

Dictionary in Python is like an object containing multiple key value pairs.

Keys are unique within a dictionary while values may not be. The values of a dictionary can be of any type, but the keys must be of an immutable data type such as strings, numbers, or tuples.

## Accessing Values in Dictionary

To access dictionary elements, you can use the familiar square brackets along with the key to obtain its value. Following is a simple example –

```
dict = {'Name': 'Krish', 'Age': 35}
print "dict['Name']:", dict['Name']
print "dict['Age']:", dict['Age']
```

When the above code is executed, it produces the following result –

```
dict['Name']: Krish
dict['Age']: 35
```

If we attempt to access a data item with a key, which is not a part of the dictionary, then Python will throw error as follows –

```
dict = {'Name': 'Krish', 'Age': 35}
print "dict['Car']:", dict['Car']
```

When the above code is executed, it produces the following result –

```
dict['Car']:
Traceback (most recent call last):
  File "test.py", line 2, in <module>
    print "dict['Car']:", dict['Car'];
KeyError: 'Car'
```

## Updating Dictionary

You can update a dictionary by adding a new entry or a key-value pair, modifying an existing entry, or deleting an existing entry as shown below in the simple example –

```
dict = {'Name': 'Krish', 'Age': 35, 'Car': 'Audi'}
dict['Car'] = 'bmw' # update existing entry
dict['Country'] = "US" # Add new entry
print "dict['Age']:", dict['Age']
print "dict['Country']:", dict['Country']
```

When the above code is executed, it produces the following result –

```
dict['Age']: 35
dict['Country']: US
```

## Delete Dictionary Elements

You can use `del` statement either to remove individual dictionary elements or clear the entire contents of a dictionary.

You can also delete entire dictionary in a single operation.

Following is a simple example –

```
dict = {'Name': 'Krish', 'Age': 35, 'Car': 'Audi'}
del dict['Name'] # remove entry with key 'Name'
dict.clear()    # remove all entries in dict
# delete entire dictionary
print "dict['Age']: ", dict['Age']
print "dict['Car']: ", dict['Car']
```

This produces the following result. Note that an exception is raised because after **del dict** dictionary does not exist any more –

```
dict['Age']:
Traceback (most recent call last):
  File "test.py", line 5, in <module>
    print "dict['Age']: ", dict['Age'];
TypeError: 'type' object is unsubscriptable
```