Set Assignment 3

Q1. Given two sets, A and B.

Write a python program which find all elements that are in either A or B, but not in both. Create a third set with these elements.

A = {1, 2, 3, 4}

B = {3, 4, 5, 6}

Q2. Given two sets, X and Y.

Write a python program which check if all elements of X are present within Y. If present, then remove those elements from Y; otherwise, add the elements of X to Y.

Test case 1: X = {2, 4}

Y = {1, 2, 3, 4, 5}

Test case 2: X = {6, 7}

Y = {1, 2, 3, 4, 5}

Q3. You are given three lists, L1, L2, and L3.

Write a python program which combine all unique elements from these lists into a set. After that, remove any elements that appear in all three lists.

L1 = [1, 2, 3, 4]

L2 = [3, 4, 5, 6]

L3 = [1, 4, 6, 7]

Hint: Use the concept of 'set'

Q4. Write a python program if a set and list is given then, for each element in L, if it's not already in S, add it; otherwise, remove it from S and then print S.

S = {1, 2, 3}

L = [2, 3, 4, 5]

Output: {1, 4, 5}

Q5. Write a python program which combine three sets, A, B, and C. Then, if any number in the set is greater than 10, remove all such numbers.

A = {2, 3, 5}

B = {5, 7, 11}

C = {11, 13, 17}

Q6. Given two sets, X and Y,

Write a python program which find the common elements and store them in a new set. Then, create another set with elements that are unique to either X or Y, but not both.

X = {10, 20, 30, 40}

Y = {30, 40, 50, 60}