```
#check whether gn character is a alphabet or digit or symbol
ch=input('enter a charcter: ')
if((ch>='a' and ch<='z') or (ch>='A' and ch<='Z')):
    print('The given character', ch, 'is an alphabet')
elif(ch>='0' and ch<='9'):
    print('The given character', ch, 'is a digit')
else:
    print('The given character', ch, 'is a symbol')
```

```
enter a charcter: &
The given character & is a symbol
```

```
#check whether vowel or constant
letter=input('Enter a letter: ')
if((letter=='a','e','i','o','u') or (letter=='A','E','I','O','U')):
  print('The given letter ',letter, 'is a vowel')
else:
  print('The given letter',letter, 'is a consonant')
```

```
Enter a letter: e
The given letter  e is a vowel
```

```
#check whether positive or negative integer
number=float(input('Enter a integer: '))
if number>=0:
  print('The given integer ',number,'is positive')
else:
  print('The given integer ',number,'is negative')
```

```
Enter a integer: 7
The given integer  7.0 is positive
```

```
#evaluate the expression
P=20*1+100*2+6*4+3*8
X3=(P-(118*2))
print('Given: ')
print('P= 20*1+100*2+6*4+3*8')
print('X3= (P-(118*2))')
print('Value of P: ',P)
print('Value of X3: ',X3)
```

```
Given:
P= 20*1+100*2+6*4+3*8
X3= (P-(118*2))
Value of P:  268
Value of X3:  32
```

```
#to perform basic arithemetic operation
A=float(input('Enter a value for A: '))
```

```
B=float(input('Enter a value for B: '))
C= A+B
D= A-B
E= A*B
F= A/B
G= A%B
H= A**B
I= A//B
print('A+B= ',C)
print('A-B= ',D)
print('A*B= ',E)
print('A/B= ',F)
print('A%B= ',G)
print('A**B= ',H)
print('A//B= ',I)
```

```
Enter a value for A: 2
Enter a value for B: 5
A+B=  7.0
A-B=  -3.0
A*B=  10.0
A/B=  0.4
A%B=  2.0
A**B=  32.0
A//B=  0.0
```

```
#to compare 2 given values
a=int(input('Enter a value a: '))
b=int(input('Enter a value b: '))
if(a==b):
   print('a and b have the same value')
elif(a>b):
   print('a has greater value than b')
elif(a<b):
   print('b has greater value than a')
else:
   print('Invalid values')
```

```
Enter a value a: 7
Enter a value b: 3
a has greater value than b
```

```
#mathematical operation with given values
x=float(input('Enter a floating number, x= '))
y=float(input('Enter a floating number, y= '))
import math as m
x1=abs(x)
print('i) abs(x)= ',x1)
x2=m.sqrt(x)
print('ii) sqrt(x)= ',x2)
x3=m.exp(x)
```

```
print('iii) exp(x)= ',x3)
x4=m.log(x)
print ('iv) log(x)= ',x4)
x5=m.pow(x,y)
print('v) pow(x,y)= ',x5)
x6=m.ceil(x)
print('vi) ceil(x)= ',x6)
x7=max(x,y)
print('vii) max(x,y)= ',x7)
x8=min(x,y)
print('viii) min(x,y)= ',x8)
```

```
Enter a floating number, x= 23.6
Enter a floating number, y= 25.7
i) abs(x)=  23.6
ii) sqrt(x)=  4.857983120596447
iii) exp(x)=  17756189565.520374
iv) log(x)=  3.1612467120315646
v) pow(x,y)=  1.9223766217963098e+35
vi) ceil(x)=  24
vii) max(x,y)=  25.7
viii) min(x,y)=  23.6
```

```
a1=344.767
a2=567.12367
a3=12300000
print(format(a1, "9.2f"))
print(format(a2, "5.3f"))
print("{:.2f}".format(a3))
```

```
   344.77
567.124
12300000.00
```

✓ 0s completed at 7:06 AM