ITC110 Chapter 2 Questions

Ted Callow

|  |  |
| --- | --- |
|  | 1. What are the two values of the Boolean data type? How do you write them? True and False. Written that way. |
|  | 2. What are the three Boolean operators? And, Or, Not [not sure if ‘not’ is technically a binary operator]). |
|  | 3. Write out the truth tables of each Boolean operator (that is, every possible combination of Boolean values for the operator and what they evaluate to).  True and True = True  True and False = False  False and False = False  True or True = True  True or False = True  False or False = False |
|  | 4. What do the following expressions evaluate to?  (5 > 4) and (3 == 5) **True** 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? Comparison operators (==, !=, >, <, >=, <=. ) |
|  | 6. What is the difference between the equal to operator and the assignment operator? eqals (==) means the value is equal. The assignment operator (=) means the value is (temporarily) stored in a certain variable. |
|  | 7. Explain what a condition is and where you would use one. A condition is a hypothetical statement that says something will happen, if something else happens. |
|  | 8. Identify the three blocks in this code:  spam = 0 **(1)** if spam == 10:**(2)**  print('eggs')  if spam > 5:  print('bacon')  else:  print('ham')  print('spam') print('spam') **(3)** |
|  | 9. Write code that prints Hello if 1 is stored in spam, prints Howdy if 2 is stored in spam, and printsGreetings! if anything else is stored in spam.  if spam =1:  print(‘hello’)  elif spam = 2:  print(‘howdy’)  else:  print(‘Greetings!’) |
|  | 10. What can you press if your program is stuck in an infinite loop? CTRL-C |
|  | 11. What is the difference between break and continue? Break stops the program. Continue reiterates the loop one more time. |
|  | 12. What is the difference between range(10), range(0, 10), and range(0, 10, 1) in a for loop?  range(10) - repeats the operation/loop 10 times, i.e. counts to 10  range(0,10) starts at 0 and counts to 10, so it’s essentially the same.  range (0,10,1) starts at 0 and counts to 10 by intervals of 1 (so also essentially the same). |
|  | 13. 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.  A.  for i in range(10)  print(i)  B.  i=0  while i<10  i = i+1  print(i) |
|  | 14. If you had a function named bacon() inside a module named spam, how would you call it after importingspam?  spam.bacon()  **Extra credit:** Look up the round() and abs() functions on the Internet, and find out what they do. Experiment with them in the interactive shell. |