# Dictionary

**Dictionary Demo**
Dictionary store key, value pair, key and value are separated by :
**Example 1**
```
>>> a={1:10,2:20,3:30,4:40}
>>> print a
{1: 10, 2: 20, 3: 30, 4: 40}
```
**Example 2**
```
>>> b={'one':1,'two':2,'three':3,'four':4}
>>>print b
{'four': 4, 'three': 3, 'two': 2, 'one': 1}
```
**Example 3**
To get keys only
```
>>>b.keys()
['four', 'three', 'two', 'one']
```
**Example 4**
To get values only
```
>>> b.values()
[4, 3, 2, 1]
```
**Example 5**
To get value against a key
```
>>>b.get('two')
2
```
**Example 6**
Dictionary is mutable (editable)
To add an item or update dictionary b use method update
```
>>>b. update({'five':5})
>>> print b
{'four': 4, 'three': 3, 'five': 5, 'two': 2, 'one': 1}
```
Other methods of dictionary can be checked by using conventional method of help.
**Example 7**
Printing key and values using for loop
```
for i,j in b.iteritems():
print i,
print ": ",j
```

## Exercises

1. Write a python script to create a dictionary **week**, the key to be integer and values should be name of

   the days of the week

2. Write a python script to create a dictionary D1, enter details of the students in the form of enrolment and

   name (See details from the file "Std Record.pdf" ).

3. Write a python script to create a dictionary D2, enter details of the students in the form of enrolment and

   City (hometown) it belongs to.

4. Write a python script to create a dictionary D3, enter details of the students in the form of enrolment and

mobile.

5. Write a python script to create a dictionary D4, enter details of the students in the form of enrolment and State it belongs to.

6. Write a python script to create a dictionary D5, enter details of the students in the form of enrolment and marks in Phy,Chem, and Maths.

7. Write a python script to create a dictionary D6, enter details of the students in the form of enrolment and email-id.

8.a. Write a python script to display students' name and email by receiving enrolment number at run time.

8.b. Write a python script to print name and enrolment number of the student by receiving email id at run time.

8.c. Write a python script to print name and city of the student by mobile number at run time.

8.d Write a python script to display students' details who are from same hometown.

9. Write a python script to display students' details who are from same State.

10. Write a python script to display students' details who have email id on same host (i.e. gmail.com, yahoo.com, rediffmail.com etc )

11. Write a python script to display students' details whose mobile service provider is same( first two bits 94: BSNL, 98: Airtel, 89:Idea, 77:Reliance, 97:Idea, 99:Vodafone, 79:Docomo)

12. Write a python script to display students' details who scored highest marks in Phy among all.

13. Write a python script to display students' details who scored highest marks in Chem among all

14. Write a python script to display students' details who scored highest marks in Maths among all

15. Write a python script to display students' details who scored highest average marks in Phy, Chem, and Maths among all.

16. Write a python script to create a dictionary **square** to store 10 integers and their square.

17. Write a python script to create any data structure named **sroot** to store 10 integers between 20 and 30, their square root.

18. Write a python script to create a dictionary odd to store first 50 odd numbers, their $\log_2$.

19. Write a python to store prime numbers between 50 and100 along with their digit-sum.

20. Write a script to print selected details of the student, asking user to keyin student's name

21. Write a script to print all details of the student, asking user to keyin student's Enrollment

22. Write a script to print all details of the student, asking user to keyin student's name

23. Write a Python program to generate the next 15 leap years starting from a given year. Populate the leap years into a list and display the list.