Aim - Implement Named Entity Recognizer for the given text input

Objective:

To study and write program for named entity recognition

Theory:

Named entity recognition is a natural language processing technique that can automatically scan entire articles and pull out some fundamental entities in a text and classify them into predefined categories. Entities may be,

1. Organization
2. Quantities
3 . Monetary values
4. Percentages and more
5. Peoples names
6. Company names
7. Geographical locations
8. Product names
9. Dates and times
10. Amounts of money
11. Names of events

In simple words, Named Entity Recognition is the process of detecting the named entities such as person names, location names, company names etc. from the text. It is also known as entity identification or entity extraction or entity chunking.

Program: import spacy import

pandas as pd nlp =

spacy.load('en_core_web_sm')

doc = nlp(u"Tesla Inc. Chief Executive Officer Elon Musk said he's considering taking the electric-car maker private, a surprise move that would end the company's eight-year history as a publicly traded firm.") for ent in doc.ents: print(ent.text, "-", ent.label_, "-", spacy.explain(ent.label_))

Output:

Tesla Inc. - ORG - Companies, agencies, institutions, etc.

Elon Musk - PERSON - People, including fictional eight-

year - DATE - Absolute or relative dates or periods

Conclusion:

The implementation of Named Entity Recognizer (NER) is instrumental in improving information extraction, enhancing text understanding, facilitating data analysis and visualization, improving information retrieval and search relevance, and supporting knowledge graph construction. By incorporating NER into the NLP pipeline, researchers and practitioners can develop more accurate and effective language models and systems that significantly improve the understanding and analysis of textual data, leading to more advanced and context-aware applications in various domains.