**Assignment 4:**

**Give python code to clean data in dataframe. You are to read data from csv file having minimum of 100 records. Use regular expressions, nltk functions and string processing techniques to do following.**

1. Remove a valid email address. (l1f20bscs0001@ucp.edu.pk)
2. Remove all the URLs from a given text.
3. Check phone number in a specific format (e.g. 0423-1234567).
4. Find all the words that start with a capital letter in a sentence and convert them to lower case .
5. Replace all occurrences of a specific word with another word in a given text (e.g. **UCP** to be replaced with **university** ).
6. Remove all the numbers from a string.
7. Determine if a string contains only alphanumeric characters.
8. Find and remove all the HTML tags in an HTML document.
9. Extract all the words ending with "ing" in a sentence.
10. Remove all whitespace characters from a string.
11. Perform Lemmatization using POS Tagging