SET

#Author - Shiuli Maji Date - 10/01/2023

 # # (a) Create an empty set set1=set()

print("The empty set is : ",set1)

OUTPUT:

PS D:\Python\SET> python -u "d:\Python\SET\problem.py"

The empty set is : set()

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 # (b) add some elements to it set1=set()

print("The set is : ",set1) set1.update({1,4,85,3})

print("After add some elements , the set is :",set1)

OUTPUT:

PS D:\Python\SET> python -u "d:\Python\SET\problem.py"

The set is : set()

After add some elements , the set is : {1, 3, 4, 85}

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 # # (c) prove that set elements are unique

s2={1,1,1,2,2,4,5,6,3,3,4,3} print("The set is :

",s2)

print("Set don't print the duplicate value, So set elements are unique.")

OUTPUT:

PS D:\Python\SET> python -u "d:\Python\SET\problem.py"

The set is : {1, 2, 3, 4, 5, 6}

Set don't print the duplicate value, So set elements are unique.

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 # # (d) create sets from list, tuple and string

li=[1,4,562,4,2,5,3] print("The list is",li)

tu=(7,8,5,7,2,4,2) print("The tuple is",tu)

st="Central Calcutta Polytechnic" print("The

string is",st) print("The set from the list : ")

print(set(li))

print("The set from the tuple : ") print(set(tu))

print("The set from the string : ") print(set(st))

OUTPUT:

PS D:\Python\SET> python -u "d:\Python\SET\problem.py"

The list is [1, 4, 562, 4, 2, 5, 3]

The tuple is (7, 8, 5, 7, 2, 4, 2)

The string is Central Calcutta Polytechnic The

set from the list :

{1, 2, 3, 4, 5, 562}

The set from the tuple :

{2, 4, 5, 7, 8}

The set from the string :

{' ', 'i', 'e', 'l', 'r', 'P', 'C', 'n', 'h', 'y', 't', 'u', 'o', 'c', 'a'}

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 # (e) use update() method to update a set

```
set1={1,2,3,4,5,2,1}
set2={7,8,9,4,5,2} print("The
first set is :",set1) print("The
second set is :",set2)
print("After update() method , the set is : ",end=' ')
set1.update(set2) print(set1)
```

OUTPUT:

```
PS D:\Python\SET> python -u "d:\Python\SET\problem.py"
The first set is : {1, 2, 3, 4, 5}
The second set is : {2, 4, 5, 7, 8, 9}
After update() method , the set is :  {1, 2, 3, 4, 5, 7, 8, 9}
```

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 # (f) create a frozen set fs={1,1,2,4,3,5,2}

```
print("The frozenset is :",end='') print(frozenset(fs))
```

OUTPUT:

```
PS D:\Python\SET> python -u "d:\Python\SET\problem.py" The
frozenset is :frozenset({1, 2, 3, 4, 5})
```

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 # # (g) use union and intersection method to do operations on sets

```
s3={1,2,3,4,5,6} s4={5,6,7,8}
print("The first set is : ",s3) print("The
second set is : ",s4) print("After union()
method the  set is : ") print(s3.union(s4))
print("After intersection() method the  set is : ") print(s3.intersection(s4))
```

OUTPUT:

```
PS D:\Python\SET> python -u "d:\Python\SET\problem.py"
The first set is :  {1, 2, 3, 4, 5, 6}
The second set is :  {8, 5, 6, 7}
After union() method the  set is :
{1, 2, 3, 4, 5, 6, 7, 8}
After intersection() method the  set is :
{5, 6}
```

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 # # (h) copy a set import

```
copy
s5={1,2,3,4,5}
print("The original set is :",s5)
s6=copy.deepcopy(s5) print("The
copied set is :",s6) print("The id of
```

original set is :",id(s5)) print("The id of

copied set is :",id(s6))

OUTPUT:

PS D:\Python\SET> python -u "d:\Python\SET\problem.py"

The original set is : {1, 2, 3, 4, 5}

The copied set is : {1, 2, 3, 4, 5}

The id of original set is : 1511929129536

The id of copied set is : 1511929129760