Module B.2: Level 1 Basic Math & Strings

1. Expression: 5- 6+ 52- 15+ 545- 656 = -75
2. Expression: 5\* 6/ 9\* 45/ 100\* 2 = 3
3. Expression: 10/5 = 2.0
   1. Expression: 65/2 = 32.5
4. Expression: round(10/5) = 2
   1. Expression: round(65/2) = 32
5. In Python one equal sign is used to assign a value to a variable, but two consecutive equal marks is used to check whether 2 expressions are the same value.
6. **True:** 5- 34\* 2+ 78> 5 **False:** 68/2+4 != 38
7. Apple is not read by python without quotations because in order for python to read the string it must be in quotations.
   1. “2+5” does not equal 7 because the expression is in between quotes, which means it is meant as a string and not an expression to be answered.
8. Typing “appl” + “e” or “hello” \*10 into python works because the addition and multiplication are the only operators that work with strings and you can only add or multiply strings together not take them away.
9. L[0] E[1] Y[2] A[3]
10. Print (“hello!” [4]) does not print l because the indexes always start at zero which means the fourth index is o.
    1. Print (“Hay, Bob!” [4]) prints the space because all of the characters are counted including spaces and punctuations.
11. Print (“Hello!” [7]) gives an error because there are less than 7 indexes in the string.

Module B.2: Level 2 Booleans and Variables

1. Puppies/3 =12
   1. Kittens /3 does not work because i did not make it a variable.
2. Puppies=36 is making puppies a variable for 36.
   1. Puppies/36 is placing the variable into an expression.
   2. Typing puppies into python shows what the variable is worth. Ex. Puppies is equal to 36.
3. Color =“red” is assigning color as a variable to represent the string “red”.
   1. Puppies=36  is making puppies a variable for 36.
   2. Color + puppies is taking the two variables and adding them together to make red 36.
4. Color + day \*fishes gives a different result than (color+day)\*fishes because the brackets tells python to concatenate color and day then multiply the strings together.
5. The index of r in “watermelon” is 4.
   1. “Watermelon” [mynumber +1]
6. The = sign is used to assign a value and an == sign is used as a comparison.
7. “Friend” + 5 doesn’t work because python cannot concatenate two different types of data.
   1. Int is an integer and str is a string.
8. The value of type(“true”) is string because it has quotations which indicate that it is a string and the value of type(True) is a boolean because it has a capital t.
9. “Friend” + 5 is a syntax error.
10. Print (“Leya, Abubaker”)
11. Having a boolean data type is important because it helps for making decisions.
12. I think there is no maybe in Boolean data because Boolean is used to make decisions and the maybe will not help in making decisions.

Module B.2: Level 3 Lists and Logic

1. True and True = True, True and False = False, False and True = False, False and False = False.
   1. True or True, False or True, False or False, not True and True, not True or True
   2. The AND operator is similar to a math operator because it acts as an addition operator.
2. True or True = True, True or False = True, False or True = True, False or False = False
   1. The OR operator is different than the AND operator because it makes either one thing or the other correct, but the AND operator needs both objects to be correct.
3. False, False, False, True
   1. Because they both give the same results.
4. They give different answers because without the brackets the not acts as an AND operator.
5. 1==2 False, 15>7 True, 15!=15 False.
6. Teams=[“maple leafs”, “Raptors”, “Barcelona”]
7. Teams[2]= “Barcelona”
   1. “Fruit[3]” is a syntax error because it is making fruit[3] a string.