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20bsc132

1. Write a Python program to create a new empty set.

ans}

**print("Create a new set:")**

**x = set()**

**print(x)**

**print(type(x))**

**output:**

**Create a new set:**

**set()**

**<class 'set'>**

1. Write a Python program to add member(s) in a set.

ans]

#A new empty set

color\_set = set()

print(color\_set)

print("\nAdd single element:")

color\_set.add("Red")

print(color\_set)

print("\nAdd multiple items:")

color\_set.update(["Blue", "Green"])

print(color\_set)

output:

set()

Add single element:

{'Red'}

Add multiple items:

{'Green', 'Red', 'Blue'}

1. Write a Python program to remove item(s) from set.

ans}

num\_set = set([0, 1, 3, 4, 5])

print("Original set:")

print(num\_set)

num\_set.pop()

print("\nAfter removing the first element from the said set:")

print(num\_set)

output:

Original set:

{0, 1, 3, 4, 5}

After removing the first element from the said set:

{1, 3, 4, 5}

1. Write a Python program to remove an item from a set if it is present in the set

ans}

#Create a new set

num\_set = set([0, 1, 2, 3, 4, 5])

print("Original set elements:")

print(num\_set)

print("\nRemove 0 from the said set:")

num\_set.discard(4)

print(num\_set)

print("\nRemove 5 from the said set:")

num\_set.discard(5)

print(num\_set)

print("\nRemove 2 from the said set:")

num\_set.discard(5)

print(num\_set)

print("\nRemove 7 from the said set:")

num\_set.discard(15)

print(num\_set)

output:

Original set elements:

{0, 1, 2, 3, 4, 5}

Remove 0 from the said set:

{0, 1, 2, 3, 5}

Remove 5 from the said set:

{0, 1, 2, 3}

Remove 2 from the said set:

{0, 1, 2, 3}

Remove 7 from the said set:

{0, 1, 2, 3}

1. Write a Python program to create an intersection of sets

ans}

setx = set(["green", "blue"])

sety = set(["blue", "yellow"])

print("Original set elements:")

print(setx)

print(sety)

print("\nIntersection of two said sets:")

setz = setx & sety

print(setz)

output:

Original set elements:

{'green', 'blue'}

{'blue', 'yellow'}

Intersection of two said sets:

{'blue'}

1. Write a Python program to create a union of sets

ans}

setc1 = set(["green", "blue"])

setc2 = set(["blue", "yellow"])

print("Original sets:")

print(setc1)

print(setc2)

setc = setc1.union(setc2)

print("\nUnion of above sets:")

print(setc)

setn1 = set([1, 1, 2, 3, 4, 5])

setn2 = set([1, 5, 6, 7, 8, 9])

print("\nOriginal sets:")

print(setn1)

print(setn2)

print("\nUnion of above sets:")

setn = setn1.union(setn2)

print(setn)

output:

Original sets:

{'blue', 'green'}

{'blue', 'yellow'}

Union of above sets:

{'blue', 'yellow', 'green'}

Original sets:

{1, 2, 3, 4, 5}

{1, 5, 6, 7, 8, 9}

Union of above sets:

{1, 2, 3, 4, 5, 6, 7, 8, 9}

1. Write a Python program to create set difference.

ans}

setc1 = set(["green", "blue"])

setc2 = set(["blue", "yellow"])

print("Original sets:")

print(setc1)

print(setc2)

r1 = setc1.difference(setc2)

print("\nDifference of setc1 - setc2:")

print(r1)

r2 = setc2.difference(setc1)

print("\nDifference of setc2 - setc1:")

print(r2)

setn1 = set([1, 1, 2, 3, 4, 5])

setn2 = set([1, 5, 6, 7, 8, 9])

print("\nOriginal sets:")

print(setn1)

print(setn2)

r1 = setn1.difference(setn2)

print("\nDifference of setn1 - setn2:")

print(r1)

r2 = setn2.difference(setn1)

print("\nDifference of setn2 - setn1:")

print(r2)

output:

Original sets:

{'green', 'blue'}

{'yellow', 'blue'}

Difference of setc1 - setc2:

{'green'}

Difference of setc2 - setc1:

{'yellow'}

Original sets:

{1, 2, 3, 4, 5}

{1, 5, 6, 7, 8, 9}

Difference of setn1 - setn2:

{2, 3, 4}

Difference of setn2 - setn1:

{8, 9, 6, 7}

1. Write a Python program to find maximum and the minimum value in a set

ans}

#Create a set

setn = {5, 10, 3, 15, 2, 20}

print("Original set elements:")

print(setn)

print(type(setn))

print("\nMaximum value of the said set:")

print(max(setn))

print("\nMinimum value of the said set:")

print(min(setn))

output:

Original set elements:

{2, 3, 5, 10, 15, 20}

<class 'set'>

Maximum value of the said set:

20

Minimum value of the said set:

2

1. Write a Python program to find maximum and the minimum value in a set

ans} above

10) Write a Python program to create a set from List.

ans}

# Creating a Set with

# a List of Numbers

# (Having duplicate values)

set1 = set([1, 2, 4, 4, 3, 3, 3, 6, 5])

print("\nSet with the use of Numbers: ")

print(set1)

# Creating a Set with

# a mixed type of values

# (Having numbers and strings)

set1 = set([1, 2, 'live', 4, 'For', 6, 'happy'])

print("\nSet with the use of Mixed Values")

print(set1)

output:

Set with the use of Numbers:

{1, 2, 3, 4, 5, 6}

Set with the use of Mixed Values

{1, 2, 4, 'live', 6, 'For'}