

## 1. What is dictionary in Python and explain it with an example

Dictionaries are another example of a data structure. A dictionary is used to map or associate things you want to store the keys you need to get them. A dictionary in Python is just like a dictionary in the real world. Python Dictionary are defined into two elements Keys and Values.

- Keys will be a single element
- Values can be a list or list within a list, numbers, etc.
- Syntax for Python Dictionary:

```
Dict = { ' Tim': 18, xyz,.. }
```

- Dictionary is listed in curly brackets, inside these curly brackets, keys and values are declared. Each key is separated from its value by a colon (:) while each element is separated by commas.

- Ex:-

```
Dict = {'Tim': 18,'Charlie':12,'Tiffany':22,'Robert':25}  
print (Dict['Tiffany'])
```

## 2. Program to find sum of all the elements in a list

```
lst = []  
  
num = int(input('How many numbers: '))  
  
for n in range(num):  
    numbers = int(input('Enter number '))  
    lst.append(numbers)  
  
print("Sum of elements in given list is :", sum(lst))
```

Output:-

How many numbers: 5

Enter number 3

Enter number 8

Enter number 6

Enter number 3

Enter number 2

Sum of elements in given list is : 22

3. Program to create a list of empty dictionaries

```
n = 5
```

```
l = [{} for _ in range(n)]
```

```
print(l)
```

Output:-

```
[{}, {}, {}, {}, {}]
```

4. Program to access dictionary keys elements by index

```
num = {'physics': 80, 'maths': 90, 'chemistry': 86}
```

```
print(list(num)[1])
```

Output:-

```
Maths
```