

# PYTHON

**22**  
Session

Step by Step Coding



All Code in Git

# Set

- Set

If we want to represent a group of unique values as a single entity then we should go for Set

- Set Representation

The elements will be placed within {} brackets

Ex:

```
String type Set
```

```
countryName={ "INDIA", "USA", "UK", "SRI LANKA", "CHINA", "ITLY" }
```

**Note:** While creating empty set we have to use set() function

- Set characteristics
  - Insertion order NOT Preserved
  - Duplicate Object are NOT Allowed
  - Heterogeneous Object are Allowed
  - Dynamic Size
  - It does not support indexing and slicing
  - Set Object are mutable

- Set Object Creation
  - Empty Set
  - Set with Element

- # Mutability

Once we create the Set object , we can modify its content

- Traversing the Set Elements

1. Using For loop

- Set Function

- add(): It adds the items to the set

Ex: mySet={1,2,3,4}

mySet.add(40)

Print(mySet)

Output : {40,1,2,3,4}



- Set Function

- `update()`: To add multiple items to the set

Ex: `x = {"apple", "banana", "cherry"}`

`y = {"google", "microsoft", "apple"}`

`x.update(y)`

`print(x)`

Output : `{'banana', 'google', 'apple', 'microsoft', 'cherry'}`

- Set Function

- `copy()`: It return copy of the set

Ex: `s= (10,20,30)`

`s1= s.copy()`

`print(s1)`

# ● Set Function

- `pop()`: It removes and returns some random elements from the set

Ex: `mySet= {40,10,30,20}`

`print(mySet)`

Output = `[40,10,20,30]`

`print(mySet.pop())`

Output = `40`

`print(mySet)`

Output = `[10,20,30]`

## ● Set Function

- `remove()`: It removes specified element from the set  
If element not present in the set then we will get `keyError`

Ex: `mySet= {40,10,30,20}`

`mySet.remove(30)`

`print(mySet)`

Output = `[40,10,20]`

## ● Set Function

- `discard()`: It removes specified element from the set

If element not present in the set then we would not get Error

Ex: `mySet= {10,20,30}`

`mySet.discard(10)`

`print(mySet)`

Output = `[20,30]`

- Set Function

- clear(): It removes all the element from set

Ex: mySet= {10,20,30}

mySet.clear()

print(mySet)

Output = []

- Mathematical Operations
  - 1.union()
  - 2.intersection()
  - 3.difference()
  - 4.symmetric\_difference ()

- Membership Operators
  - in
  - not in



Set

Thank You