



EXERCISE

Q1. Create a ndarray with the data of the precipitation in a week:

12mm 14mm 7mm 0mm 3mm 21mm 10mm

store this array in a precipitation_data variable and print a sorted list.

Q2. Create a Pandas Series with the above data and index them as:

Mon Tue Wed Thu Fri Sat Sun
and print it.

Q3. Create a Pandas Series with the given data

10 45 60 12 40

and perform the following tasks:

- index them from 'A' to 'E'
- Change the 'B' value to 65
- delete the 'E' Value
- print the Series

index = [....]
.replace()
.drop(-1)

Q4. Create a Pandas DataFrame with the given data

Subjects : Maths, Science, Literature, Comp.Sci.

Marks : 75, 94, 88, 97

create appropriate columns and indexes then perform the following tasks:

- index them from '1' to '4'
- add 'Physical Education' : 95 to the DataFrame
- change the value of Math's Marks to 81
- reindex the DataFrame with the subjects [Maths, Sci,...]
- delete the Subjects column
- print the DataFrame

Q4. Create a ar1 ndarray with data of first 10 even numbers and another ar2 ndarray with the data of first 10 odd numbers. Then create a Pandas DataFrame using the ar1 and ar2 as data, and label the columns as Even and Odd and index them in roman numbers [i, ii, iii, iv, v, ...] Display the result

Q5. Without running the code yourself, try finding the output for the following Code Cells

In [9]:

```
import numpy as npy

ar = npy.array([[[["a","b","e"],["x","y","d"]],  
                [["v","l","g"],["k","m","o"]]]])
num1 = ar[0,1,0]      X  
num2 = ar[0,1,1]      X  
num3 = ar[1,1,1]      X

print(num1, num2, num3)
```

In [12]:

```
import numpy as npy

ar = npy.array([[1,3,5,1],[8,2,9,0]],  
               [[3,5,2,9],[2,7,0,3]])
num1 = ar[1,0,2]      2  
num2 = ar[0,0,0]      1  
num3 = ar[1,1,1]      2  
num4 = ar[0,1,2]      9

print(num1, num2, num3, num4)
```

In [23]:

```
import pandas as pan
import numpy as npy
ar = npy.array([[1,2,3],[5,9,7]])
df = pan.DataFrame(ar, columns = ["C1","C2","C3"],  
                   index = ['R1','R2'])

print(df['C1'])          R1  
print(df.loc['R2'])      R2  
print(df.iloc[0])        1  
print(df.values[0,2])    3
```

C1 1
C2 2
C3 3

C1 1
C2 2
C3 3