```
## Accept input from user and store it in variable and print the value
a=input("enter a number")
print(a)
```

```
     enter a number22
     22
```

```
## Use of print statements and use of  (.format )for printing different data types
a=40
b=55
c="hello world"
d=True
print(type(a))
print(type(b))
print(type(c))
print(type(d))
```

```
     <class 'int'>
     <class 'int'>
     <class 'str'>
     <class 'bool'>
```

```
## Take 2 numbers as user input and add, multiply, divide, subtract, remainder and print the
a=int(input("enter a numbers"))
b=int(input("enter a numbers"))
sum=a+b
print(sum)
mul=a*b
print(mul)
div=(a/b)
print(div)
sub=(a-b)
print(sub)
rem=a%b
print(rem)
```

```
     enter a numbers20
     enter a numbers10
     30
     200
     2.0
     10
     0
```

```
## Take 2 numbers as user input and add, multiply, divide, subtract, remainder and print the
a=float(input("enter a numbers"))
b=float(input("enter a numbers"))
sum=a+b
```

```
print(sum)
mul=a*b
print(mul)
div=(a/b)
print(div)
sub=(a-b)
print(sub)
rem=a%b
print(rem)
```

```
enter a numbers10
enter a numbers5
15.0
50.0
2.0
5.0
0.0
```

```
## Conversion of one unit to another (such as hours to minutes, miles to km and etc)
## hours to minutes
a=int(input("enter hours"))
b=a*60
print(b)
```

```
enter hours2
120
```

```
## miles to kms
a=int(input("enter miles"))
b=a*1.6
print(b ,"kms")
```

```
enter miles3
4.800000000000001 kms
```

```
## Usage of mathematical functions in python like math.ceil, floor, fabs, fmod, trunc, pow, s
## ceil
import math
print(math.ceil(1.2))
print(math.ceil(4.9))
```

```
2
5
```

```
## floor
import math
print(math.ceil(1.2))
print(math.ceil(4.9))
```

```
print(math.floor(1.2))
print(math.floor(4.9))
```

```
2
5
1
4
```

```
## fabs
import math
print(math.ceil(1.2))
print(math.ceil(4.9))
print(math.floor(1.2))
print(math.floor(4.9))
print(math.fabs(-1.2))
print(math.fabs(-4.9))
```

```
2
5
1
4
1.2
4.9
```

```
## sqrt
import math
a=int(input('enter the value'))
print(math.sqrt(4))
print(math.trunc(a))
```

```
enter the value4
2.0
4
```

```
## pow
import math
a=int(input("enter the value"))
b=int(input("enter the value"))
print(math.pow(a,b))
```

```
enter the value2
enter the value2
4.0
```

```
## Building a mathematical calculator that can perform operations according to user input.Use
a=float(input("enter number "))
b=float(input("enter a number "))
o=input("enter opeation")
if o=="sum":
  print(a+b)
elif o=="subtract":
```

```
  print(a-b)
elif o=="product":
  print(a*b)
elif o=="remainder":
  print(a%b)
else:
  print(a/b)
```

```
    enter number 2
    enter a number 5
    enter opeation6
    0.4
```

```
## Accepting 5 different subject marks from user and displaying the grade of the student.
s1=float(input('enter the marks'))
s2=float(input('enter the marks'))
s3=float(input('enter the marks'))
s4=float(input('enter the marks'))
s5=float(input('enter the marks'))
avg=(s1+s2+s3+s4+s5)/5
if avg>=90:
  print("a grade")
elif avg>=80:
  print("b grade")
elif avg>=70:
  print("c grade")
elif avg>=60:
  print("d grade")
else:
  print("fail")
```

```
    enter the marks98
    enter the marks87
    enter the marks95
    enter the marks63
    enter the marks83
    b grade
```

```
## Printing all even numbers, odd numbers, count of even numbers, count of odd numbers
#within a given range.
n=int(input("enter range "))
c=0
for i in range(1,n+1):
 if i%2==0:
   c+=1
   print(i)
```

```
print("even count is ",c)

d=0
for i in range(1,n+1):
  if i%2!=0:
    d+=1
    print(i)

print("odd count is ",d)
```

```
 enter range 4
 2
 4
 even count is  2
 1
 3
 odd count is  2
```

```
#Compute the factorial of a given number.
n=int(input("enter a number "))
fac=1
for i in range(1,n+1):
  fac=fac*i

print(fac)
```

```
 enter a number 89
 16507955160908461081216919262453619309839666236496541854913520707833171034378509739399931
```

```
## Compute GCD of two given
a=int(input("enter a number"))
b=int(input("enter a number"))
k=a if a<b else b
while True:
    if a%k==0 and b%k==0:
     break
    k -=1
print(k)
```

```
 enter a number9
 enter a number8
 1
```

```
number=int(input("Enter the number :"))
temp=number
reverse_num=0
while(number>0):
    digit=number%10
    reverse_num=reverse_num*10+digit
```

```
    number=number//10
if(temp==reverse_num):
    print("a palindrome")
else:
    print("Not a palindrome")
```

```
 Enter the number :202
 a palindrome
```

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

```
 enter a number28
 perfect number
```