**Assignment-2**

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

Ans : True and False are the two values of Boolean data type. Boolean expressions use relational and logical operators. The result of a Boolean expression is either true or false.

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

Ans: The three basic boolean operators are: 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: The table used to represent the boolean expression of a logicgate function is commonly called a Truth Table. A logic gate truth table shows each possible input combination to the gate or circuit with the resultant output depending upon the combination of these input. Pyhton considers True (T) as 1 and False(F) as 0 if apply mathematical operators then it works as given T and F = F , T or F = T, T not F = F

4. What are the values of the following expressions?

Ans: (5 > 4) and (3 == 5) = F

not (5 > 4) = F

(5 > 4) or (3 == 5)=T

not ((5 > 4) or (3 == 5))= F

(True and True) and (True == False) = F

(not False) or (not True) = T

5. What are the six comparison operators?

Ans: A comparison operator compares two values and returns a boolean value, either True or False . Python has six comparison operators: less than ( < ), less than or equal to ( <= ), greater than ( > ), greater than or equal to ( >= ), equal to ( == ), and 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: The difference between = (Assignment) and == (Equal to) operators. The “=” is an assignment operator is used to assign the value on the right to the variable on the left. The '==' operator checks whether the two given operands are equal or not. If so, it returns true.

7. Identify the three blocks in this code:

Ans: First Block: spam = 0

if spam == 10:

print('eggs')

if spam > 5:

print('bacon')

else:

print('ham')

Second Block: print('spam')

Third Block: 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 =1

if spam==1:

  print("hello")

elif spam==2:

  print("howdy")

else:

  print("greetings!!!!!!!")

Output: hello

spam =2

if spam==1:

  print("hello")

elif spam==2:

  print("howdy")

else:

  print("greetings!!!!!!!")

Output: Howdy

spam =3

if spam==1:

  print("hello")

elif spam==2:

  print("howdy")

else:

  print("greetings!!!!!!!")

Output: greetings!!!!!!

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

Ans: I will use Break as it is a loop control statement.

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

Ans: The break statement terminates the whole iteration of a loop whereas continue skips the current iteration.

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

Ans: The value used in range( 10), so the output is 0 1 2 3 4 5 6 7 8 9.

The value used in range(0,10) , The range() function returns a sequence of numbers, starting from 0 by default, and increments by 1 (by default), and stops before a specified number.

The range(0,10,1), basically the 0 means where to start and 10 means where to stop and 1 is stand for step or a difference between the element.

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: Using for loop for i in range (1, 11):

     Print (i)

Using while loop i = 1

While (i<=10):

      Print (i)

     i += 1

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

Ans: If you had a function named bacon() inside a module named spam, how would you call it after importing spam ? This function can be called with **spam.** **bacon()**.