**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Session: \_\_\_\_**

**Programming I**

**Lab Exercise 1.18.2023**

1. Write a Python program to print out a set containing all the colors from color\_list\_1 which are not present in color\_list\_2.    
   Test Data :  
   color\_list\_1 = set(["White", "Black", "Red"])  
   color\_list\_2 = set(["Red", "Green"])  
   Expected Output :  
   {'Black', 'White'}
2. Write a Python program to solve (x + y) \* (x + y).    
   Test Data : x = 4, y = 3  
   Expected Output : (4 + 3) \*\* 2) = 49
3. Write a Python program to compute the future value of a specified principal amount, rate of interest, and a number of years.    
   Test Data : amt = 10000, int = 3.5, years = 7  
   Expected Output : 12722.79
4. Write a Python program to check the sum of three elements (each from an array) from three arrays is equal to a target value. Print all those three-element combinations.    
   Sample data:  
   X = [10, 20, 20, 20]  
   Y = [10, 20, 30, 40]  
   Z = [10, 30, 40, 20]  
   target = 70
5. Write a Python program to get all possible two digit letter permutations from a digit (1 to 9) string.    
   string\_maps = {  
   "1": "abc",  
   "2": "def",  
   "3": "ghi",  
   "4": "jkl",  
   "5": "mno",  
   "6": "pqrs",  
   "7": "tuv",  
   "8": "wxy",  
   "9": "z"  
   }

Hint: 2 letter permutations of “abc” are ab, ac, bc, cb, ca, ba.