To find whether the is digit or alphabet or special character.

```
a=input("Enter your character:")
if (a.isdigit()):
  print("The given character",a,"is a Digit.")
elif (a.isalpha()):
  print("The given character",a,"is a alphabet.")
else:
  print("The given character",a,"is a special character.")
```

```
Enter your character:g
The given character g is a alphabet.
```

To find whether the given character is vowel or constant.

```
ch=input('Enter a letter:')
if (ch=='A' or ch=='a' or ch=='E' or ch=='e' or ch=='I' or ch=='i' or ch=='O'
    or ch=='o' or ch=='U' or ch=='u'):
  print("The given letter is vowel.")
else:
  print("The given letter is constant.")
```

```
Enter a letter:A
The given letter is vowel.
```

```
L=input("Enter a letter:")
if L.upper() in ('A','E','I','O','U'):
  print(L,"is a vowel.")
elif L.lower() in ('a','e','i','o','u'):
  print(L,"is a vowel.")
else:
  print(L,"is a constant.")
```

```
Enter a letter:G
G is a constant.
```

To find whether the number is positive or negative.

```
a = int(input("Enter a number: "))
if a > 0:
   print(a,"is a positive number")
elif a == 0:
   print("Zero")
else:
   print(a,"is a negative number")
```

```
Enter a number: -5
-5 is a negative number
```

Evaluate

```
P=20*1+100*2+6*4+3*8
X3=(P-(118*2))
print(X3)
```

```
32
```

Basic arithmetic operation.

```
num1 = float(input(" Please Enter the First Value Number 1: "))
num2 = float(input(" Please Enter the Second Value Number 2: "))
add = num1 + num2
sub = num1 - num2
multi = num1 * num2
div = num1 / num2
mod = num1 % num2
expo = num1 ** num2
print("The Sum of",num1,"and",num2,"=",add)
print("The Subtraction of",num1,"and",num2,"=",sub)
print("The Multiplication of",num1,"and",num2,"=",multi)
print("The Division of",num1,"and",num2,"=",div)
print("The Modulus of",num1,"and",num2,"=",mod)
print("The Exponent Value of",num1,"and",num2,"=",expo)
```

```
 Please Enter the First Value Number 1: 20
 Please Enter the Second Value Number 2: 5
The Sum of 20.0 and 5.0 = 25.0
The Subtraction of 20.0 and 5.0 = 15.0
The Multiplication of 20.0 and 5.0 = 100.0
The Division of 20.0 and 5.0 = 4.0
The Modulus of 20.0 and 5.0 = 0.0
The Exponent Value of 20.0 and 5.0 = 3200000.0
```

Compare the two number.

```
a =int(input("Enter the first number="))
b =int(input("Enter the second number="))
if ( a == b ):
   print ("a is equal to b")
else:
   print ("a is not equal to b")
if ( a < b ):
   print ("a is less than b")
else:
   print ("a is not less than b")
if ( a > b ):
   print ("a is greater than b")
else:
   print ("a is not greater than b")
if ( a <= b ):
```

```
    print ("a is either less than or equal to  b")
else:
    print ("a is neither less than nor equal to  b")
if ( b >= a ):
    print ("b is either greater than  or equal to a")
else:
    print ("b is neither greater than  nor equal to a")
```

```
Enter the first number=5
Enter the second number=3
a is not equal to b
a is not less than b
a is greater than b
a is neither less than nor equal to  b
b is neither greater than  nor equal to a
```

Mathematical expression.

```
import math
x=float(input("Enter the first number="))
y=float(input("Enter the second number="))
print(abs(x))
print(str(math.sqrt(x)))
print(str(math.exp(x)))
print(min(x,y))
print(max(x,y))
print(pow(x,y))
print(str(math.log(x)))
print(str(math.ceil(x)))
```

```
Enter the first number=5
Enter the second number=2
5.0
2.23606797749979
148.4131591025766
2.0
5.0
25.0
1.6094379124341003
5
```

Print the number using formatting print.

```
 x=334.767
print("%9.2f"%(x))
print("%5.3f"%(x))
print(f"{x:.3e}")
print("")
y=567.12367
print("%9.2f"%(y))
print("%5.3f"%(y))
print(f"{y:.3e}")
print("")
z=12300000
```

```
print("%9.2f"%(z))
print("%5.3f"%(z))
print(f"{z:.3e}")
```

```
   334.77
334.767
3.348e+02

   567.12
567.124
5.671e+02

12300000.00
12300000.000
1.230e+07
```

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