

5.1) Python Pandas Exercise - Series

1. How to import pandas and check their version?

2. Create a series from a list, NumPy array, and dictionary with a minimum of 5 values in each?

Expected Output:

```
From List
0    11
1    22
2    33
3    44
4    55
dtype: int64
From array
0    11
1    13
2    15
3    17
4    19
5    21
6    23
dtype: int32
From dict
a     20
b     30
c     67
d     56
e     55
dtype: int64
```

3. Give a name to the series *ser* calling it *vowel*.

Input:

```
ser = pd.Series(list('aeiou'))
```

Expected Output:

```
0    a
1    e
2    i
3    o
4    u
Name: vowel, dtype: object
vowel
```

4. How to get a frequency count of unique items of a series?

- Calculate the frequency counts of each unique value ser.

Input:

```
ser = pd.Series(["a","a","b","c","d","e","a","b","z"])
```

Expected output:

```
a     3
b     2
c     1
d     1
e     1
z     1
dtype: int64
```

5. How to calculate the number of characters in each word in a series?

Input:

```
ser = pd.Series(['how', 'to', 'kick', 'ass?'])
```

Expected output:

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

6. Write a program to order a series in ascending order

Input:

```
ser_data = pd.Series({'C': 10, 'A': 5, 'D': 20, 'B': 15, 'E': 25})
```

Expected Output:

```
A     5
C    10
B    15
D    20
E    25
dtype: int64
```

7. WAP to generate the series of dates from 1st May, 2021 to 12th May, 2021

Expected Output:

```
DatetimeIndex(['2021-05-01', '2021-05-02', '2021-05-03', '2021-05-04',
               '2021-05-05', '2021-05-06', '2021-05-07', '2021-05-08',
               '2021-05-09', '2021-05-10', '2021-05-11', '2021-05-12'],
              dtype='datetime64[ns]', freq='D')
```

8. Write a Pandas program to create a TimeSeries to display all the Sundays of given year.

9. How to filter words that contain atleast 2 vowels from a series?

- From ser, extract words that contain atleast 2 vowels.

Input:

```
ser = pd.Series(['Apple', 'Orange', 'Plan', 'Python', 'Money'])
```

Expected Output:

```
0    Apple
1    Orange
4    Money
dtype: object
```

10. Create a below Series object, “company” and its profit in Crores

- i. Write the command which will display the name of the company having profit>250.
- ii. Write the command to name the series as Profit.

Input:

```
TCS      350
Reliance  200
L&T      800
Wipro    150
dtype: int64
```

Expected Output: 1)

```
TCS      350
L&T      800
dtype: int64
```

2)

```
TCS      350
Reliance  200
L&T      800
Wipro    150
Name: Profit, dtype: int64
```

11) What will be the output of the following:

- import pandas as pd
- D={'a':10,'b':11,'c':12}
- S=pd.Series(D,index=['b','c','d','a'])
- print(S)

Great Job!