**Assignment II**

**FSDS Program**

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

**Answer:** Boolean data types are True and False. We must use capital T and F and with the rest of the word in lowercase.

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

**Answer:** There are three different types of Boolean operators in python are:  **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 ).

**Answer:**  The Truth tables for the boolean tables are as follows:

* Truth Table for **and** operator  
  *True and True is True  
  True and False is False  
  False and True is False  
  False and False is False*
* Truth Table for **or** operator  
  *True and True is True  
  True and False is True  
  False and True is True  
  False and False is False*
* Truth Table for**not** operator  
  *“True not is False”, “False not is True”*

4. What are the values of the following expressions?

**Answer:** (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?

**Answer:**  The Six comparison operators available in python are:

1)Equal (==)

2) Not Equal (!=)

3) Less Than (<)

4) Greater Than (>)

5) Less Than or Equal to (<=)

6) Greater 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.

**Answer:** == is the equal to operator that compares two values and evaluates to a Boolean, while = is that assignment operator that stores a value in a variable.

x=3 # Assigning operator that stores 3 value in a variable x

if x==3:#comparing values of x varible value and 3

print(x==3)

Output : True

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')

**Answer:**

**ham**

**Spam**

**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.

**Answer:**

def spamCode(spam):

if spam==1:

print('Hello')

elif spam==2:

print('Howdy')

else:

print('Greetings')

spamCode(1)

spamCode(2)

spamCode(3)

Hello

Howdy

Greetings

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

**Answer:**  Press **Ctrl-c** to stop a program stuck in an infinite loop.

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

**Answer:** The **break** statement will move the execution outside the loop if **break** condition is satisfied. Whereas the **continue**statement will move the execution to the start of the loop.

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

**Answer:** The Differences are as follows:

1. The ***range(10)*** call range from 0 to 9 (but not include 10)
2. The ***range (0,10)*** explicitly tells the loop to start at 0
3. The ***range(0,10,1)*** explicitly tells the loop to increase the variable by 1 on each iteration

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.

#Print the Numbers 1 to 10 using For Loop

print('-'\*10,'Using For Loop','-'\*10)

for i in range(1,11):

print(i, end=" ")

print('\n')

---------- Using For Loop ----------

1 2 3 4 5 6 7 8 9 10

#Print the Numbers 1 to 10 using While Loop

print('-'\*10,'Using While Loop','-'\*10)

i=1

while i<=10:

print(i, end=" ")

i+=1

---------- Using While Loop ----------

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?

**Answer:** This function can be called with spam.bacon()