

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

ans 1:

The two values of the Boolean data type are “TRUE” and “FALSE”. We can write them as True and False.

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

Ans 2:

AND , OR , 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 ).**

P	Q	AND	OR	NOT Of P
T	T	T	T	F
T	F	F	T	F
F	T	F	T	T
F	F	F	F	T

**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)

```
script.py
1 print('(5 > 4) and (3 == 5) ==> '+str((5 > 4) and (3 == 5)))
2 print('not (5 > 4) ==> '+str(not (5 > 4)))
3 print('(5 > 4) or (3 == 5) ==> '+str((5 > 4) or (3 == 5)))
4 print('not ((5 > 4) or (3 == 5)) ==> '+str(not ((5 > 4) or (3 == 5))))
5 print('(True and True) and (True == False) ==> '+str((True and True) and (True == False)))
6 print('(not False) or (not True) ==> '+str((not False) or (not True)))
7
8
```

Input	Output
1	(5 > 4) and (3 == 5) ==> False
2	not (5 > 4) ==> False
3	(5 > 4) or (3 == 5) ==> True
4	not ((5 > 4) or (3 == 5)) ==> False
5	(True and True) and (True == False) ==> False
6	(not False) or (not True) ==> True

## 5. What are the six comparison operators?

Ans 5:

1. <
2. >
3. <=
4. >=
5. ==
6. !=

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

Ans 6:

The '==' i.e equal to operator checks whether the two given operands are equal or not. If so, it returns true. Otherwise it returns false.

Input	Output
1	True

Input	Output
1	False

The '=' ie. assignment operator is used to assign the value on the right to the variable on the left.

Input	Output
1	iNeuron

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

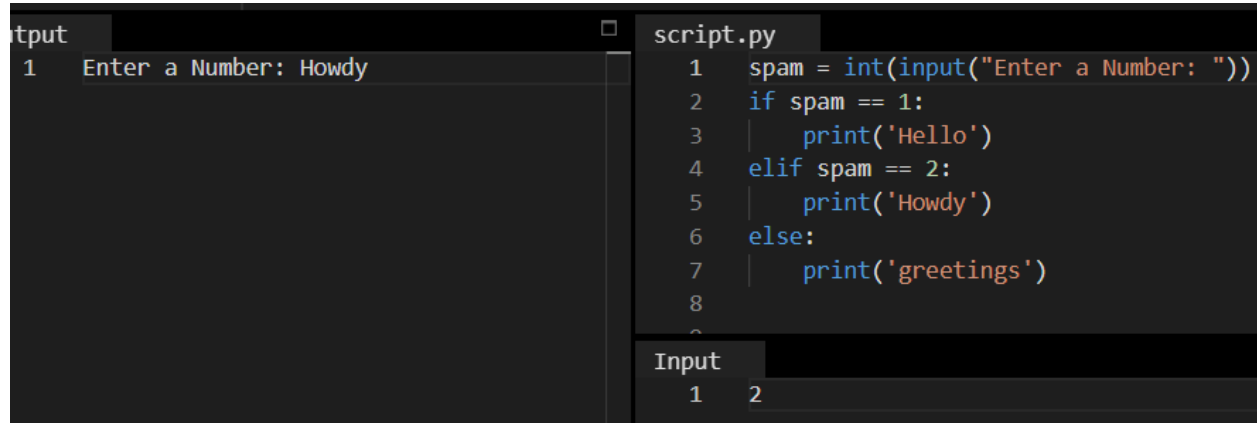
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Ans 7: print('spam')

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.



The screenshot shows a code editor with two panels. The left panel, titled 'Output', displays the text 'Enter a Number: Howdy' on line 1. The right panel, titled 'script.py', contains the following Python code:

```
1 spam = int(input("Enter a Number: "))
2 if spam == 1:
3     print('Hello')
4 elif spam == 2:
5     print('Howdy')
6 else:
7     print('greetings')
8
```

Below the script.py panel, there is an 'Input' section showing the value '2' entered on line 1.

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

Ans 9 :  
CTRL +C

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

Ans 10:  
Break keyword is used to break/come out of a looping statement  
Continue keyword is used to end the current iteration of a looping statement and continue with the next iteration.

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

Ans 11:

Range has 3 params

Start, stop, step

- **start**: integer starting from which the sequence of integers is to be returned
- **stop**: integer before which the sequence of integers is to be returned. The range of integers end at stop - 1.
- **step**: integer value which determines the increment between each integer in the sequence

range(10) gives the output up to 10 excluding 10

range(0, 10) gives the output 0 to 10 excluding 10

range(0, 10,1) the range between 0 and 10 with steps of 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.**

**Ans 12:**

```
script.py
1  print('print the numbers 1 to 10 using a for loop')
2  for i in range (1,11):
3      print(i)
4  print('*'*50)
5  print('print the numbers 1 to 10 using a while loop')
6  i=1
7  while (i<=10):
8      print(i)
9      i+=1
10
```

Input	Output
1	print the numbers 1 to 10 using a for loop
2	1
3	2
4	3
5	4
6	5
7	6
8	7
9	8
10	9
11	10
12	*****
13	print the numbers 1 to 10 using a while loop
14	1
15	2
16	3
17	4
18	5
19	6
20	7
21	8
22	9
23	10

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

**Ans 13:**

spam.bacon()