# 1)

The two values of Boolean Data type are: a) TRUE b) FALSE

In [3]:
```
a = 3>6
b = 9
print(a == b)
```

```
True
```

In [4]:
```
a = 3>6
b = 9
print(a != b)
```

```
False
```

# 2)

In [ ]:
```
# The three types of Boolean Operators are:

and
or
not
^ #XOR
```

# 3)

In [6]:
```
# AND

print('1. ',True and False)
print('2. ',True and True)
print('3. ',False and False)
```

```
1.  False
2.  True
3.  False
```

In [7]:
```
# OR

print('1. ', True or False)
print('2. ', True or True)
print('3. ', False or False)
```

```
1.  True
2.  True
3.  False
```

In [9]:
```
# Not

print('1. ', not True)
print('2. ', not False)
```

```
1.  False
2.  True
```

In [13]:
```
# XOR

print('1. ',True ^ True)
print('2. ',True ^ False)
print('3. ',False ^ False)
```

```
1.  False
2.  True
3.  False
```

# 4)

In [15]:
```
print((5 > 4) and (3 == 5))
```

```
False
```

In [17]:
```
print(not (5 > 4))
```

```
False
```

In [19]:
```
print((5 > 4) or (3 == 5))
```

```
True
```

In [20]:
```
print(not ((5 > 4) or (3 == 5)))
```

```
False
```

In [21]:
```
print((True and True) and (True == False))
```

```
False
```

In [22]:
```
print((not False) or (not True))
```

```
True
```

# 5)

In [ ]:
```
# The 6 comparison operators are:

==  #Equal to
>   #Greater than
>=  #Greater than equal to
<   #Less than
<=  #Less than equal to
!=  #Not equal to
```

# 6)

In [31]:
```
'''
Assignment Operator assigns a value to variable. Equals operator justifies if a statement is True or not.

'''
a = 10 #assignment
b = 10 #assignment

print(a == b) #equals operator
```

```
True
```

# 7)

In [42]:
```
spam = 0
if spam == 10:
    print('eggs')
if spam > 5:
    print('bacon')
else:
    print('ham')

print('spam')

print('spam')
```

```
ham
spam
spam
```

# 8)

In [44]:
```
spam = 1
if spam == 1:
    print('Hello')
elif spam == 2:
    print('Howdy')
else:
    print('Greetings!')
```

```
Hello
```

In [45]:
```
spam = 2
if spam == 1:
    print('Hello')
elif spam == 2:
    print('Howdy')
else:
    print('Greetings!')
```

```
Howdy
```

In [46]:
```
spam = 3
if spam == 1:
    print('Hello')
elif spam == 2:
    print('Howdy')
else:
    print('Greetings!')
```

```
Greetings!
```

# 9)

Ctrl + C interrupts the execution of a cell that's stuck in an infinite loop.

# 10)

In [52]:
```
#break is used to terminate the loop prematurely when a specific condition is met

for i in range(10):
    if i == 5:
        break
    print(i)
```

```
0
1
2
3
4
```

In [53]:
```
#continue is used to skip the rest of the current iteration and move to the next iteration of the loop when a specific condition is met.

for i in range(6):
    if i == 3:
        continue
    print(i)
```

```
0
1
2
4
5
```

# 11)

In [55]:
```
for i in range(10):  #print 10 numbers
    print(i)
```

```
0
1
2
3
4
5
6
7
8
9
```

In [60]:
```
for i in range(0,10): #start and end points
    print(i)
```

```
0
1
2
3
4
5
6
7
8
9
```

In [63]:
```
for i in range(0,10,1): #start,end,step
    print(i)
```

```
0
1
2
3
4
5
6
7
8
9
```

# 12)

In [64]:
```
#For Loop

for i in range(1,11):
    print(i)
```

```
1
2
3
4
5
6
7
8
9
10
```

In [73]:
```
#While Loop

a = 1
while a<=10:
    print(a)
    a = a+1
```

```
1
2
3
4
5
6
7
8
9
10
```

# 13)

In [ ]:
```
spam.bacon()
```

In [ ]:
```

```