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

ANS: There are two Boolean values: **True and False**

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

ANS: **AND, OR, and 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:

X	Y	NOT X	NOT Y	X AND Y	X OR Y
false	false	true	true	false	false
false	true	true	false	false	true
true	false	false	true	false	true
true	true	false	false	true	true

4. What are the values of the following expressions?

(5 > 4) and (3 == 5) ➔***False***

not (5 > 4) ➔ ***False***

(5 > 4) or (3 == 5) ➔***True***

not ((5 > 4) or (3 == 5)) ➔ ***False***

(True and True) and (True == False) ➔ ***False***

(not False) or (not True) ➔***True***

5. What are the six comparison operators?

ANS:

1. = (equal to)
2. > (greater than)
3. < (Less Than)
4. >= (Greater than equal to)
5. <= (Less than 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: We denote equal to operator like ➔ **==**

For e.g. 1==10, true==1

We denote assignment operator like ➔ =

For e.g. a=10, pi=3.14

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')

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:

```
In [70]:
spam=1
if spam==1:
    print("Hello ")
elif spam==2:
        print("Howdy ")
else : print("Greetings")
```

```
Hello
```

```
In [72]:
spam=2
if spam==1:
    print("Hello ")
elif spam==2:
        print("Howdy ")
else : print("Greetings")
```

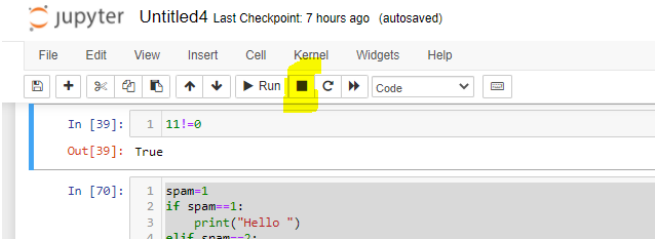
```
Howdy
```

```
In [71]:
spam=3
if spam==1:
    print("Hello ")
elif spam==2:
        print("Howdy ")
else : print("Greetings")
```

```
Greetings
```

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

ANS: CTRL + C OR can click this button in jupyter notebook➔



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

ANS:

Break ➔ It uses to stop the loop.

Continue ➔ It will skip part of a loop when a condition is met

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

ANS: No difference. All three range function gives the same result.

range (10)➔ Define the upper bound

range (0, 10)➔ in round bracket from left to right, start and upper bound

range (0, 10, 1)➔ in round bracket from left to right, start , upper bound and stepsize/jump

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: **FOR** **WHILE**

```
In [97]: for i in range(1,11):
             print(i)
             i=i+1

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

```
In [100]: a=1
          while a < 11:
              print(a)
              a=a+1

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?

ANS: spam.bacon()