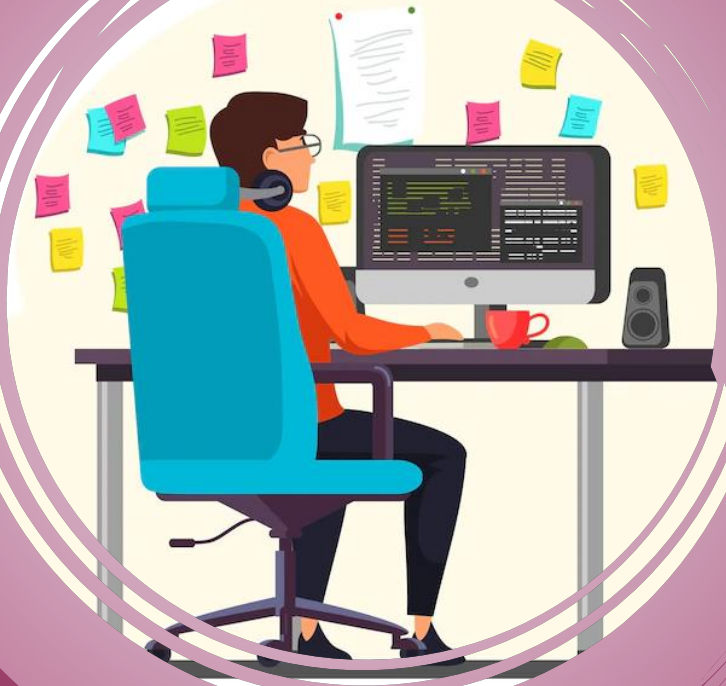
TAMILNADU ADVANCED TECHNICAL TRAINING INSTITUTE



PYTHON

Sets

A Python set is the collection of the unordered items. Each element in the set must be unique, immutable, and the sets remove the duplicate elements. Sets are mutable which means we can modify it after its creation.

Operations

- Add items
- Remove items
- Update
- Union
- Intersect
- Difference

Contoso

Built-in Set methods

clear()

copy()

difference_update()

Discard()

intersection_update()

isdisjoint()

issubset()

issuperset()

symmetric_Difference()

symmetric_dfference_update()

Contoso

Programs

```
Myset= {"a",”b”,”c”}
print(Myset)
print(type(Myset))
print("looping through the set elements ... ")
for i in Myset:
    print(i)
```

Programs

```
Myset= set(["a",”b”,”c”] )
print(Myset)
print(type(Myset))
print("looping through the set elements ... ")
for i in Myset:
    print(i)
```

Contoso

Programs

```
set1 = {1,2,3, "Python", 20.5, 14}
print(type(set1))
#Creating a set which have mutable element
set2 = {1,2,3,["Python"],4]}
print(type(set2))
set3 = {}
print(type(set3))
set4 = set()
print(type(set4))
```

Programs

```
Myset= set(["a",”b”,”c”] )
print(Myset)
print(type(Myset))
Myset.add(“d”)
Myset.add(“e”)
for i in Myset:
    print(i)
```

Programs

```
Myset= set(["a",”b”,”c”] )
print(Myset)
print(type(Myset))
Myset.update([“d”,”e”])
for i in Myset:
    print(i)
```

Contoso

Programs

```
Myset= set(["a",”b”,”c”] )
print(Myset)
print(type(Myset))
Myset.discard(“d”)
for i in Myset:
    print(i)
```

Programs

```
Myset= set(["a",”b”,”c”] )
print(Myset)
print(type(Myset))
Myset.remove(“d”)
for i in Myset:
    print(i)
```

Programs

```
Myset={“a”,”b”,”c”}
Myset2={“d”,”e”,”f”,”c”}
print(Myset|Myset2) #printing the union of the sets
```

Contoso

Programs

```
Myset={“a”,”b”,”c”}
Myset2={“d”,”e”,”f”,”c”}
print(Myset&Myset2) #printing the intersection of the sets
```

Programs

```
Myset={“a”,”b”,”c”}
Myset2={“d”,”e”,”f”,”c”}
print(Myset.intersection(Myset2)) #prints the intersection of the two sets
```

Programs

```
Myset={“a”,”b”,”c”}
Myset2={“d”,”e”,”f”,”c”}
print(Myset-Myset2) #printing the difference of the sets
```

Programs

```
Myset={“a”,”b”,”c”}
Myset2={“d”,”e”,”f”,”c”}
print(Myset.difference(Myset2)) # prints the difference of the two sets
```

Programs

```
a = {1,2,3,4,5,6}
b = {1,2,9,8,10}
c = a^b
print(c)
#prints symmetric difference
```

Programs

```
Myset = {"Monday",  "Tuesday", "Wednesday", "Thursday"}
Myset2 = {"Monday", "Tuesday"}
Myset3 = {"Monday", "Tuesday", "Friday"}
 #Myset is the superset of Myset2 hence it will print true.
print (Myset>Myset2)
#prints false since Myset is not the subset of Myset2
print (Myset<Myset2)
#prints false since Myset2 and Myset3 are not equivalent
print (Myset2 == Myset3)
```

Programs

```
Frozenset = frozenset([1,2,3,4,5])
print(type(Frozenset))
print("\nprinting the content of frozen set...")
for i in Frozenset:
    print(i);
Frozenset.add(6) #gives an error since we cannot change the content of Frozenset after creation
```

Programs

```
Dictionary = {"Name":"John", "Country":"USA", "ID":101}
print(type(Dictionary))
Frozenset = frozenset(Dictionary); #Frozenset will contain the keys of the dictionary
print(type(Frozenset))
for i in Frozenset:
    print(i)
```