

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

Sol: The two values which comes under Boolean data type, True or False In binary, these are represented by 1 and 0. Suppose that if you dealing problems like something valid or invalid

For example particular Email is valid or invalid if valid then return 1 or if invalid then return 0

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

Sol : AND , NOT & OR these are the three most basic and important Boolean operator

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).

Sol:

True and True is True.

True and False is False.

False and True is False.

False and False is False.

True or True is True.

True or False is True.

False or True is True.

False or False is False.

not True is False.

not False is True.

Q3. 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).

Ans:-

Truth Table for AND

A B output

0 0 0

0 1 0

1 0 0

1 1 1

Truth Table for OR

A B output

0 0 0

0 1 1

1 0 1

1 1 1

Truth Table for NOT

A output

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)

Soln:

FALSE

FALSE

TRUE

FALSE

FALSE

TRUE

5. What are the six comparison operators?

Soln:

equal to : ==

not equal to: !=

greater than: >

greater than or equal to: <=

less than: <

and less than or equal to: >=

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

Soln: == operators are the operators that is used for compare between two values and '=' is used to assign the value to the variable

Programming example:

```
a=1 # here we are assigning the value to the a variable
```

```
if('value of a',a):
```

```
    print(a)
```

```
elif(2==3): # here we are compare between two values
```

```
    print(True)
```

7. Identify the three blocks in this code:

```
spam = 0
```

```
if spam == 10: #BLOCK 1
```

```
    print('eggs')
```

```
if spam > 5: #BLOCK 2
```

```
    print('bacon')
```

```
else: #BLOCK 3
```

```
    print('ham')
```

```
    print('spam')
```

```
    print('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.

Soln:

```
spam = int(input("Enter value"))
```

```
if spam == 1:
```

```
    print("Hello")
```

```
elif spam == 2:
```

```
    print("Howdy")
```

```
else:
```

```
    print("Greetings!")
```

Q9.If your programme is stuck in an endless loop, what keys you'll press?

Soln: we will use CTRL+C

Q10. How can you tell the difference between break and continue?

Soln : We use Break statement when if certain condition is true then break and exit the loop while continue statement is used when only stop the current iteration of the loop, it doesn't terminate the next iteration.

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

Soln:

Range(10) :- it print the value from 0 to 9

Range(0,10) :- It print the value from 0 to 9

Range(0,10,1):- It print the value from 0 to 9 and increment by 1

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.

Soln:

FOR LOOP

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

output:-

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

WHILE LOOP

```
i=1  
while(i<11):  
    print(i)  
    i=i+1
```

Output:-

```
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`?

Soln:

First we have create mymodule.py inside there is function named bacon()

```
def bacon(message):  
    print("After calling, " + message)
```

#After Saving the file as mymodule

```
import mymodule as spam    #renamed using Alias mymodule as spam  
spam.bacon("cell sucessfully")    #then calling bacon()
```