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24. Basic of set

Set 🍴

What is a set in Python 🐍 ?

- A set is a collection which is unordered and unindexed. In Python sets are written with curly brackets({}).
- Every element is unique and must be immutable (which cannot be changed). but set itself mutable objects
- Sets are unordered, so the items will appear in a random order 📈.

How to create a set 📋?

- you can create a set using curly braces or using built in function **set()**.

Synatx:

```
setname={element}
setname1=set(elements)
```

Example: You can not create a blank ⬜ set like this

```
blankset={}
print(type(blankset))

#Result:this will create object of dictionary class
```

Create blank ⬜ Set using built in function

```
myset=set()
print(type(myset))
#Result:<class 'set'>
```

Create a set with 1,2,3,4 elements

```
myset={1,2,3,4}
print(myset)
#Result:{1,2,3,4}
```

- Set Can not Contain any mutable object such as list 📑 Example:

```
my_set = {1, 2, [3, 4]}
#Result:Error :- unhashable type: 'list'
```

Accessing Items From set 🔍

- You can not access Element refering by index becuase set are unordered and item has no index.
- You can use for loop for accessing the element as follows Example:

```
myset={1,2,3,4}
for i in myset:
    print(i)
'''

#Result
1
2
3
4
'''
```

Check Element present in set or not 🕵️

- **in** keyword is used to check existence of an element in set
- Return **True** if element exists in set otherwise Return False

Example:

```
color={'red','green','blue'}
if('red' in color):
        print('red is present')
else:
        print('red is not found')

#Result:red is present'
```

Get the set length 📏

Example

```
color={'red','green','blue'}
length=len(color)
print(length)

#Result:3
```