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

* True and False are the two values of Boolean data type
* X = True
* Y = False
* print(X) 🡪 output: True
* print(Y) 🡪 output: False

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

* Three different types of Boolean operator are-
  + and
  + or
  + not

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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 ).

* and
  + true and true 🡪 true
  + true and false 🡪 false
  + false and false 🡪 false
  + false and true 🡪 false
* or
  + true and true 🡪 true
  + true and false 🡪 true
  + false and false 🡪 false
  + false and true 🡪 true
* not
  + not true 🡪 false
  + not false 🡪 true

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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

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5. What are the six comparison operators?

* Equals to (==)
* Greater than (>)
* Lesser than (<)
* Greater than equal to (>=)
* Lesser than equal to (<=)
* Not equals (!=)

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

* == is comparison operator / = is assignment operator
* == needs two operands / = act on single operand
* == is used when you want to compare the equality / = is used to assign the value
* == always results in Boolean values / = can assign any values
* Example: if a == b:   
   return true
* Example: a = 10

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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 #1 assignment block

if spam == 10: #2 if condition one block

    print('eggs')

if spam > 5: #3 if condition two block

    print('bacon')

else: #4 else condition block

    print('ham')

print('spam') #5 other print statements block

print('spam')

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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 an integer value: "))  
if spam == 1 :  
 print("Hello")  
elif spam == 2 :  
 print("Howdy")  
else :  
 print("Greetings!")

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

* Ctrl + F2 in PyCharm

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

* break terminates the current loop whereas continue keep the loop live by stepping forward the current iteration

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

* range(10) 🡪 generates number sequence from 0 to 9
* range(0, 10) 🡪 generates number sequence from 0 to 9
* range(0, 10, 1) 🡪 generates number sequence from 0 to 9
* End result is same in all these

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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 loop

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

* While loop

i, n = 1, 10  
while i <= n :  
 print(i)  
 i = i + 1

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

* spam.py 🡪  
  def bacon():  
   pass
* test.py 🡪  
  import spam  
  // call the needed function using dot notation   
  spam.bacon()

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