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

Answer: Boolean data has only two values - True or False

It can be denoted as follows:

isYes = True;

IsNo = False;

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

Answer: The three boolean operators are AND,OR and 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 ).

Answer:

AND operator truth table:

|  |  |  |
| --- | --- | --- |
| A | B | A AND B |
| True | True | True |
| True | False | False |
| False | True | False |
| False | False | False |

OR operator truth table:

|  |  |  |
| --- | --- | --- |
| A | B | A OR B |
| True | True | True |
| True | False | True |
| False | True | True |
| False | False | False |

NOT operator:

|  |  |
| --- | --- |
| A | NOT A |
| True | False |
| False | True |

4. What are the values of the following expressions?

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

not (5 > 4)

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

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

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

(not False) or (not True)

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 |

1. What are the six comparison operators?

Answer: >,<,<=,>=,!=,==

1. How do you tell the difference between the equal to and assignment operators?Describe a condition and when you would use one.

Answer: equal to operator(==) check if both the operands in the expression are equal and return True or False based on the evaluation.

Example:

a,b =10,20;

if(a == b): #verifies if a is equal to b.

return True

else:

return False

Assignment operator(=) on the other hand assigns a value to a variable.

Example:

a=10; #assignment of a value to a variable.

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: The blocks in the following are as below:

spam = 0

if spam == 10:

#block1

print('eggs')

if spam > 5:

#block2

print('bacon')

else:

#block3

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.

Answer:

Code:

spam = input();

if(spam == 1):

print(“Hello”)

if(spam == 2):

print(“Howdy”);

else:

print(“Greetings”);

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

Answer: Ctrl+Z.

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

Answer:

 Difference between break and continue is that break is used for immediate termination of loop. On the other hand, ‘continue’ terminate the current iteration and resumes the control to the next iteration of the loop.

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

Answer:

Range(10): Prints values from 0 to 9.

Range(0,10): range(start,end)- prints, values from start value 0 till end-1, i.e., 9.

Range(0,10,1): range(start,end,increment) - prints values from start value 0 till end-1, i.e., 9 in increments of 1.

1. 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.

Answer:

For loop:

for i in range(1,11):

print(i);

while loop:

i=1;

while(i<11):

print(i)

i=i+1

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

Answer:

from spam import Bacon()

spam.bacon()