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

True, False

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

and, or, 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 ).

and:

|  |  |  |
| --- | --- | --- |
| X | Y | Result(X and Y) |
| True | True | True |
| True | False | False |
| False | False | False |
| False | True | False |

or:

|  |  |  |
| --- | --- | --- |
| X | Y | Result(X or Y) |
| True | True | True |
| True | False | True |
| False | False | False |
| False | True | True |

not:

|  |  |
| --- | --- |
| X | not(X) |
| True | 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?

==

!=

>=

<=

>

<

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

Equal to == is used to compare two values

assignment = is used to assign the value to a variable

condition is a expression that would be used to control the flow of program and executes until it satisfies the condition. It would be used in looping statements.

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')

3 blocks are:

print(‘eggs’)

if spam>5:

print(‘bacon’)

else:

print(‘ham’)

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 the 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?

break statement can be used to terminate the loop immediately when my condition meets

eg: for i in range(5):

if i==3:

break

print(i)

in the above code, when i==3, break statement terminates the loop and doesn’t print the value 3. It prints from 0 to 2.

Continue statement can be used to skip the current iteration and continue with the next iteration

Eg: for i in range(5):

If i==3:

continue

print(i)

In the above code, when i will be equal to 3, it skips the iteration and continues to the next. Hence, it will print the values 0 1 2 4. 3 will be skipped.

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

range(10), range(0,10), range(0,10,1) all will provide the same output. range(10) will start the loop from 0 to 10(doesn’t include the value 10). range(0,10) will tells that the loop will start at 0. range(0,10,1) will tells that the loop will start at 0 and after every increment, it should add 1.

Hence, all will return the same output that is 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?

spam.bacon()