

## Practical File

### Class XII - Computer Science with Python(083)

**Program 1: Program to enter two numbers and print the arithmetic operations like +,-,\*,/,// and %.**

Solution:

```
#Program for Arithmetic Calculator
```

```
result = 0
```

```
val1 = float(input("Enter the first value :"))
```

```
val2 = float(input("Enter the second value :"))
```

```
op = input("Enter any one of the operator (+,-,*,/,//,%)")
```

```
if op == "+":
```

```
    result = val1 + val2
```

```
elif op == "-":
```

```
    result = val1 - val2
```

```
elif op == "*":
```

```
    result = val1 * val2
```

```
elif op == "/":
```

```
    if val2 == 0:
```

```
        print("Please enter a value other than 0")
```

```
    else:
```

```
        result = val1 / val2
```

```
elif op == "//":
```

```
    result = val1 // val2
```

```
else:
```

```
    result = val1 % val2
```

```
print("The result is :",result)
```

```
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
>>>
RESTART: C:\Users\preeti\AppData\Local\Programs\Python\Python
37-32\prog_cd1.py
Enter the first value :50
Enter the second value :24
Enter any one of the operator (+,-,*,/,//,%) +
The result is : 74.0
>>>
RESTART: C:\Users\preeti\AppData\Local\Programs\Python\Python
37-32\prog_cd1.py
Enter the first value :50
Enter the second value :24
Enter any one of the operator (+,-,*,/,//,%) -
The result is : 26.0
>>>
RESTART: C:\Users\preeti\AppData\Local\Programs\Python\Python
37-32\prog_cd1.py
Enter the first value :50
Enter the second value :24
Enter any one of the operator (+,-,*,/,//,%) /
The result is : 2.0833333333333335
>>>
RESTART: C:\Users\preeti\AppData\Local\Programs\Python\Python
37-32\prog_cd1.py
Enter the first value :50
Enter the second value :24
Enter any one of the operator (+,-,*,/,//,%) //
The result is : 2.0
>>>
RESTART: C:\Users\preeti\AppData\Local\Programs\Python\Python
37-32\prog_cd1.py
Enter the first value :50
Enter the second value :24
Enter any one of the operator (+,-,*,/,//,%) %
The result is : 2.0
>>>
RESTART: C:\Users\preeti\AppData\Local\Programs\Python\Python
37-32\prog_cd1.py
Enter the first value :50
Enter the second value :24
Enter any one of the operator (+,-,*,/,//,%) *
The result is : 1200.0
>>> |
```

**Program 2: Write a program to find whether an inputted number is perfect or not.**

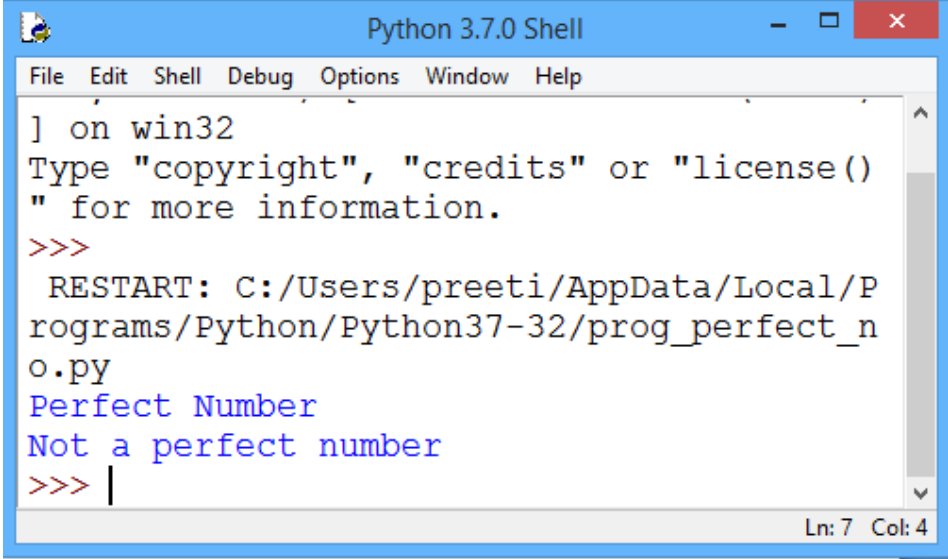
Solution:

```
# To find whether a number is perfect or not
```

```
def pernum(num):  
    divsum=0  
    for i in range(1,num):  
        if num%i == 0:  
            divsum+=i  
    if divsum==num:  
        print('Perfect Number')  
    else:  
        print('Not a perfect number')
```

```
pernum(6)
```

```
pernum(15)
```



```
Python 3.7.0 Shell  
File Edit Shell Debug Options Window Help  
] on win32  
Type "copyright", "credits" or "license()  
" for more information.  
>>>  
RESTART: C:/Users/preeti/AppData/Local/P  
rograms/Python/Python37-32/prog_perfect_n  
o.py  
Perfect Number  
Not a perfect number  
>>> |  
Ln: 7 Col: 4
```

**Program 3: Write a Program to check if the entered number is Armstrong or not.**

Solution:

```
# Program to check if the entered number is Armstrong or not.

#An Armstrong number has sum of the cubes of its digits is equal to the number itself

no=int(input("Enter any number to check : "))

no1 = no

sum = 0

while(no>0):

    ans = no % 10;

    sum = sum + (ans * ans * ans)

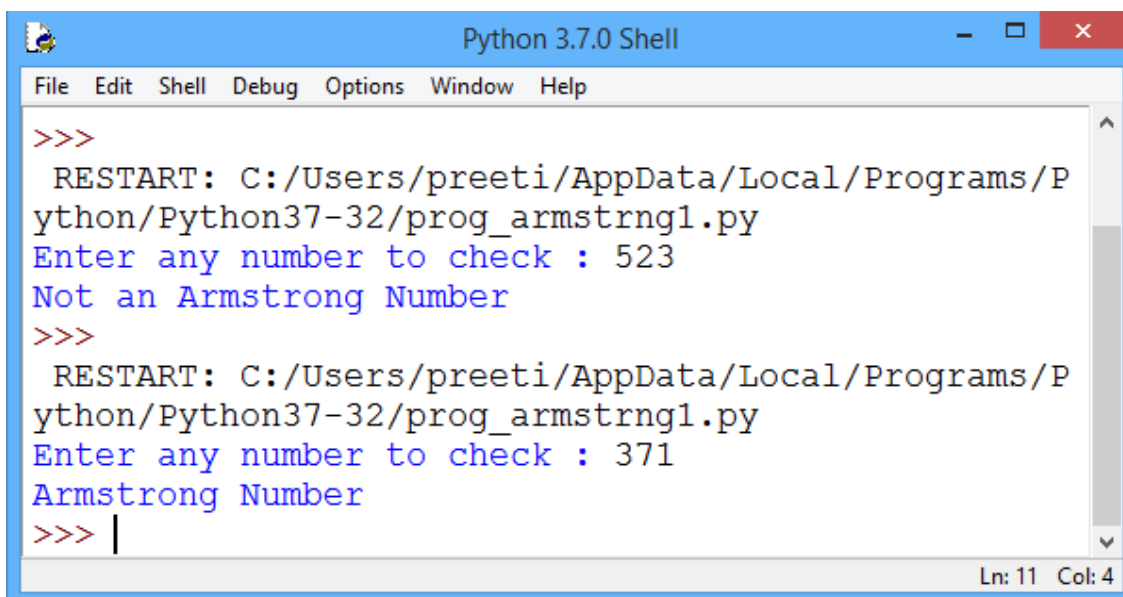
    no = int (no / 10)

if sum == no1:

    print("Armstrong Number")

else:

    print("Not an Armstrong Number")
```



```
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
>>>
RESTART: C:/Users/preeti/AppData/Local/Programs/Python/Python37-32/prog_armstrng1.py
Enter any number to check : 523
Not an Armstrong Number
>>>
RESTART: C:/Users/preeti/AppData/Local/Programs/Python/Python37-32/prog_armstrng1.py
Enter any number to check : 371
Armstrong Number
>>> |
Ln: 11 Col: 4
```

**Program 4: Write a Program to find factorial of the entered number.**

Solution:

```
#Program to calculate the factorial of an inputted number (using while loop)
```

```
num = int(input("Enter the number for calculating its factorial : "))
```

```
fact = 1
```

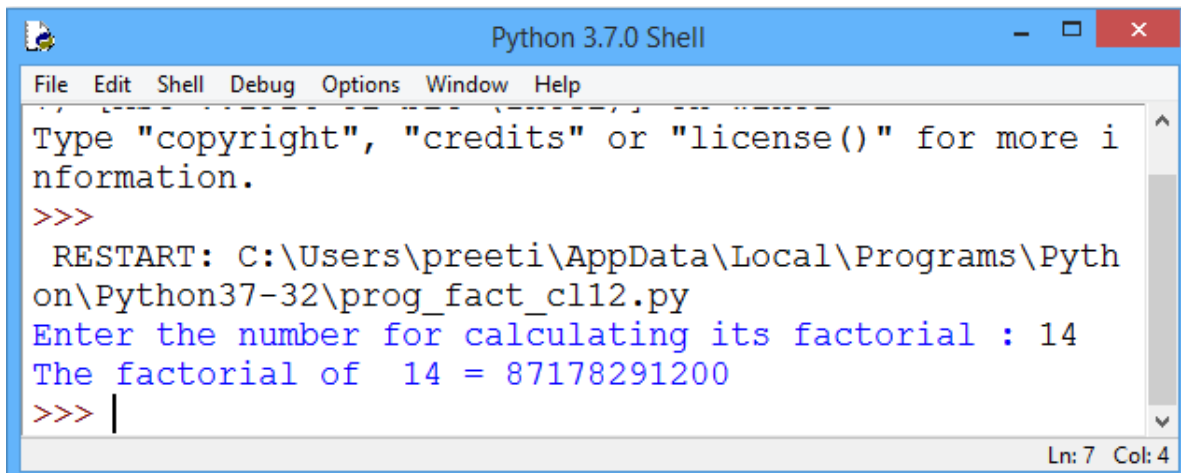
```
i = 1
```

```
while i<=num:
```

```
    fact = fact*i
```

```
    i = i + 1
```

```
print("The factorial of ",num,"=",fact)
```



```
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
Type "copyright", "credits" or "license()" for more i
nformation.
>>>
RESTART: C:\Users\preeti\AppData\Local\Programs\Pyth
on\Python37-32\prog_fact_cl12.py
Enter the number for calculating its factorial : 14
The factorial of 14 = 87178291200
>>> |
Ln: 7 Col: 4
```

**Program 5: Write a Program to enter the number of terms and to print the Fibonacci Series.**

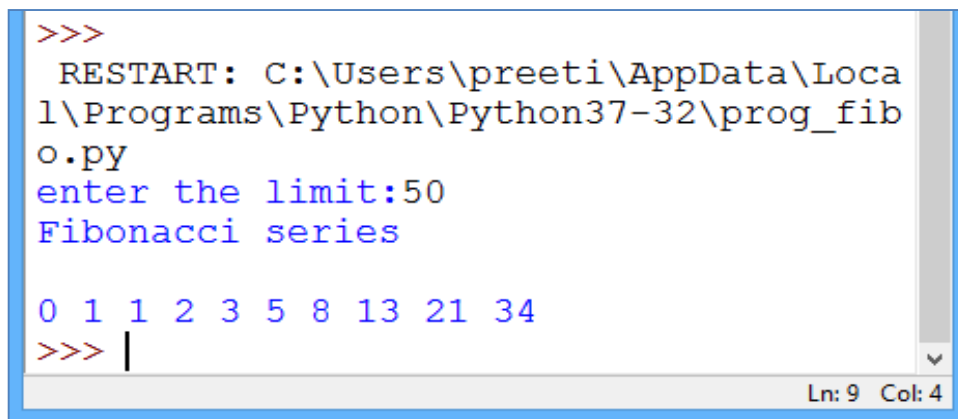
Solution:

```
#fibonacci
```

```
i =int(input("enter the limit:"))
```

```
x = 0
```

```
y = 1
z = 1
print("Fibonacci series \n")
print(x, y, end= " ")
while(z<= i):
    print(z, end=" ")
    x = y
    y = z
    z = x + y
```



```
>>>
RESTART: C:\Users\preeti\AppData\Local\Programs\Python\Python37-32\prog_fib
o.py
enter the limit:50
Fibonacci series

0 1 1 2 3 5 8 13 21 34
>>> |
```

Ln: 9 Col: 4

**Program 6: Write a Program to enter the string and to check if it's palindrome or not using loop.**

Solution:

# Program to enter the string and check if it's palindrome or not using 'for' loop.

```
msg=input("Enter any string : ")
```

```
newlist=[]
```

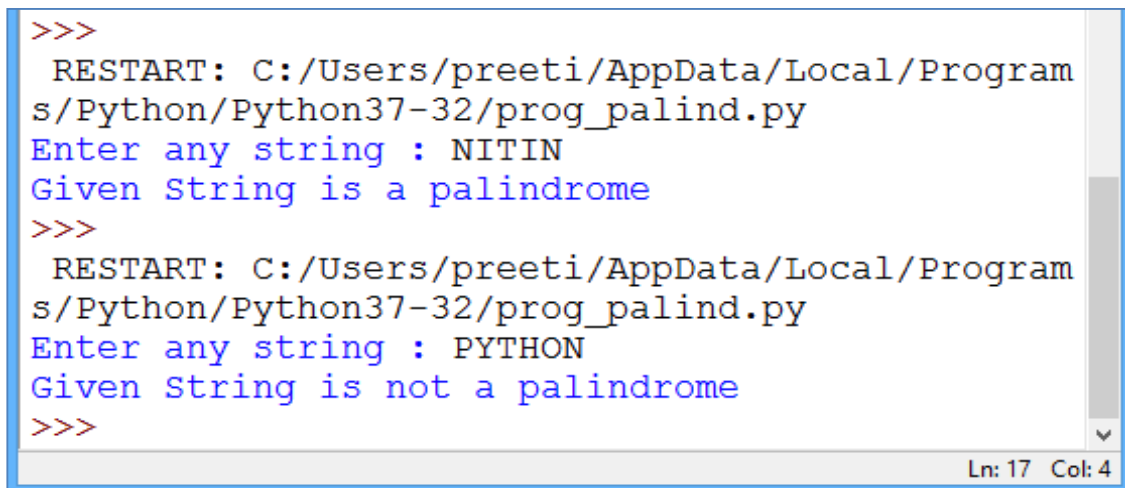
```
newlist[:0]=msg
```

```
l=len(newlist)
```

```
ed=l-1
```

```
for i in range(0,l):
```

```
if newList[i]!=newlist[ed]:
    print ("Given String is not a palindrome")
    break
if i>=ed:
    print ("Given String is a palindrome")
    break
i=i-1
ed = ed - 1
```



```
>>>
RESTART: C:/Users/preeti/AppData/Local/Program
s/Python/Python37-32/prog_palind.py
Enter any string : NITIN
Given String is a palindrome
>>>
RESTART: C:/Users/preeti/AppData/Local/Program
s/Python/Python37-32/prog_palind.py
Enter any string : PYTHON
Given String is not a palindrome
>>>
```

Ln: 17 Col: 4

**Program 7: Write a Program to show the outputs based on entered list.**

Solution:

```
my_list = ['p','r','o','b','e']
```

```
# Output: p
```

```
print(my_list[0])
```

```
# Output: o
```

```
print(my_list[2])
```

```
# Output: e
```

```
print(my_list[4])
```

```
# Error! Only integer can be used for indexing
```



```

# my_list[4.0]

# Nested List

n_list = ["Happy", [2,0,1,5]]

# Nested indexing

# Output: a

print(n_list[0][1],n_list[0][2],n_list[0][3])

# Output: 5

print(n_list[1][3])

```

The screenshot shows a Python 3.7.0 Shell window with the following content:

```

Python 3.7.0 Shell
File Edit Shell Debug Options Window
Help
>>>
RESTART: C:/Users/preeti/AppData/Local/Programs/Python/Python37-32/prog
_list_opertn.py
p
o
e
a p p
5
>>> |
Ln: 10 Col: 4

```

**Program 8: Write a Program to enter the numbers in a list using split () and to use all the functions related to list.**

Solution:

#Program to enter the numbers in a list using split () and to use all the functions related to list.

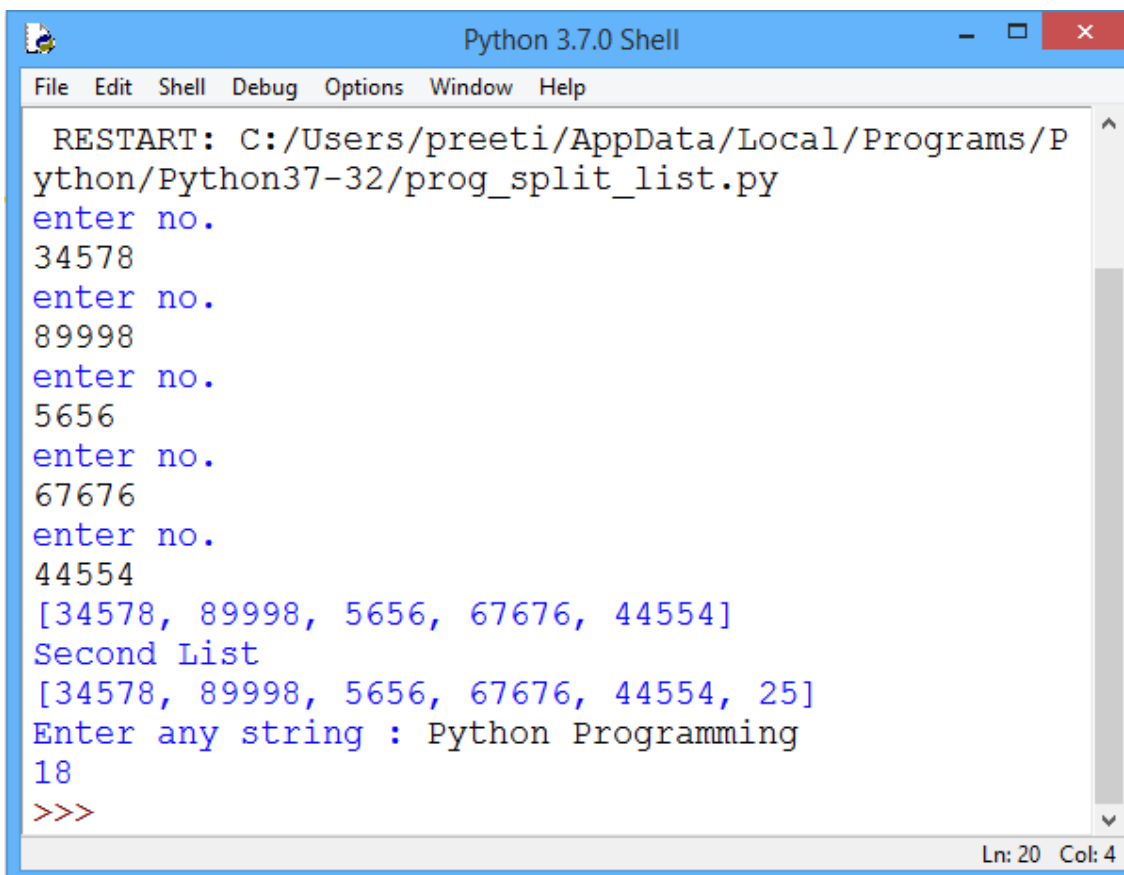
```
# numbers = [int(n, 10) for n in input().split(",")]
```

```
# print (len(numbers))
```

```
memo=[]
```

```
for i in range (5):
```

```
x=int(input("enter no. \n"))  
  
memo.insert(i,x)  
  
i+=1  
  
print(memo)  
  
memo.append(25)  
  
print("Second List")  
  
print(memo)  
  
msg=input("Enter any string : ")  
  
newlist=[]  
  
newlist[:0]=msg  
  
l=len(newlist)  
  
print(l)
```

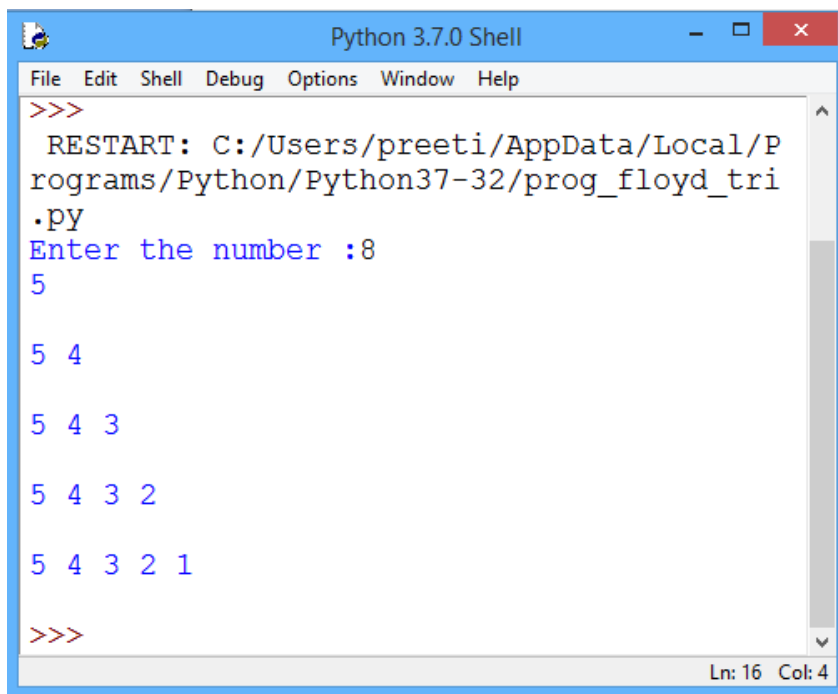


```
Python 3.7.0 Shell  
File Edit Shell Debug Options Window Help  
RESTART: C:/Users/preeti/AppData/Local/Programs/Python/Python37-32/prog_split_list.py  
enter no.  
34578  
enter no.  
89998  
enter no.  
5656  
enter no.  
67676  
enter no.  
44554  
[34578, 89998, 5656, 67676, 44554]  
Second List  
[34578, 89998, 5656, 67676, 44554, 25]  
Enter any string : Python Programming  
18  
>>>  
Ln: 20 Col: 4
```

**Program 9: Write a Program to enter the number and print the Floyd's Triangle in decreasing order.**

Solution:

```
#Floyd's triangle
n=int(input("Enter the number :"))
for i in range(5,0,-1):
    for j in range(5,i-1,-1):
        print (j,end=' ')
    print('\n')
```



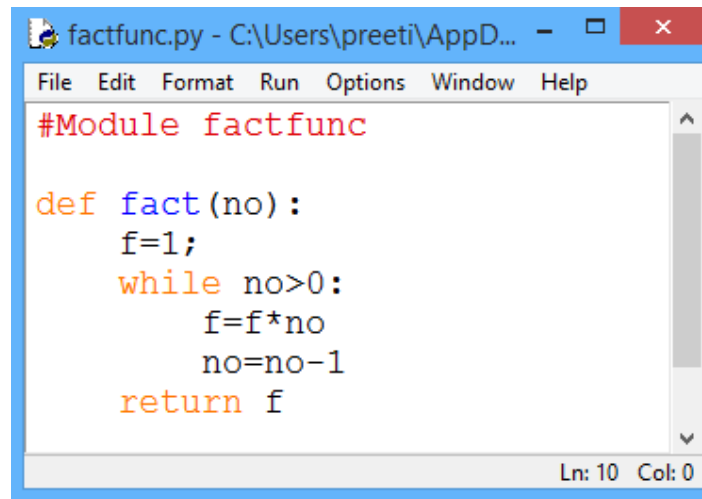
```
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
>>>
RESTART: C:/Users/preeti/AppData/Local/Programs/Python/Python37-32/prog_floyd_tri
.PY
Enter the number :8
5
5 4
5 4 3
5 4 3 2
5 4 3 2 1
>>>
Ln: 16 Col: 4
```

**Program 10: Write a Program to find factorial of entered number using user-defined module fact().**

Solution:

```
#Using function
import factfunc
x=int(input("Enter value for factorial : "))
ans=factfunc.fact(x)
```

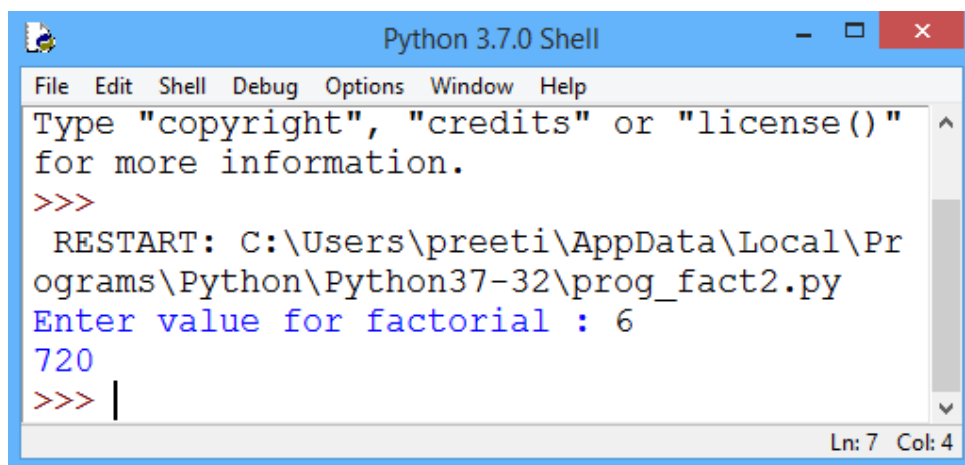
print (ans)



```
factfunc.py - C:\Users\preeti\AppData... - [ ] [ X]
File Edit Format Run Options Window Help
#Module factfunc

def fact(no):
    f=1;
    while no>0:
        f=f*no
        no=no-1
    return f

Ln: 10 Col: 0
```



```
Python 3.7.0 Shell - [ ] [ X]
File Edit Shell Debug Options Window Help
Type "copyright", "credits" or "license()"
for more information.
>>>
RESTART: C:\Users\preeti\AppData\Local\Pr
ograms\Python\Python37-32\prog_fact2.py
Enter value for factorial : 6
720
>>> |

Ln: 7 Col: 4
```

**Program 11: Write a Program to enter the numbers and find Linear Search, Binary Search, Lowest Number and Selection Sort using list/array code.**

Solution:

```
arr=[]
```

```
def array_operation():
```

```
    ch=1
```

```
    while ch!=10:
```

```
        print('Various Array operation\n')
```

```
        print('1 Create and Enter value\n')
```

```
        print('2 Print Array\n')
```

```
        print('3 Reverse Array\n')
```

```
print('4 Linear Search\n')
print('5 Binary Search\n')
print('6 Lowest Number \n')
print('7 Selection Sort\n')
print('10 Exit\n')
ch=int(input('Enter Choice '))
if ch==1 :
    appendarray()
elif ch==2 :
    print_array()
elif ch==3 :
    reverse_array()
elif ch==4 :
    linear_search()
elif ch==5 :
    binary_search()
elif ch==6 :
    min_number()
elif ch==7 :
```

```
def appendarray():
    for i in range(0,10):
        x=int(input('Enter Number : '))
        arr.insert(i,x)
```

```
#-----  
-----
```

```
def print_array():  
    for i in range(0,10):  
        print(arr[i]),
```

```
#-----  
-----
```

```
def reverse_array():  
    for i in range(1,11):  
        print(arr[-i]),
```

```
#-----  
-----
```

```
def lsearch():  
    try:  
        x=int(input('Enter the Number You want to search : '))  
        n=arr.index(x)  
        print ('Number Found at %d location'%(i+1))  
    except:  
        print('Number Not Exist in list')
```

```
#-----  
-----
```

```
def linear_search():  
    x=int(input('Enter the Number you want to search : '))  
    fl=0  
    for i in range(0,10):  
        if arr[i]==x :  
            fl=1
```

```

        print ('Number Found at %d location'% (i+1))

        break

    if fl==0 :

        print ('Number Not Found')

#-----
-----

def binary_search():

    x=int(input('Enter the Number you want to search : '))

    fl=0

    low=0

    heigh=len(arr)

    while low<=heigh :

        mid=int((low+heigh)/2)

        if arr[mid]==x :

            fl=1

            print ('Number Found at %d location'% (mid+1))

            break

        elif arr[mid]>x :

            low=mid+1

        else :

            heigh=mid-1

    if fl==0 :

        print ('Number Not Found')

#-----
-----

def min_number():

```

```
n=arr[0]
k=0
for i in range(0,10):
    if arr[i]<n :
        n=arr[i]
        k=i
print('The Lowest number is %d'%(n))
```

```
#-----
-----
```

```
def selection_sort():
    for i in range(0,10):
        n=arr[i]
        k=i
        for j in range(i+1,10):
            if arr[j]<n :
                n=arr[j]
                k=j
        arr[k]=arr[i]
        arr[i]=n
array_operation()
```



```
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
>>>
RESTART: C:/Users/preeti/AppData/Local/Programs/Python/Python37-32/prog_array_oprtn.py
Various Array operation

1 Create and Enter value

2 Print Array

3 Reverse Array

4 Linear Search

5 Binary Search

6 Lowest Number

7 Selection Sort

10 Exit

Ln: 192 Col: 4
```

```
Enter Choice 1
Enter Number : 50
Enter Number : 20
Enter Number : 10
Enter Number : 22
Enter Number : 55
Enter Number : 33
Enter Number : 67
Enter Number : 56
Enter Number : 78
Enter Number : 90

Various Array operation

1 Create and Enter value

2 Print Array

3 Reverse Array

4 Linear Search

5 Binary Search

6 Lowest Number

7 Selection Sort

10 Exit

Enter Choice 2
```

Enter Choice 2

50  
20  
10  
22  
55  
33  
67  
56  
78  
90

Enter Choice 3

90  
78  
56  
67  
33  
55  
22  
10  
20  
50

Various Array operation

1 Create and Enter value

2 Print Array

3 Reverse Array

4 Linear Search

5 Binary Search

6 Lowest Number

7 Selection Sort

10 Exit

Enter Choice 4

Enter the Number you want to search : 56

Number Found at 8 location

Various Array operation

1 Create and Enter value

2 Print Array

3 Reverse Array

4 Linear Search

5 Binary Search

6 Lowest Number

7 Selection Sort

10 Exit

Enter Choice 5

Enter the Number you want to search : 50

Number Found at 1 location

Various Array operation

1 Create and Enter value

2 Print Array

3 Reverse Array

4 Linear Search

5 Binary Search

6 Lowest Number

7 Selection Sort

10 Exit

Enter Choice 6

The Lowest number is 10

```
Various Array operation
1 Create and Enter value
2 Print Array
3 Reverse Array
4 Linear Search
5 Binary Search
6 Lowest Number
7 Selection Sort
10 Exit
Enter Choice 10
>>> |
```

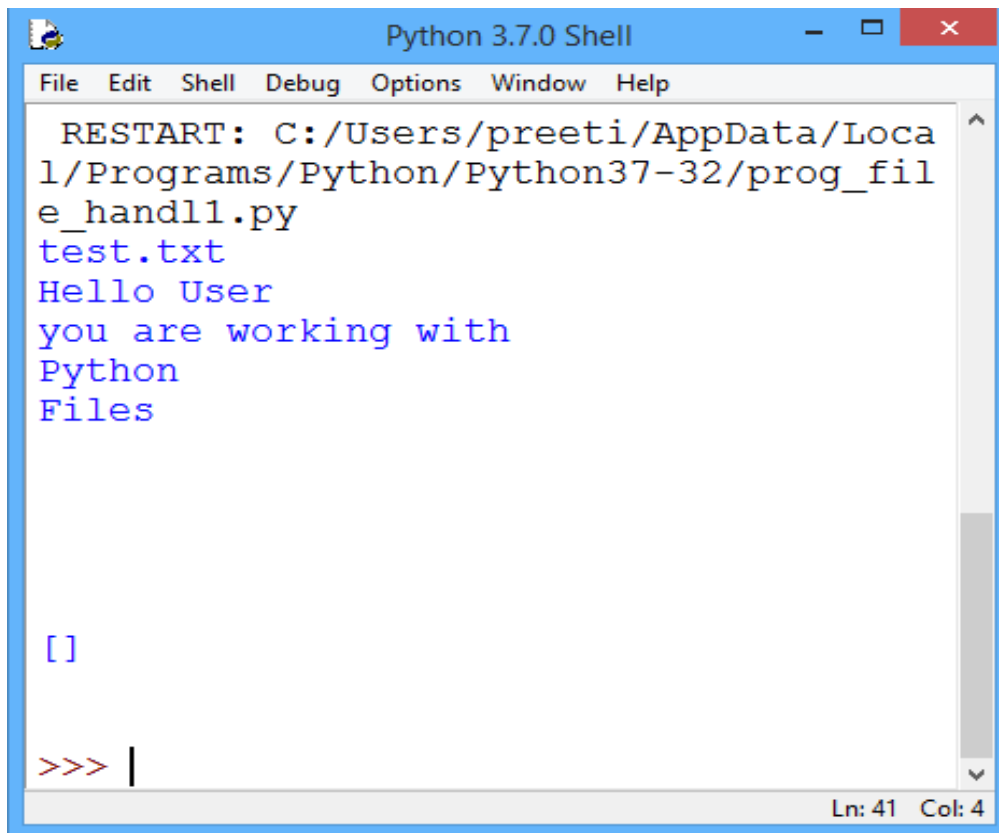
Ln: 192 Col: 4

**Program 12: Write a Program to read data from data file and show Data File Handling related functions utility in python.**

Solution:

```
f=open("test.txt",'r')
print(f.name)
f_contents=f.read()
print(f_contents)
f_contents=f.readlines()
print(f_contents)
f_contents=f.readline()
print(f_contents)
for line in f:
    print(line, end="")
f_contents=f.read(50)
print(f_contents)
```

```
size_to_read=10
f_contents=f.read(size_to_read)
while len(f_contents)>0:
    print(f_contents)
    print(f.tell())
    f_contents=f.read(size_to_read)
```



```
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
RESTART: C:/Users/preeti/AppData/Local/Programs/Python/Python37-32/prog_file_handl1.py
test.txt
Hello User
you are working with
Python
Files

[]

>>> |
Ln: 41 Col: 4
```

**Program 13: Write a Program to read data from data file in append mode and use writeLines function utility in python.**

Solution:

```

#Program to read data from data file in append mode

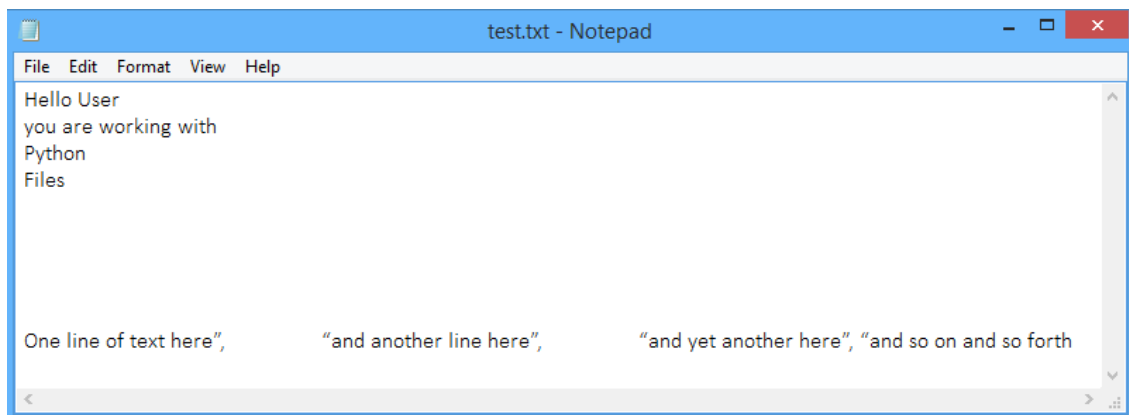
af=open("test.txt",'a')

lines_of_text = ("One line of text here",\
                "and another line here",\
                "and yet another here", "and so on and so forth")

af.writelines('\n' + lines_of_text)

af.close()

```



**Program 14: Write a Program to read data from data file in read mode and count the particular word occurrences in given string, number of times in python.**

Solution:

```

#Program to read data from data file in read mode and
#count the particular word occurrences in given string,
#number of times in python.

f=open("test.txt",'r')

read=f.readlines()

f.close()

times=0 #the variable has been created to show the number of times the loop runs

times2=0 #the variable has been created to show the number of times the loop runs

chk=input("Enter String to search : ")

```

```
count=0

for sentence in read:

    line=sentence.split()

    times+=1

    for each in line:

        line2=each

        times2+=1

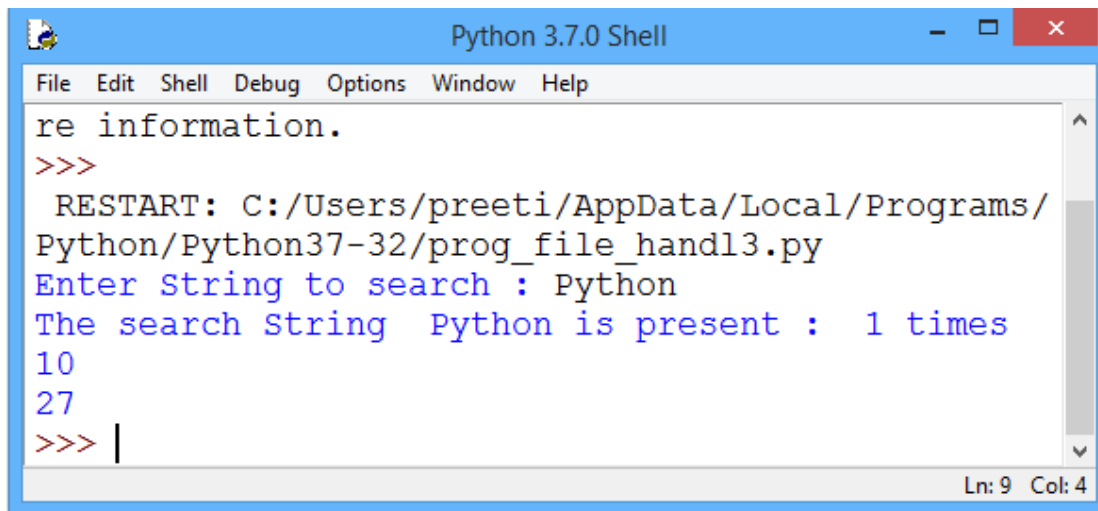
        if chk==line2:

            count+=1

print("The search String ", chk, "is present : ", count, "times")

print(times)

print(times2)
```

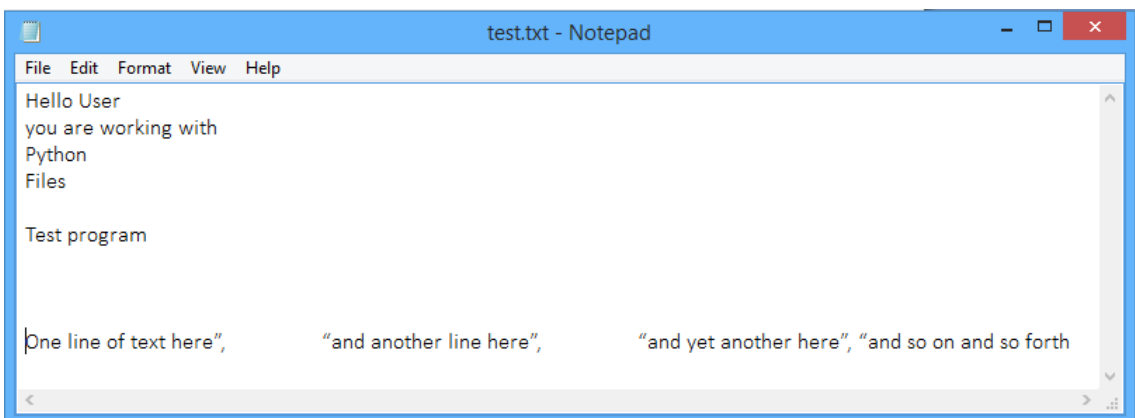
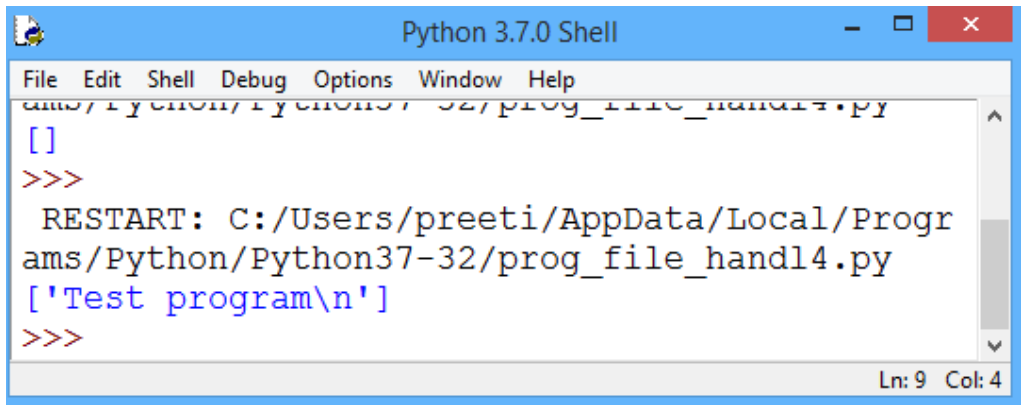


```
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
re information.
>>>
RESTART: C:/Users/preeti/AppData/Local/Programs/
Python/Python37-32/prog_file_handl3.py
Enter String to search : Python
The search String Python is present : 1 times
10
27
>>> |
Ln: 9 Col: 4
```

**Program 15: Write a Program to read data from data file in read mode and append the words starting with letter 'T' in a given file in python.**

Solution:

```
#Program to read data from data file in read mode and
#append the words starting with letter 'T'
#in a given file in python
f=open("test.txt",'r')
read=f.readlines()
f.close()
id=[]
for ln in read:
    if ln.startswith("T"):
        id.append(ln)
print(id)
```





**Program 16: Write a Program to show MySQL database connectivity in python.**

Solution:

```
import mysql.connector

con=mysql.connector.connect(host='localhost',user='root',password='',db='school')

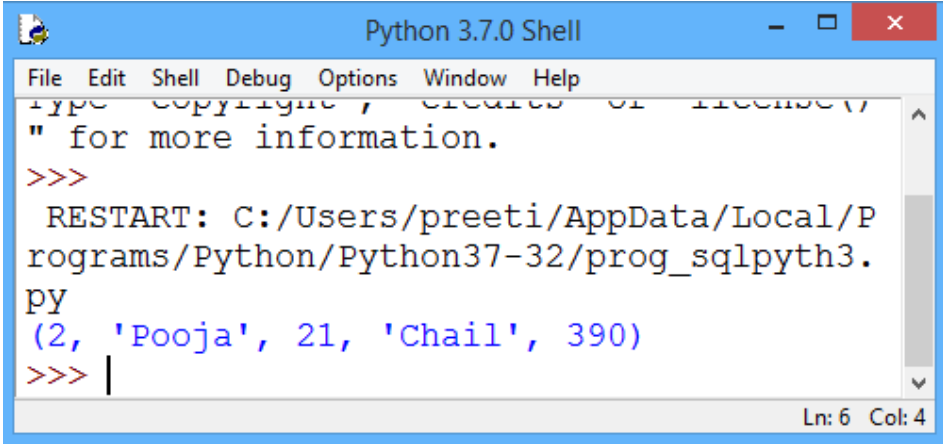
stmt=con.cursor()

query='select * from student;'

stmt.execute(query)

data=stmt.fetchone()

print(data)
```



```
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
Type copyright, creator or license()
" for more information.
>>>
RESTART: C:/Users/preeti/AppData/Local/Programs/Python/Python37-32/prog_sqlpyth3.py
(2, 'Pooja', 21, 'Chail', 390)
>>> |
Ln: 6 Col: 4
```

**Program 17: Write a Python program to implement all basic operations of a stack, such as adding element (PUSH operation), removing element (POP operation) and displaying the stack elements (Traversal operation) using lists.**

Solution:

```
#Implementation of List as stack
```

```
s=[]
```

```
c="y"
```

```
while (c=="y"):
```

```
    print ("1. PUSH")
```

```
print ("2. POP ")
print ("3. Display")
choice=int(input("Enter your choice: "))
if (choice==1):
    a=input("Enter any number :")
    s.append(a)
elif (choice==2):
    if (s==[]):
        print ("Stack Empty")
    else:
        print ("Deleted element is : ",s.pop())
elif (choice==3):
    l=len(s)
    for i in range(l-1,-1,-1): #To display elements from last element to first
        print (s[i])
else:
    print("Wrong Input")
c=input("Do you want to continue or not? ")
```

```
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:06:47) [MSC v.1
914 32 bit (Intel)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
RESTART: C:\Users\preeti\AppData\Local\Programs\Python\Python37
-32\prog_st1.py
1. PUSH
2. POP
3. Display
Enter your choice: 1
Enter any number :4
Do you want to continue or not? y
1. PUSH
2. POP
3. Display
Enter your choice: 1
Enter any number :'d'
Do you want to continue or not? y
1. PUSH
2. POP
3. Display
Enter your choice: 1
Enter any number :9
Do you want to continue or not? y
```

Ln: 37 Col: 4

```
1. PUSH
2. POP
3. Display
Enter your choice: 3
9
'd'
4
Do you want to continue or not? y
1. PUSH
2. POP
3. Display
Enter your choice: 2
Deleted element is : 9
Do you want to continue or not? n
>>> |
```

Ln: 37 Col: 4

**Program 18: Write a program to display unique vowels present in the given word using Stack.**

Solution:

```
#Program to display unique vowels present in the given word

#using Stack

vowels = ['a','e','i','o','u']

word = input("Enter the word to search for vowels :")

Stack = []

for letter in word:

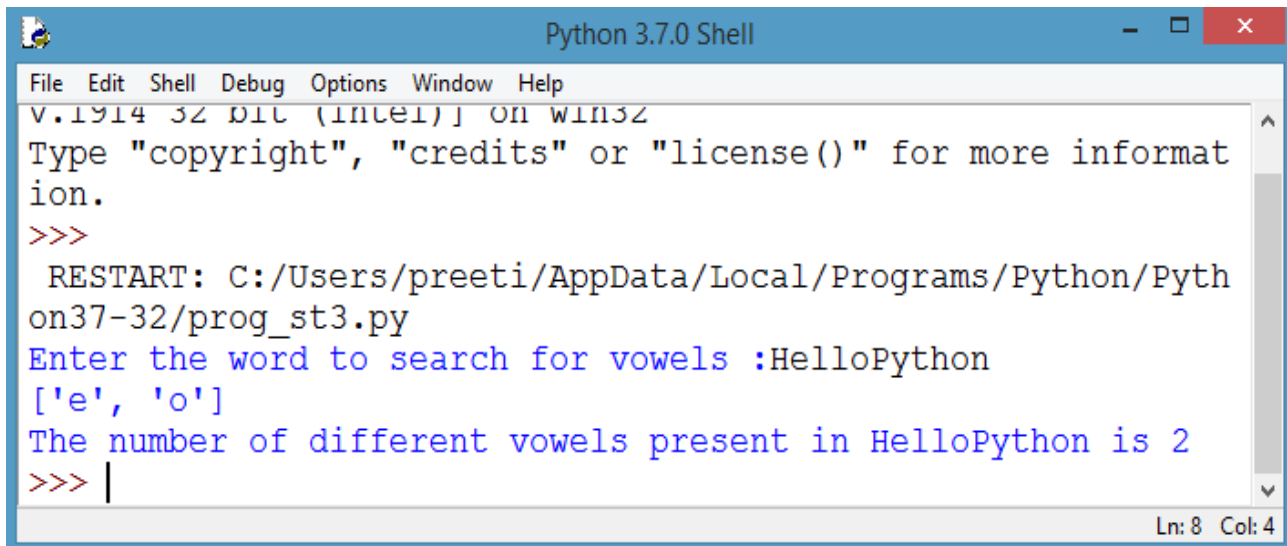
    if letter in vowels:

        if letter not in Stack:

            Stack.append(letter)

print(Stack)

print("The number of different vowels present in",word,"is",len(Stack))
```



```
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
V.1914 32 BIT (INTEL) ON WIN32
Type "copyright", "credits" or "license()" for more informat
ion.
>>>
RESTART: C:/Users/preeti/AppData/Local/Programs/Python/Pyth
on37-32/prog_st3.py
Enter the word to search for vowels :HelloPython
['e', 'o']
The number of different vowels present in HelloPython is 2
>>> |
```

Ln: 8 Col: 4

**Program 19: Write a program in Python to add, delete and display elements from a queue using list.**

Solution:

```
#Implementing List as a Queue - using function append() and pop()
```

```
a=[]
```

```
c='y'
```

```
while (c=='y'):
```

```
    print ("1. INSERT")
```

```
    print ("2. DELETE ")
```

```
    print ("3. Display")
```

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

```
    if (choice==1):
```

```
        b=int(input("Enter new number: "))
```

```
        a.append(b)
```

```
    elif (choice==2):
```

```
        if (a==[]):
```

```
            print("Queue Empty")
```

```
        else:
```

```
            print ("Deleted element is:",a[0])
```

```
            a.pop(0)
```

```
    elif (choice==3):
```

```
        l=len(a)
```

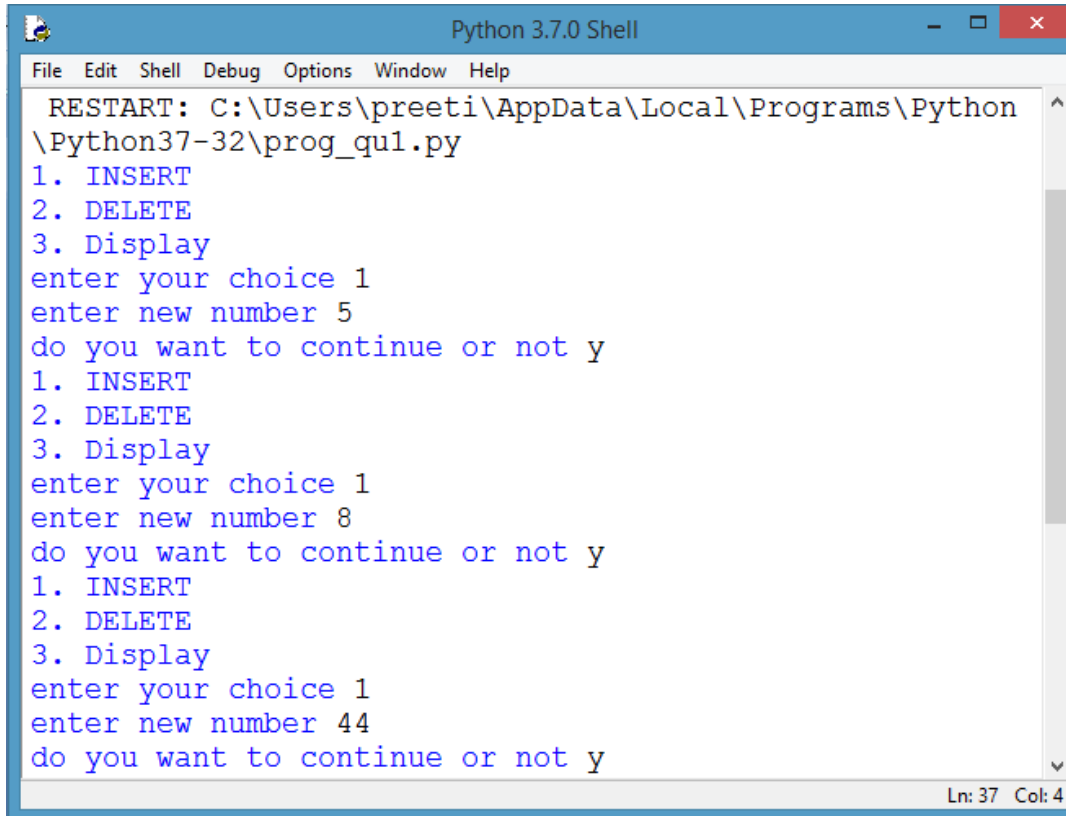
```
        for i in range(0,l):
```

```
            print (a[i])
```

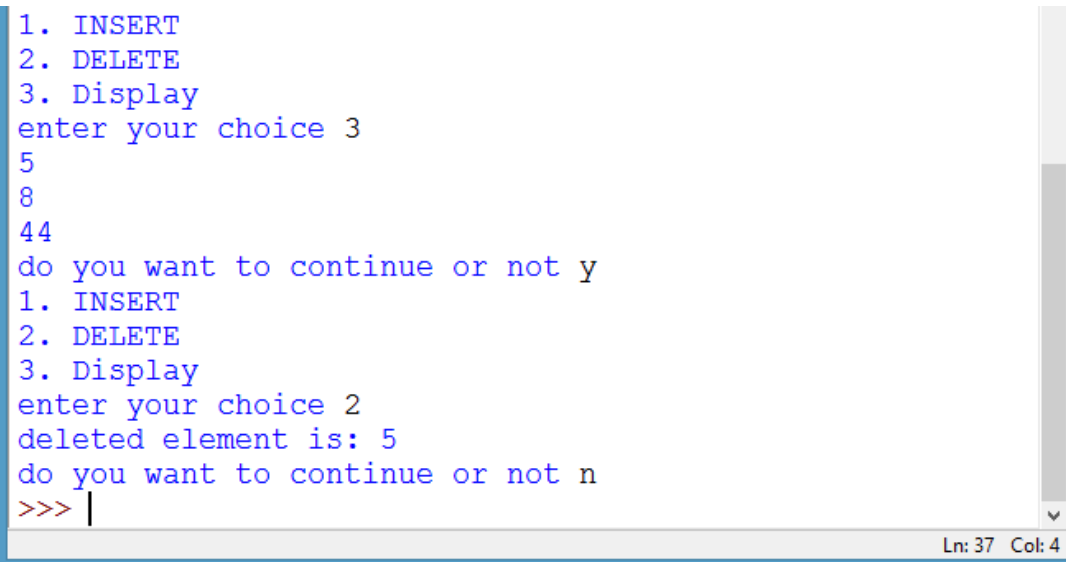
```
    else:
```

```
        print("wrong input")
```

```
c=input("Do you want to continue or not: ")
```



```
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
RESTART: C:\Users\preeti\AppData\Local\Programs\Python
\Python37-32\prog_qul.py
1. INSERT
2. DELETE
3. Display
enter your choice 1
enter new number 5
do you want to continue or not y
1. INSERT
2. DELETE
3. Display
enter your choice 1
enter new number 8
do you want to continue or not y
1. INSERT
2. DELETE
3. Display
enter your choice 1
enter new number 44
do you want to continue or not y
Ln: 37 Col: 4
```



```
1. INSERT
2. DELETE
3. Display
enter your choice 3
5
8
44
do you want to continue or not y
1. INSERT
2. DELETE
3. Display
enter your choice 2
deleted element is: 5
do you want to continue or not n
>>> |
Ln: 37 Col: 4
```

**Program 20: Perform all the operations with reference to table 'Employee' through MySQL-Python connectivity.**

Solution:

```
import MySQLdb

# Using connect method to connect database

db1 = MySQLdb.connect("localhost","root","","TESTDB" )

# using cursor() method for preparing cursor

cursor = db1.cursor()

# Preparing SQL statement to create EMP table

sql = "CREATE TABLE EMP(empno integer primary key,ename varchar(25) not null,salary
float);"

cursor.execute(sql)

# disconnect from server

db1.close()
```

```
Enter password: ****
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 4
Server version: 5.1.73-community MySQL Community Server (GPL)

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affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> use testdb
Database changed
mysql> show tables;
Empty set (0.00 sec)

mysql>
```

```
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> use testdb
Database changed
mysql> show tables;
Empty set (0.00 sec)

mysql> show tables;
+-----+
| Tables_in_testdb |
+-----+
| emp               |
+-----+
1 row in set (0.00 sec)

mysql>
```

Inserting a record in 'emp'

```
import MySQLdb
```

```
db1 = MySQLdb.connect("localhost","root","","TESTDB" )
```

```
cursor = db1.cursor()
```

```
# Preparing SQL statement to insert one record with the given values
```

```
sql = "INSERT INTO EMP VALUES (1,'ANIL KUMAR',86000);"
```

```
try:
```

```
    cursor.execute(sql)
```

```
    db1.commit()
```



except:

```
db1.rollback()
```

```
db1.close()
```

```
mysql> show tables;
+-----+
| Tables_in_testdb |
+-----+
| emp               |
+-----+
1 row in set (0.00 sec)

mysql> select * from emp;
+-----+-----+-----+
| empno | ename      | salary |
+-----+-----+-----+
|      1 | ANIL KUMAR | 86000  |
+-----+-----+-----+
1 row in set (0.00 sec)

mysql>
```

**Fetching all the records from EMP table having salary more than 70000.**

```
import MySQLdb
```

```
db1 = MySQLdb.connect("localhost","root","","TESTDB" )
```

```
cursor = db1.cursor()
```

```
sql = "SELECT * FROM EMP WHERE SALARY > 70000;"
```

```
try:
```

```
    cursor.execute(sql)
```

```
    #using fetchall() function to fetch all records from the table EMP and store in
    resultset
```

```
    resultset = cursor.fetchall()
```

```
for row in resultset:
```

```
    print (row)
```

```
except:
```

```
    print ("Error: unable to fetch data")
```

```
db1.close()
```

## Updating record(s) of the table using UPDATE

```
import MySQLdb
```

```
db1 = MySQLdb.connect("localhost","root","","TESTDB" )
```

```
cursor = db1.cursor()
```

```
#Preparing SQL statement to increase salary of all employees whose salary is less than  
80000
```

```
sql = "UPDATE EMP SET salary = salary +1000 WHERE salary<80000;"
```

```
try:
```

```
    cursor.execute(sql)
```

```
    db1.commit()
```

```
except:
```

```
    db1.rollback()
```

```
db1.close()
```

```
mysql> select * from emp;  
+-----+-----+-----+  
| empno | ename      | salary |  
+-----+-----+-----+  
|      1 | ANIL KUMAR | 86000  |  
+-----+-----+-----+  
1 row in set (0.00 sec)  
  
mysql> select * from emp;  
+-----+-----+-----+  
| empno | ename      | salary |  
+-----+-----+-----+  
|      1 | ANIL KUMAR | 86000  |  
|      2 | MANOJ KUMAR | 72000  |  
+-----+-----+-----+  
2 rows in set (0.01 sec)  
  
mysql> select * from emp;  
+-----+-----+-----+  
| empno | ename      | salary |  
+-----+-----+-----+  
|      1 | ANIL KUMAR | 86000  |  
|      2 | MANOJ KUMAR | 73000  |  
+-----+-----+-----+  
2 rows in set (0.01 sec)  
mysql> _
```

## Deleting record(s) from table using DELETE

```
import MySQLdb

db1 = MySQLdb.connect("localhost","root","","TESTDB" )

cursor = db1.cursor()

sal=int(input("Enter salary whose record to be deleted : "))

#Preparing SQL statement to delete records as per given condition

sql = "DELETE FROM EMP WHERE salary =sal"

try:

    cursor.execute(sql)

    print(cursor.rowcount, end=" record(s) deleted ")

    db1.commit()

except:

    db1.rollback()

db1.close()
```

### **Output:**

```
>>> Enter salary whose record to be deleted: 80000
```

```
1 record(s) deleted
```

```
>>>
```

```
mysql> select * from emp;
```

```
+-----+-----+-----+
| empno |  ename      | salary |
+-----+-----+-----+
|      1 | ANIL KUMAR  | 86000  |
|      2 | MANOJ KUMAR | 72000  |
+-----+-----+-----+
```

```
2 rows in set (0.01 sec)
```

```
mysql> select * from emp;
```

```
+-----+-----+-----+
| empno |  ename      | salary |
+-----+-----+-----+
|      1 | ANIL KUMAR  | 86000  |
|      2 | MANOJ KUMAR | 73000  |
+-----+-----+-----+
```

```
2 rows in set (0.01 sec)
```

```
mysql> select * from emp;
```

```
+-----+-----+-----+
| empno |  ename      | salary |
+-----+-----+-----+
|      1 | ANIL KUMAR  | 86000  |
+-----+-----+-----+
```

```
1 row in set (0.00 sec)
```