Assignment 2

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

Ans1- The two values of Boolean data type is True and False.

In python they are written as initial letters in uppercase rest in lower case such as

True and False.

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

Ans2- The three different types of Boolean operators are

1. And(&&)-returns true if both operand are true returns false if atleast one operand is false.
2. OR(||)-returns true if atleast one operand is true and false if both operands are false
3. NOT(!)-its negates value of operands it makes true operand false and vice versa.

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&&B |
| T | T | T |
| T | F | F |
| F | T | F |
| F | F | F |

Ans3- 1. AND table

2. OR table-

|  |  |  |
| --- | --- | --- |
| A | B | A||B |
| T | T | T |
| T | F | T |
| F | T | T |
| F | F | F |

3. NOT table –

|  |  |
| --- | --- |
| A | ~A |
| T | F |
| F | T |

4. What are the values of the following expressions?

(5 > 4) and (3 == 5)

5>4 is true and 3==5 is false ,and operator is used therefore it is false

not (5 > 4)

not operator negate values therefore it is true.

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

In this or is used therefore it is true.

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

inside the inner parenthesis value is true since not negates the value it becomes false.

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

True and true is true ,True==False is False therefore it is False.

(not False) or (not True)

not false gives true ,not true gives false or operator is used therefore it is True.

5. What are the six comparison operators?

Ans 5- the six operators are

1. Equal to(==)
2. Not equal to(!=)
3. Greater than(>)
4. Less than(<)
5. Greater than or equal to(>=)
6. Less 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.

Ans 6- Equal to (==):

This operator is used for comparison if two values or variables are equal or not .If they are equal it returns true .

Assignment Operator(=):

This is used for variable assignment .It assigns the value on right hand side of operator to the variable on left hand side .It does not perform comparison .

When you want to compare two values you can used equal to and if you want to assign value you can use assignment operator.

7. Identify the three blocks in this code:

spam = 0

if spam == 10:#this is the first block

print('eggs')

if spam > 5:# second block

print('bacon')

else:#third block

print('ham')

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 value for spam: "))

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?

1- Ctrl+break

2-Ctrl+\

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

Ans 10- Break :It is used to exit the current loop .It immediately terminates the existing loop.

Continue-it is used to skip current iteration and move to next iteration .

**break** is used to exit a loop prematurely, while **continue** is used to skip the current iteration of a loop and move on to the next iteration.

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

Ans11- they are produce same output but are slightly different-

Range(10)-it starts its sequence from 0 (default)to 10 with 1 as step index as default.

Range(0,10)- it starts its sequence from 0 to 10 with 1 as step index as default

Range(0,10,1)-in the every parameter is mentioned starting of sequence ending and step index.

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.

Ans12- Using a for loop

for i in range(1, 11):

print(i)

2-using while loop

i=1

while i<=10:

print(i)

i=i+1

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

Ans13- it can be done using dot operator like this:

spam.bacon()