ASSIGNMENT 2 Completed

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

Ans 1: Boolean data ype is one of the built in data type which represents one of the two values i.e True and False . Example : 1 == 1 is True , whereas 2<1 is False.

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

Ans 2: Boolean Operators are used to do arithmetic operation of True and False.

The boolean Operators are OR , AND , 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 ).

Ans 3: Let's do the Boolean arithmetic operation of values of A and B using boolean Operators are as below:

Boolean Operation between values of A an B :

| A | B | A OR B | A AND B | A NOT | A == B | A != B |
| --- | --- | --- | --- | --- | --- | --- |
| True | True | True | True | False | True | False |
| True | False | True | False | False | False | True |
| False | True | True | False | True | False | True |
| False | False | False | False | True | True | False |

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4. What are the values of the following expressions?

1. (5 > 4) and (3 == 5)
2. not (5 > 4)
3. (5 > 4) or (3 == 5)
4. not ((5 > 4) or (3 == 5))
5. (True and True) and (True == False)
6. (not False) or (not True)

Ans 4:

1. (5 > 4) and (3 == 5) , Output is False (Boolean Operation is as follows : (5>4) True and (3==5) False)
2. not (5 > 4) , Output is False
3. (5 > 4) or (3 == 5) , Output is True (Boolean Operation is as follows : (5>4) True or (3==5) False)
4. not ((5 > 4) or (3 == 5)) , Output is True
5. (True and True) and (True == False) , Output is True (Boolean Operation is as follows : (True and True) True or (True == False) False)
6. (not False) or (not True) , Outputis True (Boolean Operation is as follows : (not False) True or (not True)) False)

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5. What are the six comparison operators?

Ans 5:

There are Six Comparison Operators i.e

1. > greater than
2. < less than
3. >= greater than equal to
4. >= less than equal to
5. == equal to
6. != not equal to

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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.

Ans 6:

Assignment Operators are used to assign values to variable. Example X = A+B, where assign the value to X received from arithmetic addition operation between A and B

Comparison Operators are used to compare between values. It either returns True or false as per conditions. Example If A = 10 , B = 50 Then A < B condition is True, A> B condition is False, A==B condition is False, A != B is False.

Here Equal to ( ==) is comparison operator while = is assignment operator.

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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')

Ans 7: In this code If else statement is not properly used, hence Interpreter show Indentation Error. Interpreter gives first Error, hence code is not executed properly

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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.

Ans 8: code as below:

spam = int(input())

if spam == 1 :

print('Hello')

elif spam == 2 :

print('Howdy')

else :

print('Greetings! if anything else is stored in spam')

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

Ans 9:

This will happen when we use while loop statement where while loop condition is True. Hence system run and execute the command available in While Loop Infinitely. To avoid this we have to use Break statement which will break the loop after execute command available in While Loop. Or we can use to stop or interrupt manually by using CTRL +C key or CTRL +M + I combination.

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

Ans 10 :

Consider Example :

a=10

b=12

while a < b :

c = a+ b

print(c)

This above Example gives output infinite time because the condition mentioned in while loop statement is True.

Break Statement : it is used to stop the iteration of FOR and WHILE LOOP .

Example 1 While Loop :

a=10

b=12

while a < b :

c = a+ b

print(c)

break

Example 2 For Loop:

for letter in "I am Python Programmer":

if letter == "P":

break

print(letter)

Example 3:

a = 5

while a < 20:

print('Current number :', a)

a = a + 1

if a == 15:

break

Continue Statement : It can be used if you need to skip the current iteration of a for or while loop and move onto the next iteration.

Example 1 While Loop :

a=10

b=12

while a < b :

c = a+ b

print(c)

continue

Example 2 For Loop:

for letter in "I am Python Programmer":

if letter == "P":

continue

print(letter)

Example 3:

a = 10

while a < 20:

a = a + 1

if a == 15:

continue

print("Current num: ", a)

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

Ans 11: There is no difference between range(10), range(0, 10), and range(0, 10, 1). Output of all is same which is equal to range(0,10) .

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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.

Ans 12:

a)Code Using For Loop:

a1)

for i in (range(10)):

i= i+1

print(i)

b2)

Other programming creating List of numbers from 1 to 10 :

list =[]

for i in (range(10)):

i= i+1

list.append(i)

print(list)

b)Code Using While Loop:

b1)

i=0

while i < len(range(10)) :

i= i+1

print(i)

b2)

i= 1

while i <= len(range(10)) :

print(i)

i = i+1

b3)

Creating list of number from 1 to 10 :

i=0

list = []

while i < len(range(10)) :

i= i+1

list.append(i)

print(list)

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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?

Ans13 :

Calling function from Module by using spam.bacon()

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