ASSIGNMENT NO.3

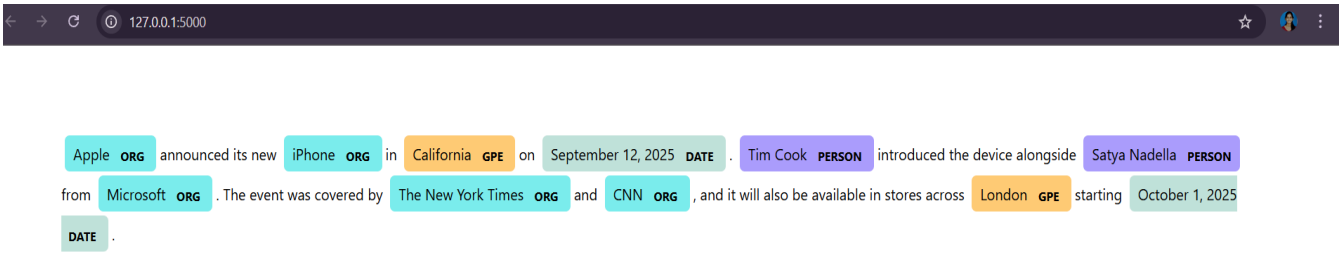
Title: Implement the NER on textual data using library for “English” language.

1. CODE USING SPACY :

```
import spacy
from spacy import displacy


nlp = spacy.load("en_core_web_sm")


text = (
    "Apple announced its new iPhone in California on September 12, 2025. "
    "Tim Cook introduced the device alongside Satya Nadella from Microsoft. "
    "The event was covered by The New York Times and CNN, and it will also be "
    "available in stores across London starting October 1, 2025."
)


doc = nlp(text)


for ent in doc.ents:
    print(
        f"""
{ent.text = }
{ent.start_char = }
{ent.end_char = }
{ent.label_ = }
spacy.explain('{ent.label_}') = {spacy.explain(ent.label_)}"""
    )
```

displacy.serve(doc, style="ent")

OUTPUT:



2.CODE USING NLTK:

```
import nltk

nltk.download('punkt')

nltk.download('averaged_perceptron_tagger')

nltk.download('maxent_ne_chunker')

nltk.download('words')


sentence = (

    "Apple announced its new iPhone in California on September 12, 2025. "

    "Tim Cook introduced the device alongside Satya Nadella from Microsoft. "

    "The event was covered by The New York Times and CNN, and it will also be "

    "available in stores across London starting October 1, 2025."

)


for sent in nltk.sent_tokenize(sentence):

    for chunk in nltk.ne_chunk(nltk.pos_tag(nltk.word_tokenize(sent))):
```

```
    if hasattr(chunk, 'label'):
        print(chunk.label(), ' '.join(c[0] for c in chunk))
```

OUTPUT: