PYTHON PROGRAMMING

LAB-15 Answers

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1. Write a Python program to Get Only unique items from two sets.

Input:

set1 = {10, 20, 30, 40, 50}

set2 = {30, 40, 50, 60, 70}

Output: {70, 40, 10, 50, 20, 60, 30}

Code:

```
set1 = {10, 20, 30, 40, 50} #input(set1)as set of elements.
set2 = {30, 40, 50, 60, 70} #input(set2)as set of elements.

unique_items = set1.union(set2)# Combine the two sets and convert to set to get unique items.

print(unique_items) #printing the unique items(unique_items).
```

Output:

{70, 40, 10, 50, 20, 60, 30}

2. Write a Python program to Return a set of elements present in Set A or B, but not both.

Input:

set1 = {10, 20, 30, 40, 50}

set2 = {30, 40, 50, 60, 70}

Output: {20, 70, 10, 60}

Code:

```
set1 = {10, 20, 30, 40, 50} #taking input(set1).
set2 = {30, 40, 50, 60, 70} #taking input(set2).

result = set1.symmetric_difference(set2) #finding the elements present in the set1 or set2 by using symmetric_difference.

print(result) # printing the result as elements present in the set1 or set2 .
```

Output:

{20, 70, 10, 60}

3. Write a Python program to Check if two sets have any elements in common. If yes, display the common elements.

Input:

set1 = {10, 20, 30, 40, 50}

set2 = {60, 70, 80, 90, 10}

Output: {10}

Code:

```
set1 = {10, 20, 30, 40, 50} #taking input(set1).
set2 = {60, 70, 80, 90, 10}#taking input(set2).

common_elements = set1.intersection(set2) # Checking if two sets have any elements in common by using intersection.

if common_elements: # Checking if two sets have any elements in common.
    print(common_elements) #prints if two sets have any element is common.
else:
    print("No common elements found.")#prints if two sets do not have any element is common.
```

Output:

{10}

4. Write a Python program to Remove items from set1 that are not common to both set1 and set2.

Input:

set1 = {10, 20, 30, 40, 50}

set2 = {30, 40, 50, 60, 70}

Output: {40, 50, 30}

Code:

```
set1 = {10, 20, 30, 40, 50} #taking input(set1).
set2 = {30, 40, 50, 60, 70} #taking input(set2).

set1.intersection_update(set2)#Removing items from set1 that are not common to both set1 and set2 by using intersection.

print(set1) # printing the set1.
```

Output:

{40, 50, 30}