**ASSIGNMENT III**

**Execute the following questions in Jupyter Notebook and upload the .ipynb file. There are 4 questions in this assignment and each carries 5 marks.**

1. Write a socket program in Python that prompts the client to send a URL to the server. The server reads the web page and sends to the client the most used word and least used word and their count. Add error checking using try and except to handle the condition where the user enters an improperly formatted or non-existent URL.

**http://www.py4inf.com/code/words.txt**

1. Write a Python program that uses urllib to retrieve the document from a URL, display up to 300 characters, and count the overall number of characters in the document.

**http://www.py4inf.com/code/words.txt**

1. Write a Python program to extract and count paragraphs from the retrieved HTML document given and display the count of the paragraphs. Also display the frequency of the letter ‘e’ in each of the paragraphs and which paragraph has the maximum number of ‘e’.

**https://www.nucleares.unam.mx/~alberto/physics/string.html**

1. For the XML document given, print its total score. (The total score is calculated by the sum of the score of each element. For any element, the score is equal to the number of attributes it has.):

**<feed xml:lang='en'>**

**<title>HackerRank</title>**

**<subtitle lang='en'>Programming challenges</subtitle>**

**<link rel='alternate' type='text/html' href='http://hackerrank.com/'/>**

**<updated>2013-12-25T12:00:00</updated>**

**<entry>**

**<author gender='male'>Harsh</author>**

**<question type='hard'>XML 1</question>**

**<description type='text'>This is related to XML parsing</description>**

**</entry>**

**</feed>**