Assignment 2

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

The two values of the Boolean data type are True and False. Example- 1==1 then output will be True and 2>5, here output is False.

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

The three different types of 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 ).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| A | B | A AND B | A OR B | NOT A |
| True | True | True | True | False |
| True | False | False | True | False |
| False | True | False | True | True |
| False | False | False | False | 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?

The six comparison operators are : 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.

The “=” is an assignment operator is used to assign the value on the right to the variable on the left. The '==' is a relational operator checks whether the two given operands are equal or not. If so, it returns true. Otherwise it returns false.

Example:

x=10 (Assignment operator is used to assign the value of variable)

Y=5

If (x==y): (Equal to operator is used for comparison)

Print(“True”)

Else:

Print(“False”)

7. Identify the three blocks in this code:

spam = 0

if spam == 10:

print('eggs') ---------------------block A

if spam > 5:

print('bacon') ------------------block B

else:

print('ham') --------------------block C

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.

spam=int(input("Enter a number "))

if spam==1:

print("Hello")

elif spam==2:

print("Howdy")

else:

print("Greetings!")

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

Ctrl+C

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

The Break statement terminates the loop in which it is used whereas Continue statement skips the code that comes after it, and the control is passed back to the start for the next iteration.

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

range(10) = defines range upto 10  
range(0, 10) = defines the range as between 0 and 10.  
range(0, 10, 1) defines the range as between 0 and 10 with steps of 1.

In all the three cases, it will print the numbers from 0 to 9.

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=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?

Import spam

spam.bacon()