

SET

Write a program to check if 'apple' is present in the set {'apple', 'banana', 'cherry'}.

```
set1 = {'apple', 'banana', 'cherry'}
print("apple" in set1)
```

True

5.Length of a Set:

Find the length of the set numbers = {10, 20, 30, 40, 50}.

```
numbers = {10, 20, 30, 40, 50}
print(len(numbers))
```

5

6.Remove Duplicates from a List:

Write a program to remove duplicates from the list [1, 2, 2, 3, 4, 4, 5] using a set.

```
list1= [1, 2, 2, 3, 4, 4, 5]
#set dosen't have duplicate values
print(set(list1))
```

{1, 2, 3, 4, 5}

=== Code Execution Successful ===

7.Find Common Elements:

Given two lists:

list1 = [1, 2, 3, 4]

list2 = [3, 4, 5, 6]

Find the common elements using a set.

```
list1 = [1, 2, 3, 4]
list2 = [3, 4, 5, 6]
#converting to set to use the intersection concept
set1 = set(list1)
set2 = set(list2)
print("The common elements are:")
print(set1 & set2)
```

The common elements are:
{3, 4}

=== Code Execution Successful ===

8.Unique Characters in a String:

Write a program to find all unique characters in the string "programming" using a set.

```
str1 = "programming"
set1 = set(str1)
print(f' All the unique characters are: {set1}')
```

All the unique characters are: {'g', 'o', 'a', 'n', 'r', 'p', 'm', 'i'}

9. Union of Sets:

Find the union of the sets:

set1 = {1, 2, 3}

set2 = {3, 4, 5}

<pre>set1 = {1, 2, 3} set2 = {3, 4, 5} print("Union of set is:") print(set1 set2)</pre>	<pre>Union of set is: {1, 2, 3, 4, 5} === Code Execution Successful ===</pre>
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10. Intersection of Sets:

Find the intersection of the sets:

A = {'a', 'b', 'c'}

B = {'b', 'c', 'd'}

<pre>A = {'a', 'b', 'c'} B = {'b', 'c', 'd'} print("Intersection of both the sets is:") print(A & B)</pre>	<pre>Intersection of both the sets is: {'c', 'b'} === Code Execution Successful ===</pre>
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11. Difference of Sets:

Find the difference of the sets:

X = {1, 2, 3, 4}

Y = {3, 4, 5, 6}

<pre>X = {1, 2, 3, 4} Y = {3, 4, 5, 6} print("The difference of set is:") print(X-Y) #one way of doing print(Y-X) #another way</pre>	<pre>The difference of set is: {1, 2} {5, 6} === Code Execution Successful ===</pre>
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