

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. not (5 > 4)
  - a. FALSE
3. (5 > 4) or (3 == 5)
  - a. TRUE
4. not ((5 > 4) or (3 == 5))
  - a. FALSE
5. (True and True) and (True == False)
  - a. FALSE
6. (not False) or (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()`