**NLP Assignment 2: Due 28th January 2023**



1. Using the grammar rules above, draw syntax trees for:
2. Oscar died suddenly.
3. The waiter put the chairs on the tables.
4. Oscar called the waiter.
5. Modify the grammar so that it generates the unstarred sentences below as well as (i–iii) above but not the starred ones. Explain the reasons for your modifications.
6. Oscar died in Paris.
7. Oscar died in a hotel in Paris.
8. The waiter came to the table when Oscar called him.
9. When Oscar called him the waiter came to the table.
10. \* Oscar put
11. \* The waiter saw on the tables
12. \* The waiter put in the chairs
13. \* The waiter put the chairs
14. \* Oscar died the table
15. \* When Oscar called him when the waiter came to the table.
16. **Use requests and beautiful soup to download a page from the internet**
    1. Perform NER and visualize the entities in your text using spacy
    2. Install the neuralcoref, perform coreference resolution on the text and visualize
    3. Perform wsd using lesk Algorithm in NLTK on all the **Verbs** in the text
    4. Print put the verbs that are closest in meaning according to WordNet sysnsets

**Reading**

1. <https://www.nltk.org/book/ch08.html>
2. Textbook: Introduction to Natural Language Processing , Chapter 2
3. Analyzing and Processing Text With spaCy
4. Word sense disambiguation: <https://www.nltk.org/howto/wsd.html>
5. Word sense disambiguation: <https://www.linkedin.com/pulse/wordnet-word-sense-disambiguation-wsd-nltk-aswathi-nambiar/>
6. Word sense disambiguation: <https://www.nltk.org/api/nltk.wsd.lesk.html>
7. CoReference Resolution: <https://kaveeshabaddage.medium.com/how-to-resolve-coreference-resolution-using-python-97fcd6b2cedb>
8. Coreference resolution: <https://spacy.io/universe/project/neuralcoref>