

Lab Assignment 7

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1. Create Lists ,Tuples, Dictionaries and Sets.Print elements stored in each case.

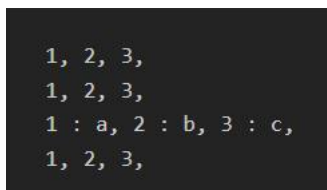
```
li = [1, 2, 3]
tu = (1, 2, 3)
di = {1: 'a', 2: 'b', 3: 'c'}
se = {1, 2, 3, 1, 3}
```

```
for ele in li:
    print(ele, end=' ')
print()
```

```
for ele in tu:
    print(ele, end=' ')
print()
```

```
for key in di:
    print(key, ': ', di[key], end=' ')
print()
```

```
for ele in se:
    print(ele, end=' ')
print()
```



```
1, 2, 3,
1, 2, 3,
1 : a, 2 : b, 3 : c,
1, 2, 3,
```

2.1) Select the Element kept at 2 nd position. From a List and display it.
li) create numpy array by already existing list and display its datatype and dimension.

```
li = [1, 2, 3]
pos = 2
print(li[pos-1])
print()
```

```
import numpy as np
nli = np.array(li)
print(nli.dtype)
print(nli.ndim)
print(nli.shape)
```

```
2
int32
1
(3,)
```

3. Use range function to generate values with name RangeVar. Keep lower bound as 1, higher bound 50. and each value should have difference of 10.

```
RangeVar = list(range(1, 50+1, 10))
print(RangeVar)
```

```
[1, 11, 21, 31, 41]
```

4. Create a string 'Techniquelab'. Find out the character at 5th position. Find out the index of 'l' in the string.

```
s = 'Techniquelab'
pos = 5
print(s[pos-1])
print(s.index('l'))
```

```
n
9
```

5. In 3rd question, the values populated in RangeVar. Find out if 11 exists and also find out the value at 3rd index.

```
RangeVar = list(range(1, 50+1, 10))
print(11 in RangeVar)
idx = 3
print(RangeVar[idx])
```

```
True
31
```

6. Create a list with values 100, 'Alice', 12 and 'Programmer'. Display the whole list. Then add value 'Python' to the list and display the modified list.

```
li = [100, 'Alice', 12, 'Programmer']
print(li)
li.append('Python')
print(li)
```

```
[100, 'Alice', 12, 'Programmer']
[100, 'Alice', 12, 'Programmer', 'Python']
```

7. Create a tuple with values:100, 'Alice', 12 and 'Programmer'.Display the tuple.Then add values 'Python' and 'ML' to it and display the modified tuple.

```
tu = (100, 'Alice', 12, 'Programmer')
print(tu)
tu = tuple(list(tu) + ['Python', 'ML'])
print(tu)
```

```
(100, 'Alice', 12, 'Programmer')
(100, 'Alice', 12, 'Programmer', 'Python', 'ML')
```

8.In the tuple with values :100, 'Alice', 12 and 'Programmer',print the values from index 0 to 2 ,getting displayed on console thrice.

```
tu = (100, 'Alice', 12, 'Programmer')
for i in range(3):
    for j in range(3):
        print(tu[j], end=', ')
    print()
```

```
100, Alice, 12,
100, Alice, 12,
100, Alice, 12,
```