**Assignment-2 Solution**

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

Solution: - The two values of Boolean data type are **TRUE** and **FALSE** and this is the way they are written.

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

Solution: - The three different types of Boolean operators are: **AND, OR, NOT**.

1. 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** | **NOT A** | **A AND B** | **A OR B** |
| FALSE | FALSE | TRUE | FALSE | FALSE |
| FALSE | TRUE | TRUE | FALSE | TRUE |
| TRUE | FALSE | FALSE | FALSE | TRUE |
| TRUE | TRUE | FALSE | TRUE | TRUE |

Solution: -

1. What are the values of the following expressions?
2. (5 > 4) and (3 == 5) -> FALSE
3. not (5 > 4) -> FALSE
4. (5 > 4) or (3 == 5) -> TRUE
5. not ((5 > 4) or (3 == 5)) -> FALSE
6. (True and True) and (True == False) -> FALSE
7. (not False) or (not True) -> TRUE
8. What are the six comparison operators?

Solution: - The six comparison operators are:

1. >
2. <
3. !=
4. ==
5. <=
6. >=
7. How do you tell the difference between the equal to and assignment operators? Describe a condition and when you would use one.

Solution: ‘=’ is an assignment operator. It is used to assign a value to a variable.

For Example: a = 10. Here we assign the value 10 to the variable ‘a’.

‘==’ is equal to operator. It is used to check if one value matches with another.

For Example: a = 10

b = 20

a == b

Output: False

1. Identify the three blocks in this code:

spam = 0

if spam == 10: ------------------🡪 Block 1

print(‘eggs’)

if spam > 5: ------------------🡪 Block 2

print(‘bacon’)

else: ------------------🡪 Block 3

print(‘ham’)

print(‘spam&’)

print(‘spam’)

1. 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.

Solution: -

spam = input("Enter the value for spam: ")

if spam == '1':

print("Hello")

elif spam == '2':

print("Howdy")

else:

print("Greetings!")

Output: Enter the value for spam: g

Greetings!

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

Solution: - CTRL + C

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

Solution:-

|  |  |
| --- | --- |
| **BREAK** | **CONTINUE** |
| 1. The execution of a loop stops at a particular condition. 2. The control exits from the loop in a Break Statement. | 1. A particular iteration of a loop can be skipped. 2. In the Continue Statement, the control remains within the loop. |

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

Solution: -

1. range(10) : It will count values from 0 by default to 9.
2. range(0,10) : It will count values specifically from 0 to 9. If the lower bound is set to some other value then the count will start from that value.

For Example: range(1,10): It will count values from 1 to 9.

1. range(0,10,1) : It will count values from 0 to 9 with a jump of 1.
2. 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.

Solution: -

1. Using FOR Loop:

for i in range(1,11):

print (i, end= ‘ ’)

1. Using WHILE Loop:

i = 1

while (i<=10):

print (i, end= ‘ ’)

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

Solution: - spam.bacon()