

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

Ans. 2 types of the boolean data type are

1. True (represents 1)
2. False (represents 0)

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

Ans. 3 different types of boolean operators are

1. AND
2. OR
3. 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).

Ans.

1. AND
 - a. TRUE and TRUE = TRUE
 - b. TRUE and FALSE = FALSE
 - c. FALSE and TRUE = FALSE
 - d. FALSE and FALSE = FALSE
2. OR
 - a. TRUE or TRUE = TRUE
 - b. TRUE or FALSE = TRUE
 - c. FALSE or TRUE = TRUE
 - d. FALSE or FALSE = FALSE
3. NOT
 - a. TRUE = FALSE
 - b. FALSE = TRUE

4. What are the values of the following expressions?

1. $(5 > 4)$ and $(3 == 5)$
 - a. FALSE
2. $\text{not}(5 > 4)$
 - a. FALSE
3. $(5 > 4)$ or $(3 == 5)$
 - a. TRUE
4. $\text{not}((5 > 4) \text{ or } (3 == 5))$
 - a. FALSE
5. $(\text{True and True}) \text{ and } (\text{True == False})$
 - a. FALSE
6. $(\text{not False}) \text{ or } (\text{not True})$
 - a. TRUE

5. What are the six comparison operators?

Ans. Six comparison operators are:

1. Less than (<)
2. Greater than (>)
3. Less than or equal to (<=)
4. Greater than or equal to (>=)
5. Equal to (==)
6. Not 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.

Ans.

1. The equal operator is represented by == and it denotes whether two values are equal to each other or not.
2. The assignment operator is represented by = and it assigns a value to a variable.

7. Identify the three blocks in Eqthis code:

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

Ans.

```
spam = 0

if spam == 10:
    print('eggs')

if spam > 5:
    print('bacon')

else:
    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.

Ans.

```
spam = int(input ("Enter the input: "))

if spam == 1:
    print("Hello")

elif spam == 2:
    print("Howdy")

else:
    print("Greetings")
```

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

Ans. Ctrl + C

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

Ans. The Break statement is used to exit from the loop. It is like an escape statement from a loop

The Continue statement is used to skip the current iteration and jump to the next iteration.

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

Ans. There is no difference between all three.

range(10), range(0,10) and range(0,10,1) all are a series of numbers starting from 0 to 9, not including 10.

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

Ans.

1. for i in range(10):

 print(i+1)

2. i = 0

 while i<10:

 print(i+1)

 i += 1

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

Ans. spam.bacon()