Computer Science Practical File

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1. Python Program to check whether the number is Positive , Negative or zero .

Code :-

```
n =int(input("Enter your number:"))
if n == 0:
    print("Your Number is 0")
elif n>0:
    print("'Your Number is a Positive Number'")
else:
    print("'Your Number is a Negative Numbe'")
```

Output :-

```
Enter your number:2
Your Number is a Positive Number
>
```

2.Python Program to print sum of numbers from 0 to 10

Code:-

```
sum=0
for j in range (10):
    print(j)
    sum=sum+j
print("Sum is",sum)
```

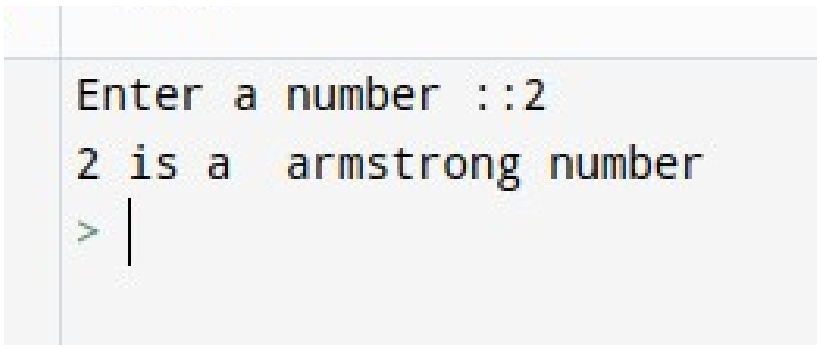
Output:-

3.Python program to check number is Armstrong number or not.

Code:-

```
num=input(“Enter a number ::”)
length=len(num)
n=int(num)
num=n
sum=0
while n>0:
rem=n%10
sum=sum+rem**length
n=n//10
if num==sum:
    print(num, “is a  armstrong number”)
else:
    print(num, """is not a  armstrong
                        number""")
```

Output:-



4.Sorting of elements in a list through bubble sort technique.

Code:-

```
lis=[7,60,42,4315,5136,537,0,48,47,50,73]
num=len(lis)
print("original order of the list elements::",lis)
for i in range (num-1):
    for j in range (num-i-1):
        if lis[j]>lis[j+1]:
            lis[j],lis[j+1]=lis[j+1],lis[j]
print("sorted list elements::",lis)
```

Output:-

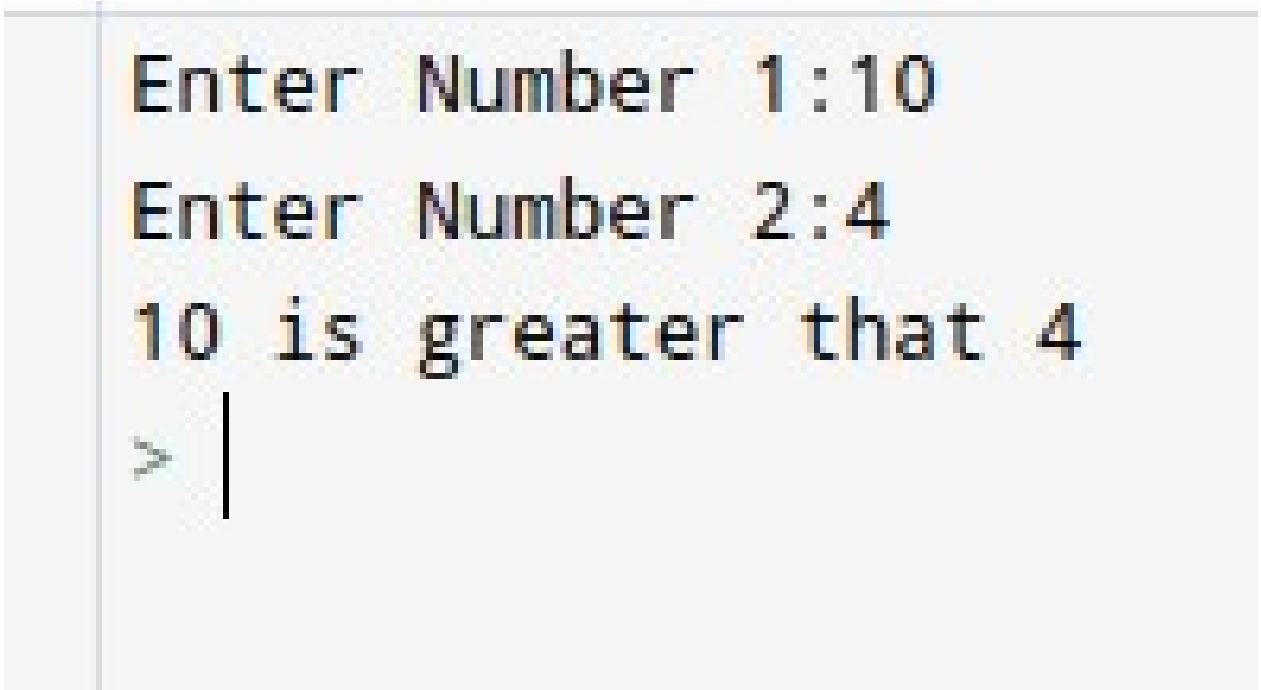
```
original order of the list elements:: [7, 60, 42, 4315, 5136, 537, 0, 48, 47, 50, 73]
sorted list elements:: [0, 7, 42, 47, 48, 50, 60, 73, 537, 4315, 5136]
>
```

5.Python program for comparison between 2 numbers

Code:-

```
num1=int(input("Enter Number 1:"))
num2=int(input("Enter Number 2:"))
if num1>num2:
    print( num1 , "is greater that" , num2)
elif num1<num2:
    print(num1 "is smaller than " num2)
else:
    print("Both Numbers are equal")
```

Output:-



6.Python Program to input names 'n' countries and their capital and currency , storing it in dictionary.

Code:-

```
d = dict()
i=1
num = input("Enter number of enteries::")
while i <=num:
    country = input("Enter you country::")
    capital = input("Enter Capital::")
    curr = input("Enter Currency::")
    d[c]=(cap,curr)
l=d.keys()
print("\nCountry\t\t" , "Captial\t\t" , "Currency")
for i in l :
    z = d[i]
    print("\n" , i , "\t\t" , end="")
    for j in z:
        print( j , "\t\t" , end = "\t\t")
x = input("\nEnter Country to be searched:")
for i in l :
```

```
    if i  == x :
        print("\nCountry\t\t" ,"Capital\t\t" ,"Currency\t\t" )
        z=d[i]
        print("\n" ,  i , "\t\t" , end="")
        for j in z :
            print(j,'\t\t',end = "\t\t")
        break
```

Output:-

```
Enter number of enteries::2
Enter you country::India
Enter Capital::Delhi
Enter Currency::Rupee
Enter you country::America
Enter Capital::Washington DC
Enter Currency::Dollar
Country      Captial         Currency

 India      Delhi               Rupee
 America        Washington DC               Dollar
```

7.Python program to read email IDs of n number of students and store them in a tuple

Code:-

```
emails = tuple()
username = tuple()
domainname = tuple()
n = int(input("How many email ids you want to enter?: "))
for i in range(0,n):
    emid = input("> ")
    emails = emails +(emid,)
    spl = emid.split("@")
    username = username + (spl[0],)
    domainname = domainname + (spl[1],)
print("\nThe email ids in the tuple are:")
print(emails)
print("\nThe username in the email ids are:")
print(username)
print("\nThe domain name in the email ids are:")
print(domainname)
```

Output:-

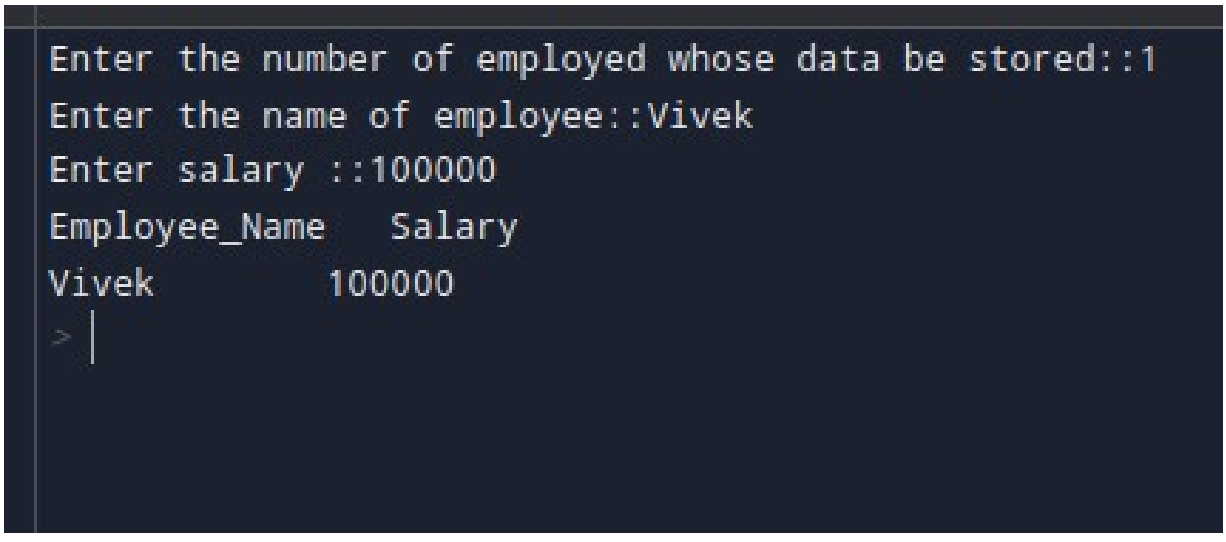
```
How many email ids you want to enter?: 1
> neevahuja9971@gmail.com
The email ids in the tuple are:
('neevahuja9971@gmail.com',)

The username in the email ids are:
('neevahuja9971',)

The domain name in the email ids are:
('gmail.com',)
>
```

8.Employee Data Stored

Code:-

```
num = int(input("Enter the number of employed whose data be stored::"))
count = 1
employee = dict()
while count<=num:
    name = input("Enter the name of employee::")
    salary  = int(input("Enter salary ::"))
    employee[name] = salary
    count +=1
print("\n\nEmployee_Name\tSalary")
for k in employee:
    print(k,"\t\t",employee[k])
```

Output:-

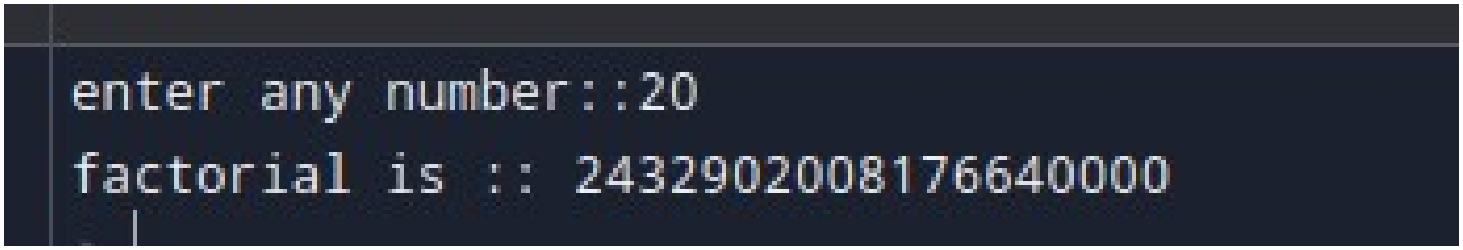


9.To Calculate Factorial of a number

Code:-

```
num=int(input("enter any number::"))
fact=1
while num>=1:
    fact=fact*num
    num=num-1
print("factorial is ::",fact)
```

Output:-



10.To print the fibannoci series

Code:-

```
#programe to print fibonnacci series :
a=0
b=1
c=a+b
n=int(input("Enter nth term ::"))
print("Fibonnacci series--",a,b,end=' ')
while c<=n:
    print(c,end=' ')
    a=b
    b=c
    c=a+b
```

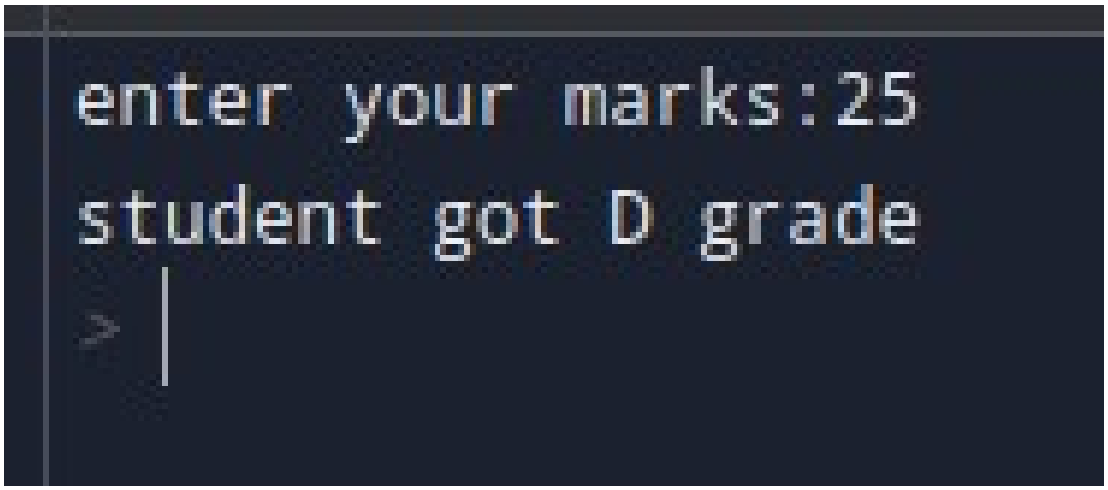
Output:-

11.Python Program to calculate grade of students

Code:-

```
marks=int(input("enter your marks:"))
if marks>=90:
    print("student got A+ grade")
elif marks>=75 and marks<90:
    print("student got A grade")
elif marks>=50 and marks<75:
    print("student got B grade")
elif marks>=35 and marks<50:
    print("student got c grade")
else:
    print("student got D grade")
```

Output:-

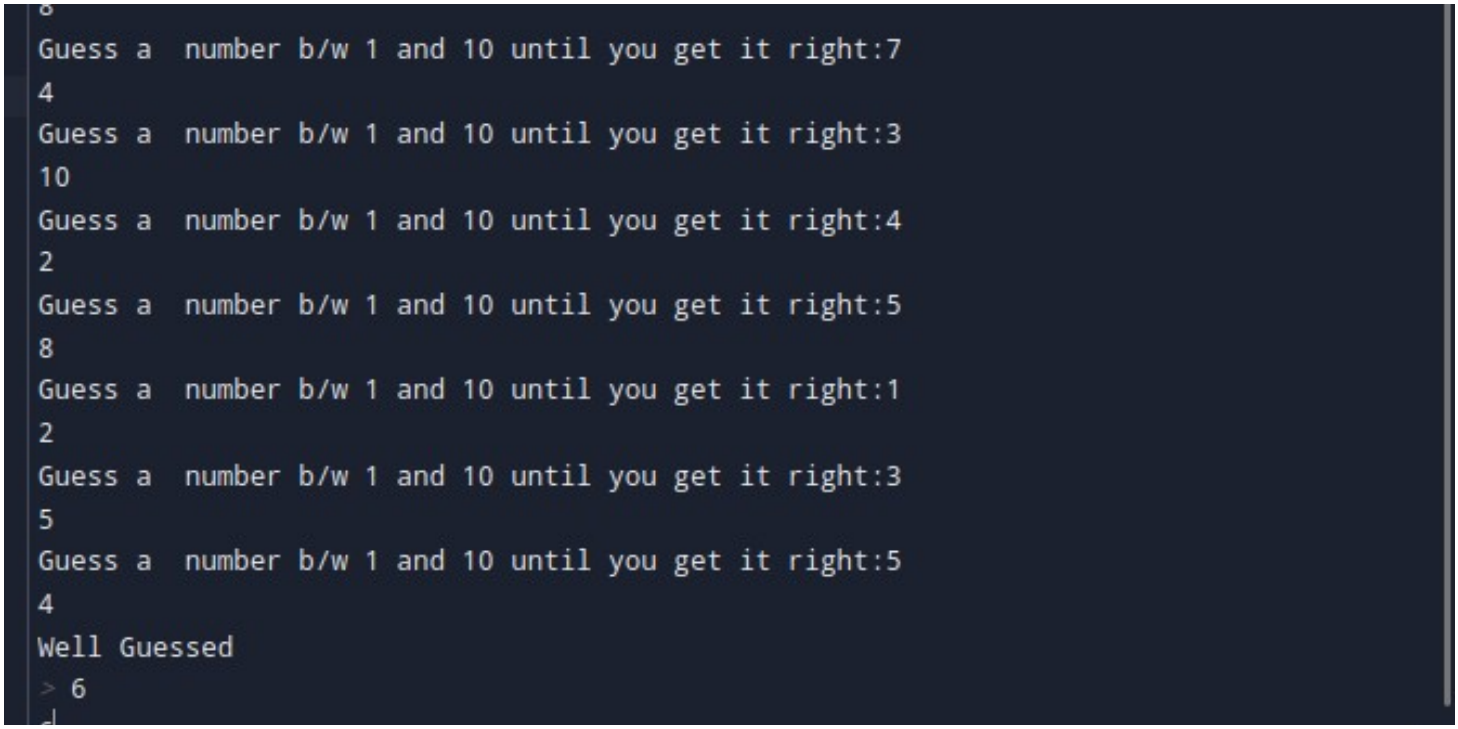


12.Python Program to guess a number b/w 1 and 5

Code:-

```
import random as r
target_num , guess_num = r.randint(1,10),0
while target_num != guess_num:
    guess_num = int(input("Guess a  number b/w 1 and 10 until you get it right:"))
    print(target_num)
    target_num = r.randint(1,10)
print("Well Guessed")
```

Output:-

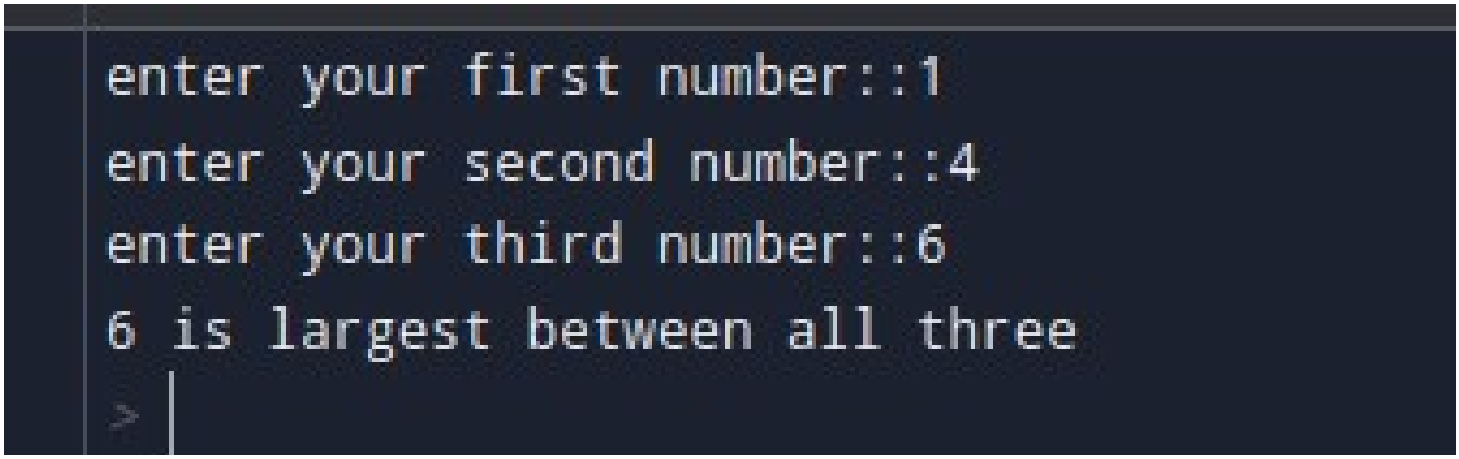


13.Python Program to check and print the largest b/w numbers

Code:-

```
n1=int(input("enter your first number::"))
n2=int(input("enter your second number::"))
n3=int(input("enter your third number::"))
if n1>n2 and n1>n3:
    print(n1, "is largest between all three")
if n2>n1 and n2>n3:
    print(n2, "is largest between all three")
else:
    print(n3, "is largest between all three")
```

Output:-

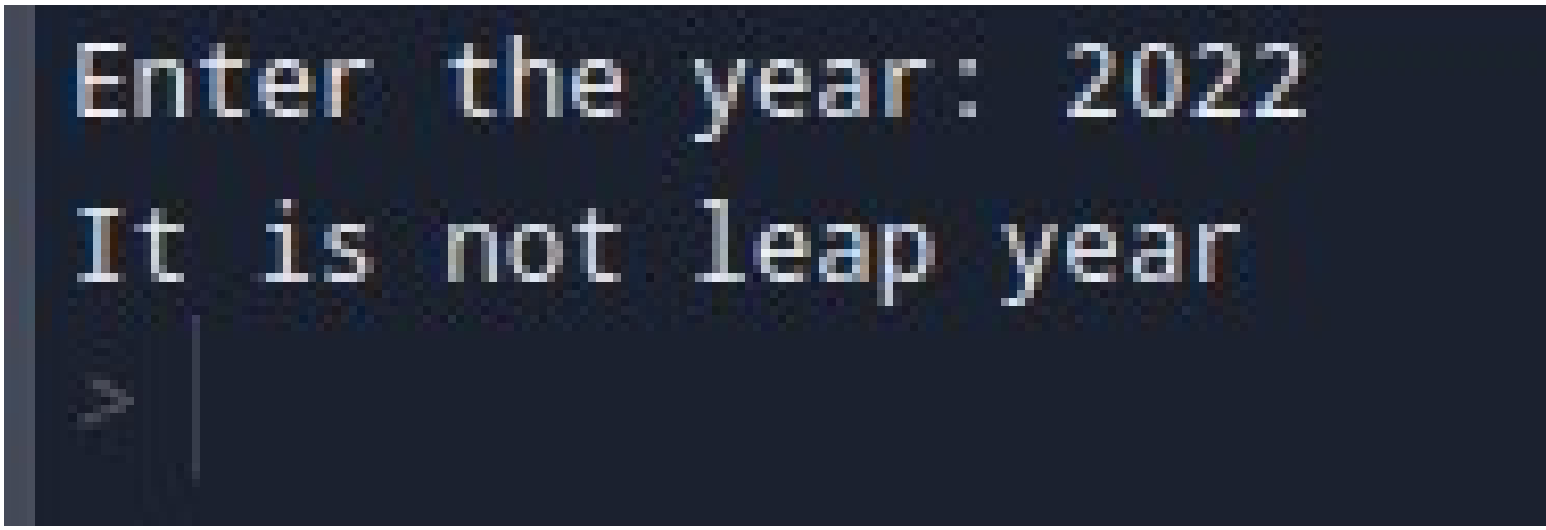


14.Python Program to check whether the year is leap year or not

Code:-

```
year=int(input("Enter the year: "))
if year%100==0 and year%400==0:
    print("It is a leap year ")
elif year%4==0:
    print("It is a leap year")
else:
    print("It is not leap year")
```

Output:-

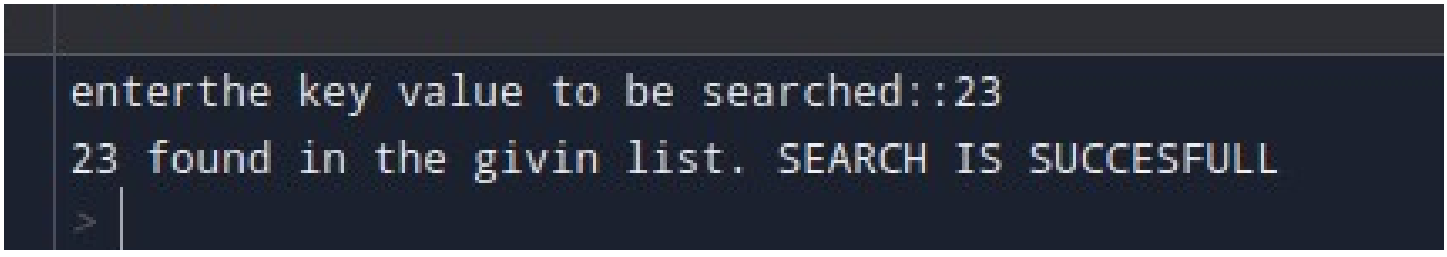


15.Python Program for linear search

Code:-

```
marks=[23,45,58,67,85,75,34,16,35,67,36,67,
35,46,79,34,78,87]
key=eval(input("""enterthe key value to be
searched::"""))
flag=0
for m in marks:
    if m==key:
        flag=1
        print(key,"""found in the givin list.
SEARCH IS SUCCESFULL""")
        break
if flag==0:
        print(key,"""not found in the givin list.
SEARCH IS UNSUCCESFULL""")
```

Output:-

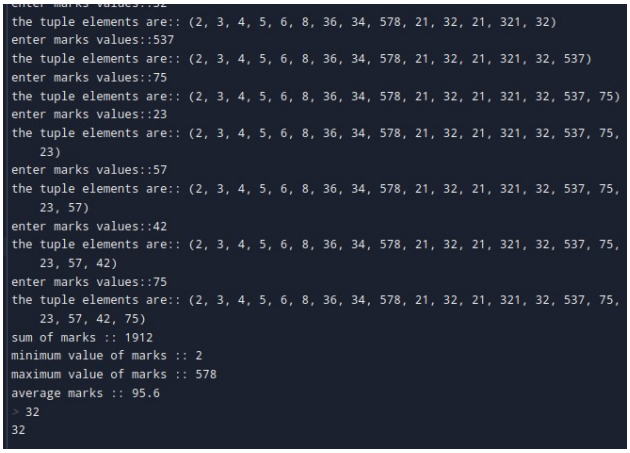


16.Python Program to print max , min and average value

Code:-

```
marks=()
for i in range(20):
    num=int(input("enter marks values::"))
    marks=marks+(num,)
    print("the tuple elements are::",marks)
Sum=sum(marks)
Min=min(marks)
Max=max(marks)
avg=Sum/len(marks)
print("sum of marks ::",Sum)
print("minimum value of marks ::",Min)
print("maximum value of marks ::",Max)
print("average marks ::",avg)
```

Output:-

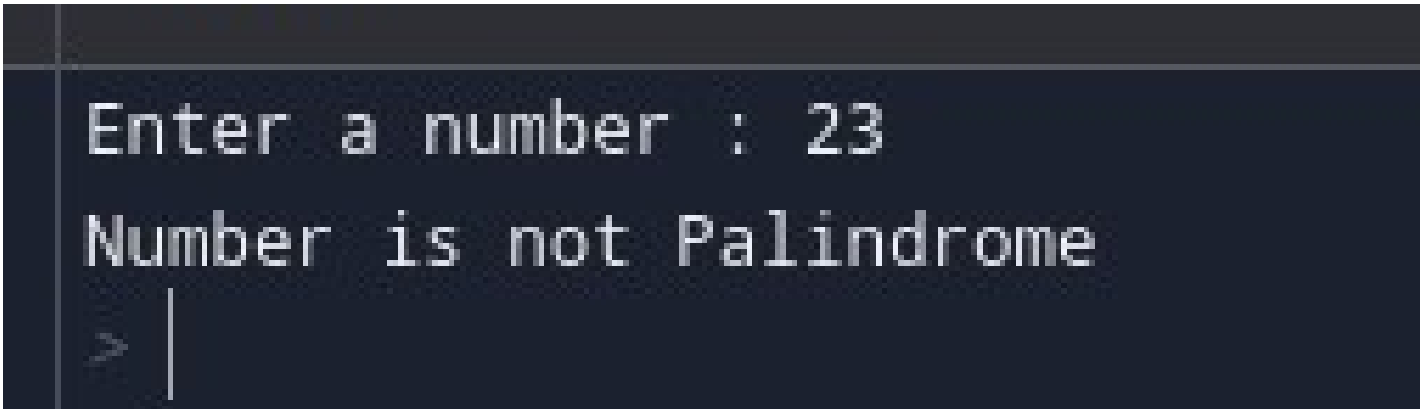


17.Python Program to check whether a number is palindrome or not

Code:-

```
#program to check a number whether it is palindrome or not.
num=int(input("Enter a number : "))
n=num
res=0
while num>0:
    rem=num%10
    res=rem+res*10
    num=num//10
if res==n:
    print("Number is Palindrome")
else:
    print("Number is not Palindrome")
```

Output:-

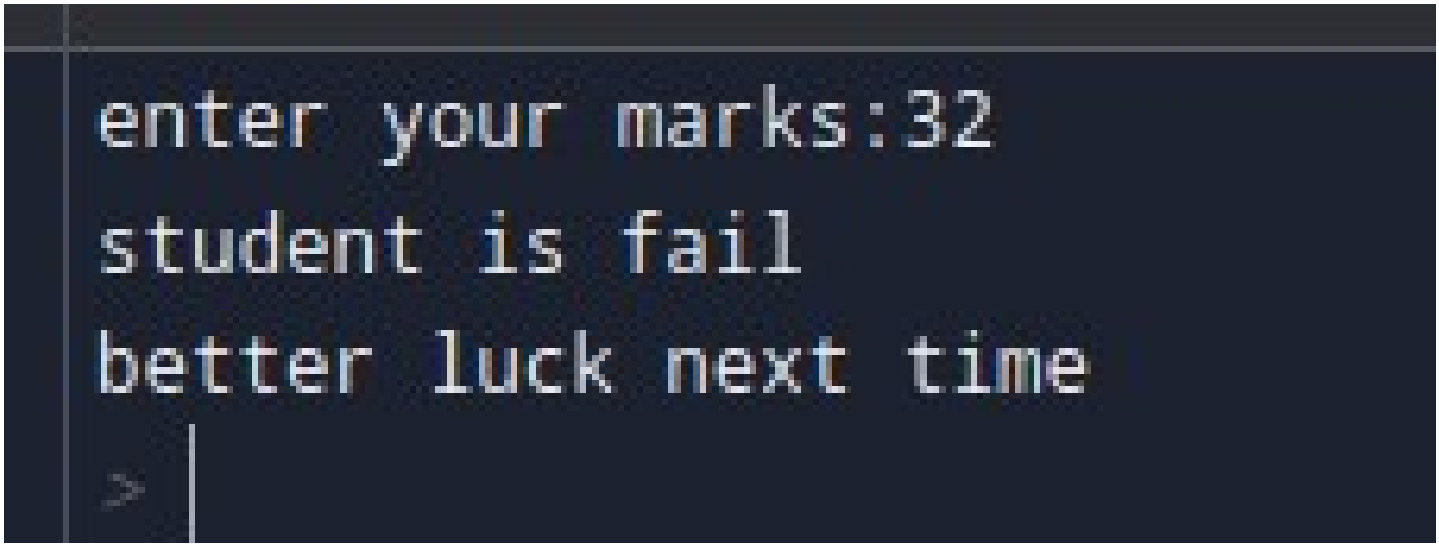


18.Python program to check the student's result either pass or fail on the basis of marks entered by the user. if the marks of student entered <=33 than result should be pass otherwise fail

Code:-

```
marks=int(input("enter your marks:"))
if marks>=33:
    print('"student is pass
congratulations you've passed"')
else:
    print('"student is fail
better luck next time"')
```

Output:-

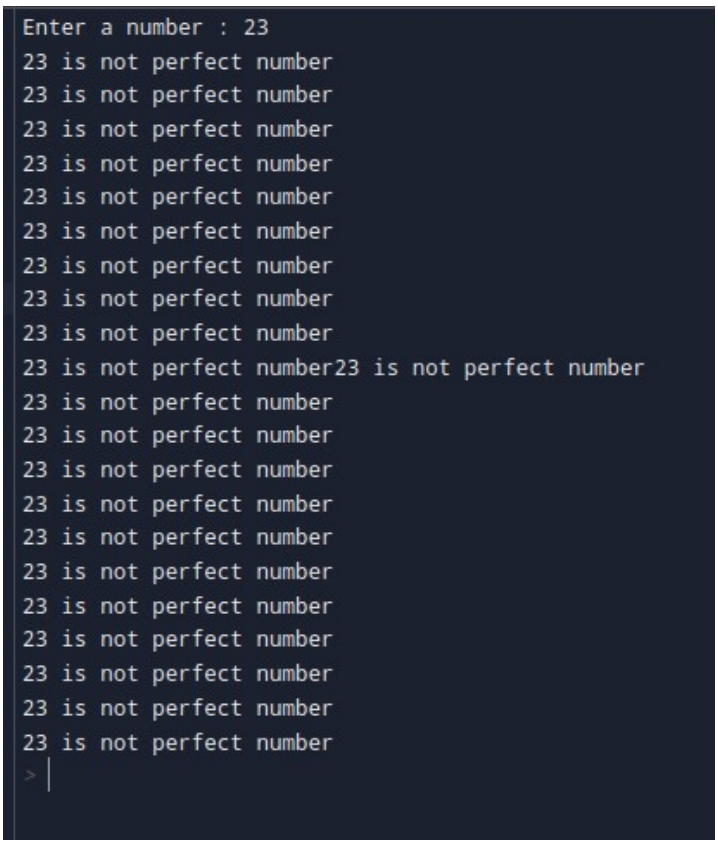


19.Python program to check whether the number is perfect number or not

Code:-

```
num=int(input("Enter a number : "))
sum=0
for i in range(1,num):
    if(num%i==0):
        sum=sum+i
    if num==sum:
        print(num, "is perfect number")
    else:
        print(num, "is not perfect number")
```

Output:-

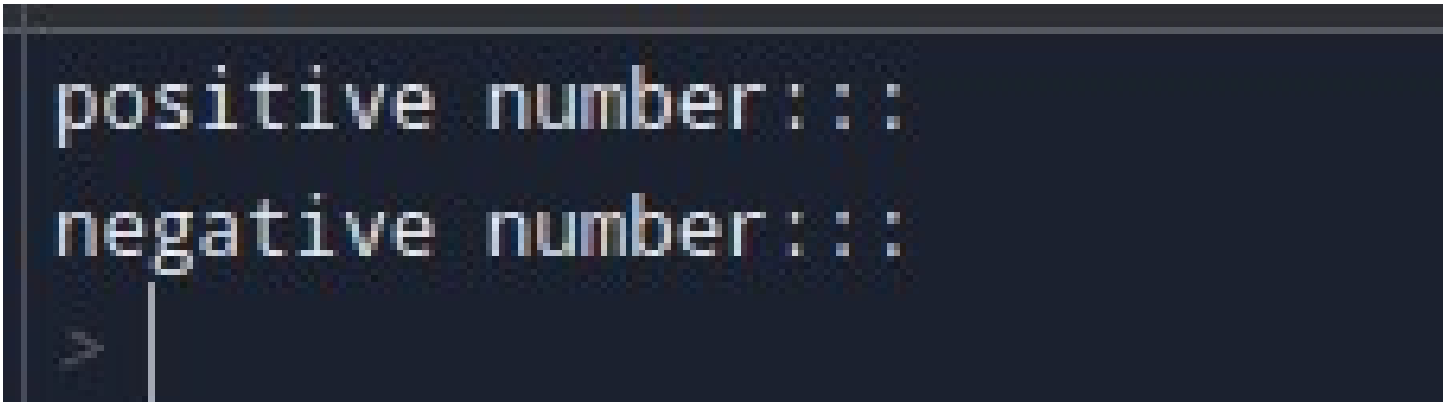


20.Python Program to check whether the number is negative positive or zero

Code:-

```
def check(num):
    if num==0:
        print("you have entered zero::")
    elif num>0:
        print("positive number:::")
    else:
        print("negative number:::")
check(12)
check(-1)
```

Output:



21.Python Program to check the smallest b/w three numbers

Code:-

```
n1=int(input("enter your first number::"))
n2=int(input("enter your second number::"))
n3=int(input("enter your third number::"))
if n1<n2 and n1<n3:
    print(n1, "is smallest between all three")
if n2<n1 and n2<n3:
    print(n2, "is smallest between all three")
else:
    print(n3, "is smallest between all three")
```

Output:-

```
enter your first number::2
enter your second number::3
enter your third number::6
2 is smallest between all three
6 is largest between all three
>
```

22.Python Program to calc the mean , meadian , mode height of the students from data

Code:-

```
import statistics as s
heights = [5.9,5.4,6.1,6.0,7.2]
mean = s.mean(heights)
mode = s.mode(heights)
median = s.median (heights)
print("Mean of the above numbers is ::"  , mean)
print("Mode of the above numbers is ::" , mode)
print("Median of the above numbers is ::" , median)
```

Output:-

```
Mean of the above numbers is :: 6.12
Mode of the above numbers is :: 5.9
Median of the above numbers is :: 6.0
>
```

23.Python Program to store students data

Code:-

```
dict1  = dict()
i = 1
flag  = 0
n = int(input("Enter number of entries::"))
while i<=:
    adm = input("\nEnter admission no of a
student ::")
    nm = input("Enter name of this student::")
    section=input("Enter class and section::")
    per = float(input("Enter Percentage of
student::"))
    b=(nm,section,pr)
    dict1[Adm]=b
    i=i+1
l=dict.keys()
for i in l :
    print("\nAdmno-" , i , ":")
    z=dict[i]
    print("Name\t" , "class\t" , "per\t")
    for j in z :
        print(j,end="\t")
```

Output:-

```
Enter number of entries::1
Enter admission no of a student ::P-9773
Enter name of this student::Rambharose
Enter class and section::XI-D
Enter Percentage of student::98
```

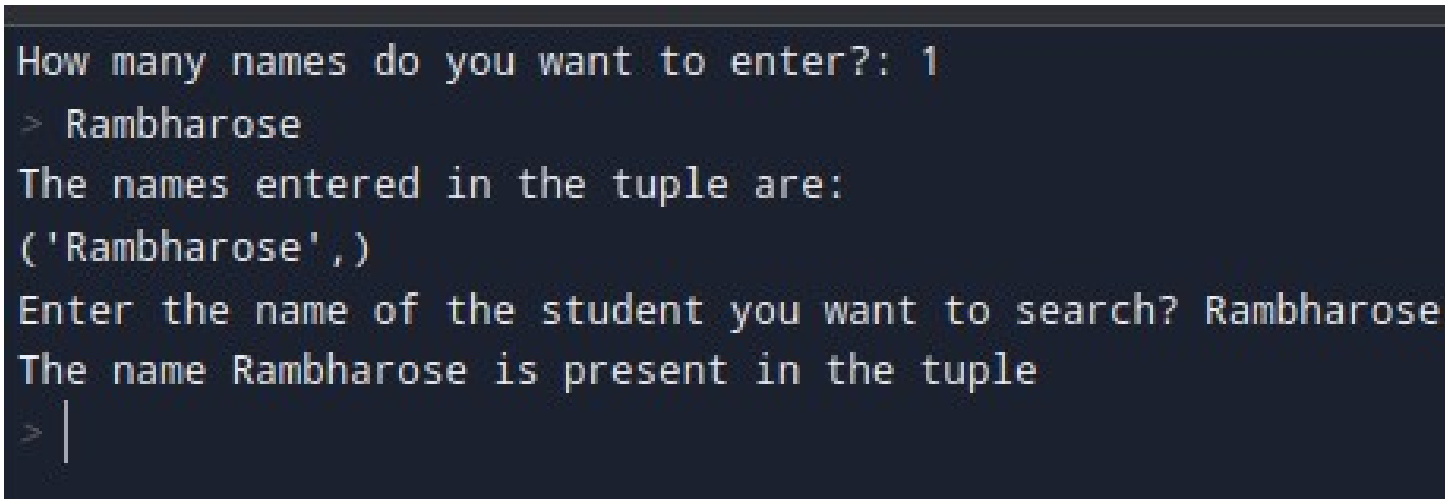
24.Python Program to python input names of n students and store them in a tuple

Code:-

```
def searchStudent(tuple1,search):
    for a in tuple1:
        if(a == search):
            print("The name",search,"is present in the tuple")
            return
    print("The name",search,"is not found in the tuple")

name = tuple()
```

```
n = int(input("How many names do you want
to enter?: "))
for i in range(0,n):
    num = input("> ")+++
    name = name + (num,)

print("\nThe names entered in the tuple are:")
print(name)

search = input("\nEnter the name of the
student you want to search? ")

searchStudent(name,search)
```

Output:-



25.Sum of dynamic tuple elements

Code:-

```
tup=tuple()
n= eval(input("enter elements counter::"))
for i in range(n):
    a=int(input("enter your tuple elements::"))
    tup=tup+(a,)
print("tuple elements are ::",tup)
sum=0
for j in tup:
   sum=sum+j
print("sum of all elements in
tuple",tup,"is::",sum)
```

Output:-

```
enter elements counter::2
enter your tuple elements::3
enter your tuple elements::4
tuple elements are :: (3, 4)
sum of all elements in tuple (3, 4) is:: 7
>
```

26.Python program to count the number of alphabets, upper case letters, lower case letters, digits, vowels, whitespaces and special characters present in the entered string

Code:-

```
s="""This is my python program
We are creating an email id - abcd124678@gmail.com
It will work in 234 apps"""
count =0
for i in s:
    if i.isalpha ():
        count=count+1
print("total number of alphabets are::",count)

for i in s:
    if i.isupper ():
        count=count+1
print("total number of upper case characters are::",count)

for i in s:
    if i.islower ():
```

```
        count=count+1
print("total number of lower case characters are::",count)

for i in s:
    if i.isdigit ():
        count=count+1
print("total number of digits are::",count)

for i in s:
    if i in "aeiouAEIOU":
        count=count+1
print("total number of vowels are::",count)

count=0
for i in s:
    if i ==' ':
        count=count+1
print("total number of spaces are ::",count)

count=0
for i in s:
    if i not in 'alnum, whitespaces':
        count=count+1
```

```
print("total number of special characters
are ::",count)
```

Output:-

```
total number of alphabets are:: 71
total number of upper case characters are:: 74
total number of lower case characters are:: 142
total number of digits are:: 151
total number of vowels are:: 176
total number of spaces are :: 16
total number of special characters are :: 35
>
```

27.python program to count the number of vowels in the entered string

Code:-

```
s=input("Enter::")
count =0
for i in s:
    if i in "aeiouAEIOU":
        count=count+1
print("total number of vowels are::",count)
```

Output:-