

In [1]:

```
###check for character,digit or symbol
A=input('enter a character:')
if(A>='a' and A<='z'):
    print(f'The given entry "{A}" is a character')
elif(A>='0' and A<='9'):
    print(f'The given entry "{A}" is a digit')
else:
    print(f'The given entry "{A}" is a symbol')
```

enter a character:j  
The given entry "j" is a character

In [3]:

```
###check for vowel or consonant
a=input('enter an alphabet:')
if(a=='A' or a=='a' or a=='E' or a=='e' or a=='I' or a=='i' or a=='O' or a=='o' or a=='U' or a=='u'):
    print(f'{a} is a vowel')
else:
    print(f'{a} is a consonant')
```

enter an alphabet:O  
O is a vowel

In [9]:

```
###check whether the given integer is positive or negative
num=int(input('enter an integer'))
if(num>0):
    print(f'{num} is a positive number')
elif(num==0):
    print(f'{num} is zero')
else:
    print(f'{num} is a negative number')
```

enter an integer:-11  
-11 is a negative number

In [7]:

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

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In [32]:

```
###basic arithmetic operation
a=float(input('enter num a : '))
b=float(input('enter num b : '))
add=a+b
sub=a-b
mul=a*b
div=a/b
remainder=a%b
print(f'{a} + {b} = {add}')
print(f'{a} - {b} = {sub}')
print(f'{a} * {b} = {mul}')
print(f'{a} / {b} = {div}')
print(f'{a} % {b} = {remainder}')
```

```
enter num a : 9
enter num b : 3
9.0 + 3.0 = 12.0
9.0 - 3.0 = 6.0
9.0 * 3.0 = 27.0
9.0 / 3.0 = 3.0
9.0 % 3.0 = 0.0
```

In [13]:

```
###comparison of two values
x=int(input('enter a num x : '))
y=int(input('enter a num y : '))
print(x==y)
print(x!=y)
print(x<y)
print(x>y)
print(x<=y)
print(x>=y)
```

```
enter a num x : 10
enter a num y : 15
False
True
True
False
True
False
```

In [18]:

```
###importing mathematical library
import math as m
x=float(input('enter a num x : '))
y=float(input('enter a num y : '))
print('1)',abs(x))
print('2)',m.sqrt(x))
print('3)',m.exp(x))
print('4)',m.log(x))
print('5)',m.pow(x,y))
print('6)',m.ceil(x))
print('7)',max(x,y))
print('8)',min(x,y))
```

```
enter a num x : 4
enter a num y : 6
1) 4.0
2) 2.0
3) 54.598150033144236
4) 1.3862943611198906
5) 4096.0
6) 4
7) 6.0
8) 4.0
```

In [19]:

```
###print using formatting
num1=344.767
num2=567.12367
num3=12300000
print('{:9.2f}'.format(num1))
print('{:5.3f}'.format(num2))
print('{:,.3e}'.format(num3))
```

```
344.77
567.124
1.230e+07
```