

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

- True
- False

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

- 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 evaluates to).

A	B	$Y = A \wedge B$
0	0	0
0	1	0
1	0	0
1	1	1

A	B	$Y = A \vee B$
0	0	0
0	1	1
1	0	1
1	1	1

A	$Y = \neg A$
0	1
1	0

Where 0: False

1: True

4. What are the values of the following expressions?

$(5 > 4)$ and $(3 == 5)$: False

`not (5 > 4) : Flase`

`(5 > 4) or (3 == 5) :True`

`not ((5 > 4) or (3 == 5)) : False`

`(True and True) and (True == False) : Flase`

`(not False) or (not True) : True`

5. What are the six comparison operators?

- `==` Equal to
- `!=` not equal to
- `>` grater than
- `<` less than
- `>=` greater than or eual to
- `<=` 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.

Assignment operator is `'='` : we will use this when we want to assign value to a variable

Equal to is `'=='` : we use this to compare the given 2 variables or data to know whether they are equal or not

7. Identify the three blocks in this code:

#Block 1, the value assigning

```
spam = 0
```

#Block 2 , if block

```
if spam == 10:
```

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

#Block 3, if else block

```
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.

```
spam = int( input('enter spam value'))
```

```
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?

- In jupyter notebook, 'i,i' is key the keyboard interruption

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

- break is end the loop and come out of the group
- continue ends the particular iteration and still continuous with in the same loop from it's next iteration

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

- There is no difference in the above 3 loops

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.

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

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

```
Import spam
```

```
spam.bacon()
```

```
or
```

```
from spam import *  
bacon()
```