بِسۡمِ ٱللّٰهِ ٱلرَّحۡمَٰنِ ٱلرَّحِيمِ

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Semester:

7th

Subject: **Web design & framework**
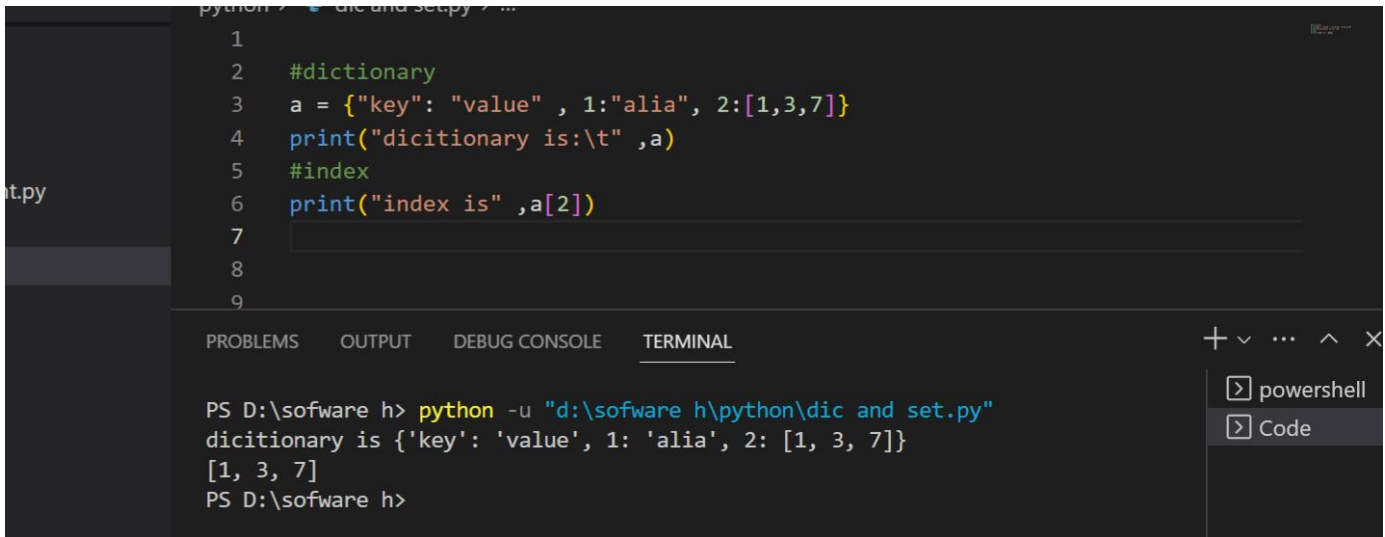
Roll no: **SP20M2BB024**

Chapter # 4

➢ Dictionary:

Dictionaries are Python's implementation of a data structure that is more generally known as an associative array**.**

🔅 Example


```
python >  dic and set.py > ...
1
2    #dictionary
3    a = {"key": "value" , 1:"alia", 2:[1,3,7]}
4    print("dicitionary is:\t" ,a)
5    #index
6    print("index is" ,a[2])
7
8
9
```

```
PROBLEMS   OUTPUT   DEBUG CONSOLE   TERMINAL                    + ∨  ···  ∧  ✕
                                                                   ⟩ powershell
PS D:\sofware h> python -u "d:\sofware h\python\dic and set.py"     ⟩ Code
dicitionary is {'key': 'value', 1: 'alia', 2: [1, 3, 7]}
[1, 3, 7]
PS D:\sofware h>
```

➢ Dictionary properties:

❖ Some properties of dictionary are given below:

- Dictionaries are unordered. A dictionary contains key-value pairs but does not possess an order for the pairs. ...
- Keys are unique. Dictionary keys must be unique. ...
- Keys must be immutable. ...
- Dictionary comprehension

➢ Dictionary method:

Python has a set of built-in methods that you can use on dictionaries.

♦ Example:

```
 7    #dictionary method
 8    print(type[a])
 9    a.items()
10    print(a)
11    a.keys()
12    print(a)
13    #update
14    b = {"key": "value" , 1:"alia", 2:[1,3,7]}
15    c= {"friend":"faria"}
16    b.update(c)
17    print(b)
```

Output

➢ Set:

Sets are **used to store multiple items in a single variable**. Set is one of 4 built-in data types in Python used to store collections of data, the other 3 are List, Tuple, and Dictionary, all with different qualities and usage.

♦ Example:

```
python > ☘ set.py > ...
 1    #set
 2    name = {"alia","asad" ,"faria"}
 3    print("set is\t" ,name)
 4    info ={"alia", 2, False ,4.33}
 5    print("INFO IS:\t" ,info)
 6
 7
```

Output

```
PS D:\sofware h> python -u "d:\sofware h\python\set.py"
set is  {'asad', 'alia', 'faria'}
INFO IS:        {False, 2, 'alia', 4.33}
PS D:\sofware h>
```