**SET AND DICTIONARY**

* **Meaning of SET:**
* It is used to store multiple items in a single variable.
* A set is a collection which is unordered and unindexed.
* Do not allow duplicate values.
* It is mutable.
* Set can be immutable by using a frozen set.
* The curly braces {} represent it**.**
* **Methods in set:**

1. Add
2. Clear
3. Copy
4. Pop
5. Remove
6. Update

* **Operations in set:**

1. Union
2. Difference
3. Intersection
4. Symmetric difference

**Methods:**

* **Add:**
* It is used to insert a single element into a set.
* Example: a={3,4,5,6,8}

a.add(57)

print(a)

Output:{ 3,4,5,6,8,57}

* **Clear:**
* It removes all of the elements from the Set.
* Example: a={1,4,5,6,3}

a.clear()

print(a)

output: set()

* **Copy:**
* It is used to create a copy of the list as required by the user.
* Example: a={1,4,3,2,5,8}

a.copy()

print(a)

Output: {1, 2, 3, 4, 5, 8}

* **Pop:**
* It removes any random element from the set.
* Example: a={3,4,5,2,6,7}

a.pop()

print(a)

output: {3,4,5,6,7}

* **Remove:**
* It is used to remove the specified element from the set.
* Example: set1={20,30,40,50,60}

Set1.remove(50)

print(a)

output: {20,30,40,60}

* **Update:**
* It is used to insert multiple elements into a set.
* Example: set1={10,30,40,50,60}

Set1.update({2,4,6,8})

Print(set1)

Output: {2,4,6,8,10,30,40,50,60}

**Operations:**

* **Union:**
* It is used to two or more sets combine and the resulting set contains all of the elements present in each set.
* Example: set1={1,2,3,4}

set2={5,6,7,8}

print(set1.union(set2))

output: {1,2,3,4,5,6,7,8}

* **Difference:**
* It is used to identify the difference between two sets.
* Example: set1={1,2,3,4}

set2={5,6,7,8}

print(set1.difference(set2))

output-{1,2,3,4}

* **Intersection:**
* It is used to return the common items from the two sets.
* Example: set1={1,2,3,4}

set2={5,3,4,8}

print(set1.difference(set2))

output-{3,4}

* **Symmetric difference:**
* It removes the common element from the sets.
* Example: set1={1,2,3,4}

set2={5,3,4,8}

print(set1.difference(set2))

output-{1,2,5,8}

* **Meaning of dictionary:**
* It is used to store data values in key: value pairs.
* It is an ordered collection of data/items.
* Do not allow duplicates.
* Keys are immutable in the dictionary.
* Values are mutable.
* Dictionary created by curly {} braces.
* Dictionary keys are case-sensitive.
* dictionary methods:

1. clear
2. copy
3. get
4. items
5. keys
6. pop
7. update
8. values.

* **get:**
* It returns the value of the item with the specified key.
* Example: dict1={"name": 'pudi', "number": '12457101'}  
   print(dict1.get('number'))

Output-12457101.

* **Keys:**
* It returns the key's names.
* Example: dict1={"name": 'pudi', "number": '12457101'}  
   print(dict1.get('number'))

Output- dict\_keys(['name', 'number'])

* **Values:**
* It returns the key values.
* Example: dict1={"name": 'pudi', "number": '12457101'}  
   print(dict1.get('number'))

Output- dict\_values(['pudi', '12457101'])

* **Items:**
* It returns the key names and key values.
* Example: dict1={"name": 'pudi', "number": '12457101'}  
   print(dict1.get('number'))

Output- dict\_items([('name', 'pudi'), ('number', '12457101')])

* **Pop:**
* It removes the specific key value.
* Example: dict1={"name": 'pudi', "number": '12457101'}  
   print(dict1.get('number'))

Output: pudi.

* **Update:**
* It is used to modify existing key-value pairs or add new pairs from another dictionary.
* Example: dict1={"name": 'pudi', "number": '12457101'}  
   dict1.update({1:"java"})

print(dict1)

output: {'name': 'pudi', 'number': '12457101', 1: 'java'}