

1.What are the two values of the Boolean data type? How do you write them?

Answer :- there are two values 1) True & 2) False

2. What are the three different types of Boolean operators?

Answer:- There are three logical operators that are used to compare values. They evaluate expressions down to Boolean values, returning either True or False . These operators are **and** , **or** , and **not**.

3. Make a list of each Boolean operator's truth tables (i.e. every possible combination of Boolean values for the operator and what it evaluate).

Answer :- 1>true

2)False these is two value in Boolean data type

1) And

True	True	True
True	False	False
False	False	False
False	True	False

0	0	0
0	1	0
1	0	0
1	1	1

2) OR

True	True	True
True	False	True
False	True	True
False	False	False

0	0	0
0	1	1
1	0	1
1	1	1

3) Not

	false
False	True

0	1
1	0

4. What are the values of the following expressions?

(5 > 4) and (3 == 5)

not (5 > 4)

(5 > 4) or (3 == 5)

not ((5 > 4) or (3 == 5))

(True and True) and (True == False)

(not False) or (not True)

Answer :-

```
print((5>4) and (3==5))
print(not(5>4))
print((5>4) or (3==5))
print(not(5>4) or (3==5))
print((True and True) and (True==False))
print((not(False))or(not(True)))
```

False

False

True

False

False

True

Q5. What are the six comparison operators?

Answer :-

- 1) ==** Equal Operator
- 2) !=** not Equal Operator
- 3) >** Greater than Operator
- 4) <** less than Operator
- 5) >=** Greater than Equal Operator
- 6) <=** less than Equal Operator

6. How do you tell the difference between the equal to and assignment operators? Describe a condition and when you would use one.

Answer :- == is the equal to operator that compares two values and evaluates to a Boolean, while = is the assignment operator that stores a value in a variable.

#eg.

```
if(2==3):
    print("True")
else:
    print("False")
#Assignment operator
c=1 #here we have used assignment operator(=) to assign value of c which is 1
print("c =",c)
False
c = 1
```

7. Identify the three blocks in this code:

```
spam = 0

if spam == 10:

    print('eggs')

    if spam > 5:

        print('bacon')

    else:

        print('ham')

        print('spam')

        print('spam')
```

Answer :-

```
spam = 0
if spam == 10:
    print('eggs') #Block 1
if spam > 5:
    print('bacon') #Block 2
else:
    print('ham') #Block 3
    print('spam')
    print('spam')
```

ham
spam
spam

8. Write code that prints Hello if 1 is stored in spam, prints Howdy if 2 is stored in spam, and prints Greetings! if anything else is stored in spam.

Answer :-

```
spam = int(input("Input a no. "))
if spam == 1:
    print("Hello")
elif spam == 2:
    print("Howdy")
else:
    print("Greetings!")
```

Input a no. 2
Howdy

9.If your programme is stuck in an endless loop, what keys you'll press?

Answer :- . If program is stuck in endless loop we will press ctrl+c.

10. How can you tell the difference between break and continue?

Answer :-

```
# use of break
for i in range(10):
    if(i==7):
        break
    print(i)

print('Breaked')
#use of continue
for i in range(10):
    if(i==7):
        continue
    print(i)
```

0
1
2
3
4
5
6
Breaked
0
1
2
3
4
5
6
8
9

Ans . The break statement will move the execution outside and just after a loop. The continue statement will move the execution to the start of the loop

11. In a for loop, what is the difference between range(10), range(0, 10), and range(0, 10, 1)?

Answer :- `for i in range(10):`

```
print(i)
print("xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx")
xxx")
for i in range(0,10):
    print(i)
print("xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx")
xxx")
for i in range(0,10,1):
    print(i)
```

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

From the above output we can conclude that they all do the same thing. The range(10) call ranges from 0 up to (but not including) 10, range(0, 10) tells the loop to start at 0, and range(0, 10, 1) tells the loop to increase the variable by 1 on each iteration.

12. Write a short program that prints the numbers 1 to 10 using a for loop. Then write an equivalent program that prints the numbers 1 to 10 using a while loop.

Answer :-

```
#Use of For Loop
print("For Loop")
for i in range(1,11):
    print(i)
#Use of While Loop
print("While Loop")
a =1
while a <= 10:
    print(a)
    a+=1
```

For Loop

1
2
3
4
5
6
7
8
9
10

While Loop

1
2
3
4
5
6
7
8
9
10

13. If you had a function named bacon() inside a module named spam, how would you call it after importing spam?

Answer :- This function can be called with spam.bacon().

in []:

