txt")
v=0
c=0
u=0
l=0
o=0
data = f.read()
vowels=['a','e','i','o','u']
for ch in data:
    if ch.isalpha():
        if ch.lower() in vowels:
            v+=1
        else:
            c+=1
    if ch.isupper():
        u+=1
    elif ch.islower():
        l+=1
    elif ch!=' ' and ch!='\n':
        o+=1
print("Total Vowels in file      :",v)
print("Total Consonants in file  n  :",c)
print("Total Capital letters in file :",u)
print("Total Small letters in file  :",l)
print("Total Other than letters    :",o)
f.close()
```

NOTE : if the original content of file is:

India is my country

I love python

Python learning is fun

123@

OUTPUT

```
Total Vowels in file      : 16
Total Consonants in file  n  : 30
Total Capital letters in file : 2
Total Small letters in file  : 44
Total Other than letters    : 4
```

Program 1: Program to create binary file to store Rollno and Name, Search any Rollno and display name if Rollno found otherwise "Rollno not found"

```
#Program to create a binary file to store Rollno and name
#Search for Rollno and display record if found
#otherwise "Roll no. not found"
```

```
import pickle
student=[]
f=open('student.dat','wb')
ans='y'
while ans.lower()=='y':
    roll = int(input("Enter Roll Number :"))
    name = input("Enter Name :")
    student.append([roll,name])
    ans=input("Add More?(Y)")
pickle.dump(student,f)
f.close()
f=open('student.dat','rb')
student=[]
while True:
    try:
        student = pickle.load(f)
    except EOFError:
        break
ans='y'

while ans.lower()=='y':
    found=False
    r = int(input("Enter Roll number to search :"))
    for s in student:
        if s[0]==r:
            print("## Name is :",s[1], " ##")
            found=True
            break
    if not found:
        print("####Sorry! Roll number not found ####")
    ans=input("Search more?(Y) :")
f.close()
```


OUTPUT

Enter Roll Number :1
Enter Name :Amit
Add More ?(Y)y

Enter Roll Number :2
Enter Name :Jasbir
Add More ?(Y)y

Enter Roll Number :3
Enter Name :Vikral
Add More ?(Y)n

Enter Roll number to search :2
Name is : Jasbir ##
Search more ?(Y) :y

Enter Roll number to search :1
Name is : Amit ##
Search more ?(Y) :y

Enter Roll number to search :4
####Sorry! Roll number not found ####
Search more ?(Y) :n

Program 1: Program to create binary file to store Rollno,Name and Marks and update marks of entered Rollno

```
#Program to create a binary file to store Rollno and name
#Search for Rollno and display record if found
#otherwise "Roll no. not found"

import pickle
student=[]
f=open('student.dat','wb')
ans='y'
while ans.lower()=='y':
    roll = int(input("Enter Roll Number :"))
    name = input("Enter Name :")
    marks = int(input("Enter Marks :"))
    student.append([roll,name,marks])
    ans=input("Add More ?(Y)")
pickle.dump(student,f)
f.close()
f=open('student.dat','rb+')
student=[]
while True:
    try:
        student = pickle.load(f)
    except EOFError:
        break
ans='y'
while ans.lower()=='y':
    found=False
    r = int(input("Enter Roll number to update :"))
    for s in student:
        if s[0]==r:
            print("## Name is :",s[1], " ##")
            print("## Current Marks is :",s[2]," ##")
            m = int(input("Enter new marks :"))
            s[2]=m
            print("## Record Updated ##")
            found=True
            break
    if not found:
        print("####Sorry! Roll number not found ####")
    ans=input("Update more ?(Y) :")
f.close()
```

OUTPUT

Enter Roll Number :1
Enter Name :Amit
Enter Marks :99
Add More ?(Y)y

Enter Roll Number :2
Enter Name :Vikrant
Enter Marks :88
Add More ?(Y)y

Enter Roll Number :3
Enter Name :Nitin
Enter Marks :66
Add More ?(Y)n

Enter Roll number to update :2
Name is : Vikrant ##
Current Marks is : 88 ##
Enter new marks :90
Record Updated ##
Update more ?(Y) :y

Enter Roll number to update :2
Name is : Vikrant ##
Current Marks is : 90 ##
Enter new marks :95
Record Updated ##
Update more ?(Y) :n

Date :

Experiment No: 10

Program 1: Program to read the content of file line by line and write it to another file except for the lines contains 'a' letter in it.

```
#Program to read line from file and write it to another line
#Except for those line which contains letter 'a'
```

```
f1 = open("file2.txt")
f2 = open("file2copy.txt","w")

for line in f1:
    if 'a' not in line:
        f2.write(line)
print("## File Copied Successfully! ##")
f1.close()
f2.close()
```

NOTE: Content of file2.txt

```
a quick brown fox
one two three four
five six seven
India is my country
eight nine ten
bye!
```

OUTPUT

```
## File Copied Successfully! ##
```

NOTE: After copy content of file2copy.txt

```
one two three four
five six seven
eight nine ten
bye!
```

Program 1: Program to create CSV file and store empno,name,salary and search any empno and display name,salary and if not found appropriate message.

```
import csv
with open('myfile.csv',mode='a') as csvfile:
    mywriter = csv.writer(csvfile,delimiter=',')
    ans='y'
    while ans.lower()=='y':
        eno=int(input("Enter Employee Number "))
        name=input("Enter Employee Name ")
        salary=int(input("Enter Employee Salary :"))
        mywriter.writerow([eno,name,salary])
        print("## Data Saved... ##")
        ans=input("Add More ?")
ans='y'
with open('myfile.csv',mode='r') as csvfile:
    myreader = csv.reader(csvfile,delimiter=',')
    while ans=='y':
        found=False
        e = int(input("Enter Employee Number to search :"))
        for row in myreader:
            if len(row)!=0:
                if int(row[0])==e:
                    print("=====")
                    print("NAME  :",row[1])
                    print("SALARY :",row[2])
                    found=True
                    break
        if not found:
            print("=====")
            print("    EMPNO NOT FOUND")
            print("=====")
            ans = input("Search More ? (Y)")
```

Enter Employee Number 1

Enter Employee Name Amit

Enter Employee Salary :90000

Data Saved...

Add More ?y

Enter Employee Number 2

Enter Employee Name Sunil

Enter Employee Salary :80000

Data Saved...

Add More ?y

Enter Employee Number 3

Enter Employee Name Satya

Enter Employee Salary :75000

Data Saved...

Add More ?n

Enter Employee Number to search :2

=====

NAME : Sunil

SALARY : 80000

Search More ? (Y)y

Enter Employee Number to search :3

=====

NAME : Satya

SALARY : 75000

Search More ? (Y)y

Enter Employee Number to search :4

=====

EMPNO NOT FOUND

=====

Search More ? (Y)n

Program 1: Program to generate random number 1-6, simulating a dice

```
# Program to generate random number between 1 - 6
# To simulate the dice
import random
import time
print("Press CTRL+C to stop the dice ")
play='y'
while play=='y':
    try:
        while True:
            for i in range(10):
                print()
                n = random.randint(1,6)
                print(n,end="")
                time.sleep(.00001)
    except KeyboardInterrupt:
        print("Your Number is :",n)
        ans=input("Play More? (Y) :")
        if ans.lower()!='y':
            play='n'
            break
```

OUTPUT

```
4Your Number is : 4
Play More? (Y) :y
Your Number is : 3
Play More? (Y) :y
Your Number is : 2
Play More? (Y) :n
```

Program 1: Program to implement Stack in Python using List

```
def isEmpty(S):
    if len(S)==0:
        return True
    else:
        return False

def Push(S,item):
    S.append(item)
    top=len(S)-1

def Pop(S):
    if isEmpty(S):
        return "Underflow"
    else:
        val = S.pop()
        if len(S)==0:
            top=None
        else:
            top=len(S)-1
        return val

def Peek(S):
    if isEmpty(S):
        return "Underflow"
    else:
        top=len(S)-1
        return S[top]

def Show(S):
    if isEmpty(S):
        print("Sorry No items in Stack ")
    else:
        t = len(S)-1
        print("(Top)",end=' ')
        while(t>=0):
            print(S[t],"<==",end=' ')
            t-=1
        print()
```



```

# main begins here
S=[]      #Stack
top=None
while True:
    print("**** STACK DEMONSTRATION ****")
    print("1. PUSH ")
    print("2. POP")
    print("3. PEEK")
    print("4. SHOW STACK ")
    print("0. EXIT")
    ch = int(input("Enter your choice :"))
    if ch==1:
        val = int(input("Enter Item to Push :"))
        Push(S,val)
    elif ch==2:
        val = Pop(S)
        if val=="Underflow":
            print("Stack is Empty")
        else:
            print("\nDeleted Item was :",val)
    elif ch==3:
        val = Peek(S)
        if val=="Underflow":
            print("Stack Empty")
        else:
            print("Top Item :",val)
    elif ch==4:
        Show(S)
    elif ch==0:
        print("Bye")
        break

```

OUTPUT

```

**** STACK DEMONSTRATION ****
1. PUSH
2. POP
3. PEEK
4. SHOW STACK
0. EXIT
Enter your choice :1
Enter Item to Push :10

```

Cont...

**** STACK DEMONSTRATION ****

1. PUSH
2. POP
3. PEEK
4. SHOW STACK
0. EXIT

Enter your choice :1

Enter Item to Push :20

**** STACK DEMONSTRATION ****

1. PUSH
2. POP
3. PEEK
4. SHOW STACK
0. EXIT

Enter your choice :1

Enter Item to Push :30

**** STACK DEMONSTRATION ****

1. PUSH
2. POP
3. PEEK
4. SHOW STACK
0. EXIT

Enter your choice :4

(Top) 30 <== 20 <== 10 <==

**** STACK DEMONSTRATION ****

1. PUSH
2. POP
3. PEEK
4. SHOW STACK
0. EXIT

Enter your choice :3

Top Item : 30

**** STACK DEMONSTRATION ****

1. PUSH
2. POP
3. PEEK
4. SHOW STACK
0. EXIT

Enter your choice :2

Deleted Item was : 30

**** STACK DEMONSTRATION ****

1. PUSH
2. POP
3. PEEK
4. SHOW STACK
0. EXIT

Enter your choice :4

(Top) 20 <== 10 <==

**** STACK DEMONSTRATION ****

1. PUSH
2. POP
3. PEEK
4. SHOW STACK
0. EXIT

Enter your choice :0

Bye

Program 1: Program to implement Queue in Python using List

```
def isEmpty(Q):
    if len(Q)==0:
        return True
    else:
        return False

def Enqueue(Q,item):
    Q.append(item)
    if len(Q)==1:
        front=rear=0
    else:
        rear=len(Q)-1

def Dequeue(Q):
    if isEmpty(Q):
        return "Underflow"
    else:
        val = Q.pop(0)
    if len(Q)==0:
        front=rear=None
    return val

def Peek(Q):
    if isEmpty(Q):
        return "Underflow"
    else:
        front=0
        return Q[front]

def Show(Q):
    if isEmpty(Q):
        print("Sorry No items in Queue ")
    else:
        t = len(Q)-1
        print("(Front)",end=' ')
        front = 0
        i=front
        rear = len(Q)-1
        while(i<=rear):
            print(Q[i],"==>",end=' ')
            i+=1
        print()
```

Cont...

```

Q=[]      #Queue
front=rear=None
while True:
    print("**** QUEUE DEMONSTRATION ****")
    print("1. ENQUEUE ")
    print("2. DEQUEUE")
    print("3. PEEK")
    print("4. SHOW QUEUE ")
    print("0. EXIT")
    ch = int(input("Enter your choice :"))
    if ch==1:
        val = int(input("Enter Item to Insert :"))
        Enqueue(Q,val)
    elif ch==2:
        val = Dequeue(Q)
        if val=="Underflow":
            print("Queue is Empty")
        else:
            print("\nDeleted Item was :",val)
    elif ch==3:
        val = Peek(Q)
        if val=="Underflow":
            print("Queue Empty")
        else:
            print("Front Item :",val)
    elif ch==4:
        Show(Q)
    elif ch==0:
        print("Bye")
        break

```

OUTPUT

```
**** QUEUE DEMONSTRATION ****
```

```

1. ENQUEUE
2. DEQUEUE
3. PEEK
4. SHOW QUEUE
0. EXIT

```

```
Enter your choice :1
```

```
Enter Item to Insert :10
```

```
**** QUEUE DEMONSTRATION ****
```

```

1. ENQUEUE
2. DEQUEUE
3. PEEK
4. SHOW QUEUE
0. EXIT

```

```
Enter your choice :1
```

Cont...

```
Enter Item to Insert :20
**** QUEUE DEMONSTRATION ****
1. ENQUEUE
2. DEQUEUE
3. PEEK
4. SHOW QUEUE
0. EXIT
Enter your choice :1
Enter Item to Insert :30
**** QUEUE DEMONSTRATION ****
1. ENQUEUE
2. DEQUEUE
3. PEEK
4. SHOW QUEUE
0. EXIT
Enter your choice :4
(Front) 10 ==> 20 ==> 30 ==>
**** QUEUE DEMONSTRATION ****
1. ENQUEUE
2. DEQUEUE
3. PEEK
4. SHOW QUEUE
0. EXIT
Enter your choice :3
Front Item : 10
**** QUEUE DEMONSTRATION ****
1. ENQUEUE
2. DEQUEUE
3. PEEK
4. SHOW QUEUE
0. EXIT
Enter your choice :2
Deleted Item was : 10
**** QUEUE DEMONSTRATION ****
1. ENQUEUE
2. DEQUEUE
3. PEEK
4. SHOW QUEUE
0. EXIT
Enter your choice :4
(Front) 20 ==> 30 ==>
**** QUEUE DEMONSTRATION ****
1. ENQUEUE
2. DEQUEUE
3. PEEK
4. SHOW QUEUE
0. EXIT
Enter your choice :0
Bye
```

Program 1: Program to take 10 sample phishing email, and find the most common word occurring

```
#Program to take 10 sample phishing mail
#and count the most commonly occurring word
phishingemail=[
    "jackpotwin@lottery.com",
    "claimtheprize@mymoney.com",
    "youarethewinner@lottery.com",
    "luckywinner@mymoney.com",
    "spinthewheel@flipkart.com",
    "dealwinner@snapdeal.com"
    "luckywinner@snapdeal.com"
    "luckyjackpot@americanlottery.com"
    "claimtheprize@lootolottery.com"
    "youarelucky@mymoney.com"
]
myd={}
for e in phishingemail:
    x=e.split('@')
    for w in x:
        if w not in myd:
            myd[w]=1
        else:
            myd[w]+=1
key_max = max(myd,key=myd.get)
print("Most Common Occuring word is :",key_max)
```

OUTPUT

Most Common Occuring word is : mymoney.com

Program 1: Program to create 21 Stick Game so that computer always wins

Rule of Game (Total Sticks = 21):

- 1) User and Computer both can pick stick one by one
- 2) Maximum stick both can pick is 4 i.e. 1 to 4
- 3) Anyone with last stick will be the looser

```
def PrintStick(n):
```

```
    print("o "*n)
    print("| "*n)
    print("| "*n)
    print("| "*n)
    print("| "*n)
```

```
TotalStick=21
```

```
win=False
```

```
humanPlayer=True
```

```
print("==== Welcome To Stick Picking Game :: Computer Vs User =====")
```

```
print("Rule: 1) Both User and Computer can pick sticks between 1 to 4 at a time")
```

```
print("    2) Whosoever picks the last stick will be the looser")
```

```
print("==== Lets Begin =====")
```

```
playerName = input("Enter Your Name :")
```

```
userPick=0
```

```
PrintStick(TotalStick)
```

```
while win==False:
```

```
    if humanPlayer==True:
```

```
        print("You Can Pick stick between 1 to 4")
```

```
        userPick=0
```

```
        while userPick<=0 or userPick>4:
```

```
            userPick = int(input(playerName+": Enter Number of Stick to Pick"))
```

```
        TotalStick=TotalStick - userPick
```

```
        humanPlayer=False
```

```
        PrintStick(TotalStick)
```

```
        print("***60)
```

```
        input("Press any key...")
```

```
    else:
```

```
        computerPick = (5-userPick)
```

```
        print("Computer Picks : ",computerPick," Sticks ")
```

```
        TotalStick=TotalStick -computerPick
```

```
        PrintStick(TotalStick)
```

```
        if TotalStick==1:
```

```
            print("## WINNER : COMPUTER ##")
```

```
            win=True
```

```
        print("***60)
```

```
        input("Press any key...")
```

```
        humanPlayer=True
```


OUTPUT

==== Welcome To Stick Picking Game :: Computer Vs User =====

Rule: 1) Both User and Computer can pick sticks between 1 to 4 at a time

2) Whosoever picks the last stick will be the loser

==== Lets Begin =====

Enter Your Name :RAJ

```
o o o o o o o o o o o o o o o o o o o o o o
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
```

You Can Pick stick between 1 to 4

RAJ: Enter Number of Stick to Pick3

```
o o o o o o o o o o o o o o o o o o o o o o
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
```

Press any key...

Computer Picks : 2 Sticks

```
o o o o o o o o o o o o o o o o o o o o o o
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
```

Press any key...

You Can Pick stick between 1 to 4

RAJ: Enter Number of Stick to Pick4

```
o o o o o o o o o o o o o o o o o o o o o o
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
```

Press any key...

Computer Picks : 1 Sticks

```
o o o o o o o o o o o o o o o o o o o o o o
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
```

Press any key...

You Can Pick stick between 1 to 4

RAJ: Enter Number of Stick to Pick2

```
o o o o o o o o o o o o o o o o o o o o o o
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
```

Press any key...

Computer Picks : 3 Sticks

o o o o o o

Press any key...

You Can Pick stick between 1 to 4

RAJ: Enter Number of Stick to Pick3

o o o

Press any key...

Computer Picks : 2 Sticks

o

|
|
|
|

WINNER : COMPUTER

Press any key...

Program 1: Program to connect with database and store record of employee and display records.

```
import mysql.connector as mycon
con = mycon.connect(host='127.0.0.1',user='root',password="admin")
cur = con.cursor()
cur.execute("create database if not exists company")
cur.execute("use company")
cur.execute("create table if not exists employee(empno int, name varchar(20), dept
varchar(20),salary int)")
con.commit()
choice=None
while choice!=0:
    print("1. ADD RECORD ")
    print("2. DISPLAY RECORD ")
    print("0. EXIT")
    choice = int(input("Enter Choice :"))
    if choice == 1:
        e = int(input("Enter Employee Number :"))
        n = input("Enter Name :")
        d = input("Enter Department :")
        s = int(input("Enter Salary :"))
        query="insert into employee values({},{},{},{}).format(e,n,d,s)
        cur.execute(query)
        con.commit()
        print("## Data Saved ##")
    elif choice == 2:
        query="select * from employee"
        cur.execute(query)
        result = cur.fetchall()
        print("%10s"% "EMPNO", "%20s"% "NAME", "%15s"% "DEPARTMENT",
              "%10s"% "SALARY")
        for row in result:
            print("%10s"%row[0], "%20s"%row[1], "%15s"%row[2], "%10s"%row[3])
    elif choice==0:
        con.close()
        print("## Bye!! ##")
    else:
        print("## INVALID CHOICE ##")
```

OUTPUT

1. ADD RECORD
2. DISPLAY RECORD
0. EXIT

Enter Choice :1

Enter Employee Number :1

Enter Name :AMIT

Enter Department :SALES

Enter Salary :9000

Data Saved

1. ADD RECORD
2. DISPLAY RECORD
0. EXIT

Enter Choice :1

Enter Employee Number :2

Enter Name :NITIN

Enter Department :IT

Enter Salary :80000

Data Saved

1. ADD RECORD
2. DISPLAY RECORD
0. EXIT

Enter Choice :2

EMPNO	NAME	DEPARTMENT	SALARY
1	AMIT	SALES	9000
2	NITIN	IT	80000

1. ADD RECORD
2. DISPLAY RECORD
0. EXIT

Enter Choice :0

Bye!!

Program 1: Program to connect with database and search employee number in table employee and display record, if empno not found display appropriate message.

```
import mysql.connector as mycon
con = mycon.connect(host='127.0.0.1',user='root',password="admin",
    database="company")
cur = con.cursor()
print("#"*40)
print("EMPLOYEE SEARCHING FORM")
print("#"*40)
print("\n\n")
ans='y'
while ans.lower()=='y':
    eno = int(input("ENTER EMPNO TO SEARCH :"))
    query="select * from employee where empno={}".format(eno)
    cur.execute(query)
    result = cur.fetchall()
    if cur.rowcount==0:
        print("Sorry! Empno not found ")
    else:
        print("%10s"% "EMPNO", "%20s"% "NAME", "%15s"% "DEPARTMENT",
            "%10s"% "SALARY")
        for row in result:
            print("%10s"%row[0], "%20s"%row[1], "%15s"%row[2], "%10s"%row[3])
    ans=input("SEARCH MORE (Y) :")
```

OUTPUT

```
#####
EMPLOYEE SEARCHING FORM
#####

ENTER EMPNO TO SEARCH :1
  EMPNO      NAME      DEPARTMENT  SALARY
    1        AMIT      SALES       9000
SEARCH MORE (Y) :y
ENTER EMPNO TO SEARCH :2
  EMPNO      NAME      DEPARTMENT  SALARY
    2        NITIN      IT          80000
SEARCH MORE (Y) :y
ENTER EMPNO TO SEARCH :4
Sorry! Empno not found
SEARCH MORE (Y) :n
```

Program 1: Program to connect with database and update the employee record of entered empno.

```

import mysql.connector as mycon
con = mycon.connect(host='127.0.0.1',user='root',password="admin",
    database="company")
cur = con.cursor()
print("#"*40)
print("EMPLOYEE UPDATION FORM")
print("#"*40)
print("\n\n")
ans='y'
while ans.lower()=='y':
    eno = int(input("ENTER EMPNO TO UPDATE :"))
    query="select * from employee where empno={}".format(eno)
    cur.execute(query)
    result = cur.fetchall()
    if cur.rowcount==0:
        print("Sorry! Empno not found ")
    else:
        print("%10s"% "EMPNO", "%20s"% "NAME", "%15s"% "DEPARTMENT",
            "%10s"% "SALARY")
        for row in result:
            print("%10s"%row[0], "%20s"%row[1], "%15s"%row[2], "%10s"%row[3])
        choice=input("\n### ARE YOUR SURE TO UPDATE ? (Y) :")
        if choice.lower()=='y':
            print("== YOU CAN UPDATE ONLY DEPT AND SALARY ==")
            print("== FOR EMPNO AND NAME CONTACT ADMIN ==")
            d = input("ENTER NEW DEPARTMENT,(LEAVE BLANK IF NOT WANT
TO CHANGE)")
            if d=="":
                d=row[2]
            try:
                s = int(input("ENTER NEW SALARY,(LEAVE BLANK IF NOT
WANT TO CHANGE)"))
            except:
                s=row[3]
            query="update employee set dept='{0}',salary={1} where empno={2}".format
(d,s,eno)
            cur.execute(query)
            con.commit()
            print("## RECORD UPDATED ## ")
        ans=input("UPDATE MORE (Y) :")

```

OUTPUT

EMPLOYEE UPDATION FORM
#####

ENTER EMPNO TO UPDATE :2

EMPNO	NAME	DEPARTMENT	SALARY
2	NITIN	IT	90000

ARE YOUR SURE TO UPDATE ? (Y) :y

== YOU CAN UPDATE ONLY DEPT AND SALARY ==

== FOR EMPNO AND NAME CONTACT ADMIN ==

ENTER NEW DEPARTMENT,(LEAVE BLANK IF NOT WANT TO CHANGE)

ENTER NEW SALARY,(LEAVE BLANK IF NOT WANT TO CHANGE)

RECORD UPDATED

UPDATE MORE (Y) :y

ENTER EMPNO TO UPDATE :2

EMPNO	NAME	DEPARTMENT	SALARY
2	NITIN	IT	90000

ARE YOUR SURE TO UPDATE ? (Y) :y

== YOU CAN UPDATE ONLY DEPT AND SALARY ==

== FOR EMPNO AND NAME CONTACT ADMIN ==

ENTER NEW DEPARTMENT,(LEAVE BLANK IF NOT WANT TO CHANGE)SALES

ENTER NEW SALARY,(LEAVE BLANK IF NOT WANT TO CHANGE)

RECORD UPDATED

UPDATE MORE (Y) :Y

ENTER EMPNO TO UPDATE :2

EMPNO	NAME	DEPARTMENT	SALARY
2	NITIN	SALES	90000

ARE YOUR SURE TO UPDATE ? (Y) :Y

== YOU CAN UPDATE ONLY DEPT AND SALARY ==

== FOR EMPNO AND NAME CONTACT ADMIN ==

ENTER NEW DEPARTMENT,(LEAVE BLANK IF NOT WANT TO CHANGE)

ENTER NEW SALARY,(LEAVE BLANK IF NOT WANT TO CHANGE) 91000

RECORD UPDATED

UPDATE MORE (Y) :Y

ENTER EMPNO TO UPDATE :2

EMPNO	NAME	DEPARTMENT	SALARY
2	NITIN	SALES	91000

ARE YOUR SURE TO UPDATE ? (Y) :N

UPDATE MORE (Y) :N

Program 1: Program to connect with database and delete the record of entered employee number.

```
import mysql.connector as mycon
con = mycon.connect(host='127.0.0.1',user='root',password="admin",
    database="company")
cur = con.cursor()
print("#"*40)
print("EMPLOYEE DELETION FORM")
print("#"*40)
print("\n\n")
ans='y'
while ans.lower()=='y':
    eno = int(input("ENTER EMPNO TO DELETE :"))
    query="select * from employee where empno={}".format(eno)
    cur.execute(query)
    result = cur.fetchall()
    if cur.rowcount==0:
        print("Sorry! Empno not found ")
    else:
        print("%10s"% "EMPNO", "%20s"% "NAME", "%15s"% "DEPARTMENT",
            "%10s"% "SALARY")
        for row in result:
            print("%10s"%row[0], "%20s"%row[1], "%15s"%row[2], "%10s"%row[3])
        choice=input("\n## ARE YOUR SURE TO DELETE ? (Y) :")
        if choice.lower()=='y':
            query="delete from employee where empno={}".format(eno)
            cur.execute(query)
            con.commit()
            print("=== RECORD DELETED SUCCESSFULLY! ===")
        ans=input("DELETE MORE ? (Y) :")
```

OUTPUT

```
#####
EMPLOYEE DELETION FORM
#####
```

```
ENTER EMPNO TO DELETE :2
  EMPNO      NAME      DEPARTMENT  SALARY
    2         NITIN      SALES      91000
```

```
## ARE YOUR SURE TO DELETE ? (Y) :y
=== RECORD DELETED SUCCESSFULLY! ===
DELETE MORE ? (Y) :y
ENTER EMPNO TO DELETE :2
Sorry! Empno not found
DELETE MORE ? (Y) :n
```