**1.Sort a given array of shape 2 along the first axis, last axis and on flattened array**

**Original array:**

**[[10 40]**

**[30 20]]**

**Expected Output:**

**Sort the array along the first axis:**

**[[10 20]**

**[30 40]]**

**Sort the array along the last axis:**

**[[10 40]**

**[20 30]]**

**Sort the flattened array:**

**[10 20 30 40]**

2.**Write a NumPy program to repeat all the elements three times of a given array of string**

**Original Array:**

**['Python' 'PHP' 'Java' 'C++']**

**Expected Output:**

**New array:**

**['PythonPythonPython' 'PHPPHPPHP' 'JavaJavaJava' 'C++C++C++']**

**3.Write a NumPy program to count the number of "P" in a given array, element-wise.**

Original Array:  
['Python' 'PHP' 'JS' 'examples' 'html']

Sample Output:

Number of 'P':  
[1 2 0 0 0]

4.Write a NumPy program to count the number of days of specific month.   
Expected Output:  
Number of days, February, 2016:  
29 days  
Number of days, February, 2017:  
28 days  
Number of days, February, 2018:  
28 days

**5.** Write a NumPy program to concatenate element-wise two arrays of string.   
Expected Output:  
Array1:  
['Python' 'PHP']  
Array2:  
[' Java' ' C++']  
new array:  
['Python Java' 'PHP C++']

**6.** Write a NumPy program to create a structured array from given student name, height, class and their data types. Now sort by class, then height if class are equal.   
Expected Output:  
Original array:  
[(b'James', 5, 48.5 ) (b'Nail', 6, 52.5 ) (b'Paul', 5, 42.1 ) (b'Pit', 5, 40.11)]  
Sort by age, then height if class are equal:  
[(b'Pit', 5, 40.11) (b'Paul', 5, 42.1 ) (b'James', 5, 48.5 ) (b'Nail', 6, 52.5 )]

**7.**Write a NumPy program to get the dates of yesterday, today and tomorrow.   
Sample Output:  
Yestraday: 2017-03-24  
Today: 2017-03-25  
Tomorrow: 2017-03-26

**8.** Write a NumPy program to make all the elements of a given string a numeric string of 5 digits with zeros on its left

Sample Input:

['2', '11', '234', '1234', '12345']

Sample Output:

Numeric string of 5 digits with zeros:

['00002' '00011' '00234' '01234' '12345']

**9.** Write a NumPy program to convert numpy datetime64 to Timestamp.   
Sample output:  
Current date:  
2017-04-01 08:01:12.722055  
Timestamp:  
1491033672.72  
UTC from Timestamp:  
2017-04-01 08:01:12.722055