Python Programming

Lab:- 15(Set)

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Set:- **A set is an unordered collection of unique elements. In Python, sets are created using curly braces {} or the set () function. Sets do not allow duplicate values and are commonly used for membership testing and eliminating duplicate entries.**

Example:

```
lab15.py > ...
36
37
38    # Example of a set
39    my_set = {1, 2, 3, 4, 5}
40    print(my_set)  # Output: {1, 2, 3, 4, 5}
41
```

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}

Program :-

```
lab15.py > ...
1   #  Write a Python program to Get Only unique items from two sets.
2
3   # Input: set1 = {10, 20, 30, 40, 50} set2 = {30, 40, 50, 60, 70} Output: {70, 40, 10, 50, 20, 60, 30}
4
5   # Function to get unique items from two sets
6   def unique_items(set1, set2):
7       # Using symmetric difference to get unique items
8       unique_set = set1.symmetric_difference(set2)
9       return unique_set
10
11  # Input sets
12  set1 = {10, 20, 30, 40, 50}
13  set2 = {30, 40, 50, 60, 70}
14
15  # Get unique items
16  result = unique_items(set1, set2)
17  print("Unique items from both sets:", result)  # Output: {10, 20, 60, 70}
18
```

Output:-

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  TEST RESULTS  PORTS

PS C:\Users\Raj Kumar\Desktop\python programming> & "C:/Users/Raj Kumar/AppData/Local/Programs/Python/Python312/pytho
n.exe" "c:/Users/Raj Kumar/Desktop/python programming/lab15.py"
Unique items from both sets: {20, 70, 10, 60}
PS C:\Users\Raj Kumar\Desktop\python programming>
```

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}

Program:-

lab15.py > ...

```
20
21  #  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}
22
23  # Function to get elements present in Set A or B, but not both
24  def exclusive_items(set1, set2):
25      # Using symmetric difference to find elements in either set but not both
26      exclusive_set = set1.symmetric_difference(set2)
27      return exclusive_set
28
29  # Input sets
30  set1 = {10, 20, 30, 40, 50}
31  set2 = {30, 40, 50, 60, 70}
32
33  # Get exclusive items
34  result = exclusive_items(set1, set2)
35  print("Elements present in Set A or B, but not both:", result)  # Output: {10, 20, 60, 70}
36
```

Output:-

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  TEST RESULTS  PORTS

PS C:\Users\Raj Kumar\Desktop\python programming> & "C:/Users/Raj Kumar/AppData/Local/Programs/Python/Python312/pytho
n.exe" "c:/Users/Raj Kumar/Desktop/python programming/lab15.py"
Elements present in Set A or B, but not both: {20, 70, 10, 60}
PS C:\Users\Raj Kumar\Desktop\python programming>
```