

In [8]:

```
a=15
b=13
print("the addition of two numbers is=",a+b)
```

the addition of two numbers is= 28

In [9]:

```
a=62
b=2
print(" the multiplication of two numbers is=",a*b)
```

the multiplication of two numbers is= 124

In [10]:

```
a=100
b=75
print("the subtraction of to numbers is",a-b)
```

the subtraction of to numbers is 25

In [11]:

```
a=100
b=50
print("the division of two numbers is",a|b)
```

the division of two numbers is 118

In [15]:

```
a=10
b=15
print(a+b)
print(a-b)
print(a|b)
print(a*b)
```

25
-5
15
150

In [1]:

```
# change A STRING TO UPPER TO LOWER
string="GOPAL"
string.lower()
```

Out[1]:

'gopal'

In [2]:

```
# CHANGE A STRING TO LOWER TO UPPER  
string="gopal"  
string.upper()
```

Out[2]:

'GOPAL'

In [3]:

```
string="ganesh"  
string.lower()
```

Out[3]:

'ganesh'

In [4]:

```
string="Ganesh"  
string.upper()
```

Out[4]:

'GANESH'

In [1]:

```
string="gajwalli satya venkata naga ganesh kumar"  
string.upper()
```

Out[1]:

'GAJWALLI SATYA VENKATA NAGA GANESH KUMAR'

In [6]:

```
a="gajwalli"  
b="ganeshkumkar"  
c=a+b  
print(c)
```

gajwalliganeshkumkar

In [7]:

```
a="ganesh"  
print(len(a))
```

6

In [9]:

```
a="gajwallisatyavenkatanagaganeshkumar"  
print(len(a))
```

35

In [2]:

```
a=10
b=20
c=(a+b)
print(c)
```

30

python

python is used for data base communication

python is a programming language

it consists of code , markdown

it is a basic and simple language to understand

heading 6 python is used for real time operations

In [13]:

```
a=10
b=45
c=32
print(a-b)
print(a+b)
print(b-a)
print(a|b)
print(a+b+b)
print(a*b)
print(b*c)
print(a*b*c)
print(c*a)
print(b-c*a)
```

-35
55
35
47
100
450
1440
14400
320
-275

In [15]:

```
print("welcome to workshop")  
# printing the message
```

welcome to workshop

In [16]:

```
print("iam 'tougher' than what u think")
```

iam 'tougher' than what u think

In [17]:

```
h=9  
print(type(h))  
h1=float(h)  
print(h1)  
print(type(h1))
```

```
<class 'int'>  
9.0  
<class 'float'>
```

In [20]:

```
g=8.9  
print(type(g))  
g1=int(g)  
print(g1)  
print(type(g1))
```

```
<class 'float'>  
8  
<class 'int'>
```

In [21]:

```
r=68  
print(type(r))
```

```
<class 'int'>
```

In [1]:

```
f=6.8  
print(type(f))
```

```
<class 'float'>
```

In [20]:

```
x=4
y=5
print(x+y)
print(x>y)
print(x<y)
print(x*y)
print(x|y)
print(x-y)
print(y*x)
print(x**y)
print(x>y)
print(x/y)
print(x|y)
print(x--y)
print(x-+y)
```

```
9
False
True
20
5
-1
20
1024
False
0.8
5
9
-1
```

In [31]:

```
b=10
print(b>3 and b<5)
print(b>3 or b<5)
```

```
False
True
```

In [5]:

```
g=15
print(type(g))
g2=float(g)
print(g2)
print(type(g2))
g=15
n=str(g)
type(n)
```

```
<class 'int'>
15.0
<class 'float'>
```

Out[5]:

str

In [11]:

```
r=6.7
print(type(r))
r3=str(r)
print(r3)
print(type(r3))
r3=int(r)
print(r3)
print(type(r3))
```

```
<class 'float'>
6.7
<class 'str'>
6
<class 'int'>
```

In [12]:

```
b=25.5
print(type(b))
b3=int(b)
print(b3)
print(type(b3))
```

```
<class 'float'>
25
<class 'int'>
```

In [5]:

```
v=23.3
print(type(v))
v3=int(v)
print(v3)
print(type(v3))
```

```
<class 'float'>
23
<class 'int'>
```

In [8]:

```
a=10
print(type(a))
a5=str(a)
print(a5)
print(type(a5))
a6=float(a)
print(a6)
print(type(a6))
```

```
<class 'int'>
10
<class 'str'>
```

In [10]:

```
t=5.8
print(type(t))
t2=int(t)
print(t2)
print(type(t2))
```

```
<class 'float'>
5
<class 'int'>
```

In [12]:

```
d=556
print(type(d))
d4=float(d)
print(d4)
print(type(d4))
```

```
<class 'int'>
556.0
<class 'float'>
```


In [13]:

```
got=876.99
got5=int(got)
print(got5)
print(type(got5))
```

```
876
<class 'int'>
```

In [14]:

```
a=30
b=15
print(a>b)
```

```
True
```

In [10]:

```
ch = input("Please Enter Your Own Character : ")

if(ch == 'a' or ch == 'e' or ch == 'i' or ch == 'o' or ch == 'u' or ch == 'A'
    or ch == 'E' or ch == 'I' or ch == 'O' or ch == 'U'):
    print("The Given Character ", ch, "is a Vowel")
else:
    print("The Given Character ", ch, "is a Consonant")
```

```
Please Enter Your Own Character : i
The Given Character  i is a Vowel
```

In [11]:

```
b=55.6
print(type(b))
b6=int()
```

```
<class 'float'>
```

In [10]:

```
n=78.7
print(type(n))
n2=int(n)
print(n2)
print(type(n2))
```

```
<class 'float'>
78
<class 'int'>
<class 'float'>
78
<class 'int'>
<class 'float'>
78
<class 'int'>
```

In []:

```
n=int(input("enter a natural number size"))
for i in range(n,0,-1)
print(i end)
```

In [16]:

```
# Break statement example in python
for i in 'apssdc':
    if i=='s':
        break
    else:
        print(i,end=" ")
```

a p

In [32]:

```
for i in 'gajwalli ganesh kumar':
    if i=='u':
        break
    else:
        print(i,end=" ")
```

g a j w a l l i g a n e s h k

In [34]:

```
# to print the range of 1to10 break
for i in range (1,10):
    if i==5:
        break
    else:
        print(i,end=" ")
```

1 2 3 4

In [38]:

```
for i in range (1,20):
    if i==16:
        break
    else:
        print(i,end=" ")
```

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

In [40]:

```
for i in range (2,20,2):
    print(i,end=" ")
```

2 4 6 8 10 12 14 16 18

In [21]:

```
for i in range(3,253,3):
    print(i,end=" ")
```

```
3 6 9 12 15 18 21 24 27 30 33 36 39 42 45 48 51 54 57 60 63 66 69 72 75 78 8
1 84 87 90 93 96 99 102 105 108 111 114 117 120 123 126 129 132 135 138 141
144 147 150 153 156 159 162 165 168 171 174 177 180 183 186 189 192 195 198
201 204 207 210 213 216 219 222 225 228 231 234 237 240 243 246 249 252
```

In [10]:

```
# Swap Variables in Python without a Temporary Variable
x = 3
y = 6
x, y = y, x
print('x equals: ', x)
print('y equals: ', y)
# Returns:
# x equals: 6
# y equals: 3
```

```
x equals: 6
y equals: 3
```

In [12]:

```
a=10
b=6
a, b =b, a
print('a equals: ', a)
print('y equals: ', b)
# returns:
# a equals: 10
# b equals: 6
```

```
a equals: 6
y equals: 10
```

In [22]:

```
print("Uppercase Alphabets are:")
for i in range(65,91):
    print(chr(i),end=' ')
```

```
Uppercase Alphabets are:
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
```

In [23]:

```
print("Lowercase Alphabets are:")
for i in range(97,123):
    print(chr(i),end=' ')
```

```
Lowercase Alphabets are:
a b c d e f g h i j k l m n o p q r s t u v w x y z
```

In []:

```
print("uppercase alphabets are:")  
for i in range(65,91):  
    print(chr(i),end=' ')
```

In [16]:

```
n1= int(input("enter n1 value"))  
n2= int(input("enter n2 value"))  
def add (a,b):  
    c=a+b  
    return c  
add(n1,n2)
```

enter n1 value10
enter n2 value4

Out[16]:

14

In [18]:

```
n1= int(input("enter n1 value"))  
n2= int(input("entrt n2 value"))  
def sub (a,b):  
    c=a-b  
    return c  
sub(n1,n2)
```

enter n1 value10
entrt n2 value4

Out[18]:

6

In [19]:

```
n1= int(input("entr n1 value"))  
n2= int(input("enter n2 value"))  
def multi (a,b):  
    c=a*b  
    return c  
multi(n1,n2)
```

entr n1 value9
enter n2 value3

Out[19]:

27

In [11]:

```
n1= int(input("enter n1 value"))
n2= int(input("enter n2 value"))
def divison (a,b):
    c=a|b
    return c
division(n1,n2)
```

enter n1 value10
enter n2 value5

Out[11]:

15

In [13]:

```
n1= int(input("enter n1 value"))
n2= int(input("enter n2 value"))
def multiplication (a,b):
    c=a*b
    return c
multiplication(n1,n2)
```

enter n1 value32
enter n2 value2

Out[13]:

64

In [14]:

```
n3= int(input("enter n3 value"))
n4= int(input("enter n4 value"))
def add (a,b):
    c=a+b
    return c
add(n3,n4)
```

enter n3 value3
enter n4 value5

Out[14]:

8

In [1]:

```
print(items)
```

('ganesh', 'balaram', 'anil', 'kasiah')

In [2]:

```
items=("you","are","the","one","who","believes","in","you")  
print(items)  
  
( 'you', 'are', 'the', 'one', 'who', 'believes', 'in', 'you' )
```

In [19]:

```
li=("the","rabbit","jumps","away")  
li
```

Out[19]:

```
( 'the', 'rabbit', 'jumps', 'away' )
```

In [20]:

```
li[2:4]
```

Out[20]:

```
( 'jumps', 'away' )
```

In [3]:

```
li=("you","them","their","them")  
li
```

Out[3]:

```
( 'you', 'them', 'their', 'them' )
```

In [10]:

```
print(li[-4])
```

```
you
```

In [14]:

```
print(len(li))
```

```
4
```

In [22]:

```
li=("their")  
li
```

Out[22]:

```
'their'
```

In [25]:

```
li=('soul','on','fleek')  
li
```

Out[25]:

```
('soul', 'on', 'fleek')
```

In [1]:

```
# Create tuple  
t1=(10,20,30)  
print(type(+1))
```

```
<class 'int'>
```

In [3]:

```
t2=20  
print(type(+2))  
t3=30  
print(type(+3))
```

```
<class 'int'>
```

```
<class 'int'>
```

In [8]:

```
tuple1 = (1, 3, 5, 7, 9);  
print(tuple1[3])
```

```
7
```

In [9]:

```
tuple16 = (45,67,89,87,34,363,387,378,37289,)  
print(tuple16[8])
```

```
37289
```

In [8]:

```
tuple22 = (34,45,57,92)  
print(tuple22[2])
```

```
57
```

In [12]:

```
t=23
print(type(t))
t2=float(t)
print(t2)
print(type(t2))
t3=int(t2)
print(t3)
print(type(t3))
```

```
<class 'int'>
23.0
<class 'float'>
23
<class 'int'>
```

In [14]:

```
y=5.9
print(type(y))
y4=float(y)
print(y4)
print(type(y4))
```

```
<class 'float'>
5.9
<class 'float'>
```

In [18]:

```
n2={'a':10,'b':34,'c':32}
print(n2)
print(type(n2))
```

```
{'a': 10, 'b': 34, 'c': 32}
<class 'dict'>
```

In [20]:

```
m2={'a':100,'name':'ganesh','branch':'MBA','b':56.8}
print(m2)
```

```
{'a': 100, 'name': 'ganesh', 'branch': 'MBA', 'b': 56.8}
```

In [22]:

```
s={'g':12,'b':56,'f':23}
print(s)
print(type(s))
```

```
{'g': 12, 'b': 56, 'f': 23}
<class 'dict'>
```


In [26]:

```
r4={'n':21,'o':57,'j':76}  
print(r4)  
print(type(r4))
```

```
{'n': 21, 'o': 57, 'j': 76}  
<class 'dict'>
```