Series Object:

```
    Series Object is one dimensional labled array.
```

In [1]:

```
import pandas as pd
```

In [2]:

```
s1 = pd.Series([10,20,30,40,50,60])
s1
```

Out[2]:

```
0    10
1    20
2    30
3    40
4    50
5    60
dtype: int64
```

The values stored in left side is Index Value and the values stored in right side is the Element Present in Series Object.

In [4]:

```
type(s1)
```

Out[4]:

```
pandas.core.series.Series
```

Changing Index:

In [5]:

```
s2 = pd.Series([1,2,3,4,5])
s2
```

Out[5]:

```
0    1
1    2
2    3
3    4
4    5
dtype: int64
```

The above index values are the default values.

If you want to change the index value then insert index attribute inside the Series method.

In [6]:

```
s3 = pd.Series([1,2,3,4,5],index = ['a','b','c','d','e'])
s3
```

Out[6]:

```
a    1
b    2
c    3
```

```
d    4
e    5
dtype: int64
```

Series Object from Dictionary:

You can also create a series object from a dictionary.

In [7]:

```
s4 = pd.Series({'a' : 1,'b' : 2,'c' : 3})
s4
```

Out[7]:

```
a    1
b    2
c    3
dtype: int64
```

Here a,b,c are the keys and 1,2,3 are the values.

Changing Index Position:

You can change the index position.

In [9]:

```
s5 = pd.Series({'a' : 1,'b' : 2,'c' : 3},index = ['b','c','a'])
s5
```

Out[9]:

```
b    2
c    3
a    1
dtype: int64
```

If a extra index value is added and there is no valuse corresponding to it then it will be shown as NaN.

In [17]:

```
s6 = pd.Series({'a' : 1,'b' : 2,'c' : 3},index = ['b','c','d','a'])
s6
```

Out[17]:

```
b    2.0
c    3.0
d    NaN
a    1.0
dtype: float64
```

Extracting Individual Elements:

In [4]:

```
import pandas as pd
s7 = pd.Series([1,2,3,4,5,6,7,8,9])
s7
```

Out[4]:

```
0    1
```

```
1    2
2    3
3    4
4    5
5    6
6    7
7    8
8    9
dtype: int64
```

Extracting a Single Element:

In [5]:

```
s7[3]
```

Out[5]:

```
4
```

Extracting a Sequence of Elements:

In [7]:

```
s7[:4]
```

Out[7]:

```
0    1
1    2
2    3
3    4
dtype: int64
```

In [8]:

```
s7[4:]
```

Out[8]:

```
4    5
5    6
6    7
7    8
8    9
dtype: int64
```

Extracting Elements from Back:

In [9]:

```
s7[-3:]
```

Out[9]:

```
6    7
7    8
8    9
dtype: int64
```

Basic Math Operations on Series:

Adding a Scalar Value to Series Elements:

In [10]:

```
s7
```

Out[10]:

```
0    1
1    2
2    3
3    4
4    5
5    6
6    7
7    8
8    9
dtype: int64
```

In [11]:

```
s7 +5
```

Out[11]:

```
0     6
1     7
2     8
3     9
4    10
5    11
6    12
7    13
8    14
dtype: int64
```

In [12]:

```
s8 = pd.Series([10,20,30,40,50,60,70,80,90])
s7 + s8
```

Out[12]:

```
0    11
1    22
2    33
3    44
4    55
5    66
6    77
7    88
8    99
dtype: int64
```

In [ ]:

```

```