ASSIGNMENT I

Execute the following questions in Jupyter Notebook and upload the .ipynb file. There are 10 questions in this assignment and each carries 2 marks.

1. Write a function that takes as input a sentence and a word, from the user and counts the occurrences of the word in the sentence. For example: "I felt happy because I saw that others were happy and because I knew I should feel happy, but I wasn't really happy." and count the occurrence of the word 'I'. Also, replace the word 'I' with 'WE' and print the sentence.
2. Write a Python program that accepts from the user a value for the number of days and subtracts it from the current date and displays the result.
3. Write a Python program to find the numbers which are divisible by 7 and are multiples of 5, between 2100 and 3500 (both included).
4. Write a Python function to check whether a given number is a prime number or not. Accept the number from the user.
5. Write a Python program to construct the following pattern. Accept the number of lines of the pattern to be printed from the user. For example, the pattern with 6 lines is as follows:

```
         *
        * * *
       * * * * *
      * * * * * * *
     * * * * * * * * *
    * * * * * * * * * * *
```

6. You are given the following list:

    names = ['Vipin', 'Sanath', 'Priya', 'Sudhish', 'Akshay', 'Suraj']

    Using a lambda function, filter those names that start with 'S'.
7. Write a function that accepts a positive single digit integer (n) from the user and computes the value of n+nn+nnn. For example: if n=5, 5+55+555 = 615 should be displayed.
8. Write a Python function that takes as input an email address from the user and returns the domain as result.
9. Write a Python program to get a string made of the first two and the last two characters from a given string. Other conditions as per the sample:

    Sample String: 'w3resource'
    Expected Result: 'w3ce'
    Sample String: 'w3'
    Expected Result: 'w3w3'
    Sample String: 'w'
    Expected Result: Empty String
10. Write a Python program to add 'ing' at the end of a given string (length of input string should be at least 3). If the given string already ends with 'ing' then add 'ly' instead. If the string length of the given string is less than 3, leave it unchanged:

    Sample String: 'abc'
    Expected Result: 'abcing'
    Sample String: 'string'
    Expected Result: 'stringly'