

Practical 9

Name: Shivam Tawari

Roll no: A-58

Subject: NLP

Aim: Write a python program to recognize entities in text.

Theory:

The process of detecting and classifying proper names mentioned in a text can be defined as Named Entity Recognition (NER).

In simple words, it locates person name, organisation and location, etc in the content. This is generally the first step in most of the Information Exchange (IE) tasks of Natural Language Processing.

Ram went to US to study at NYU.

Person Location Organization

There is a need for NER across multiple domains. Below are a few sample business use cases for reference.

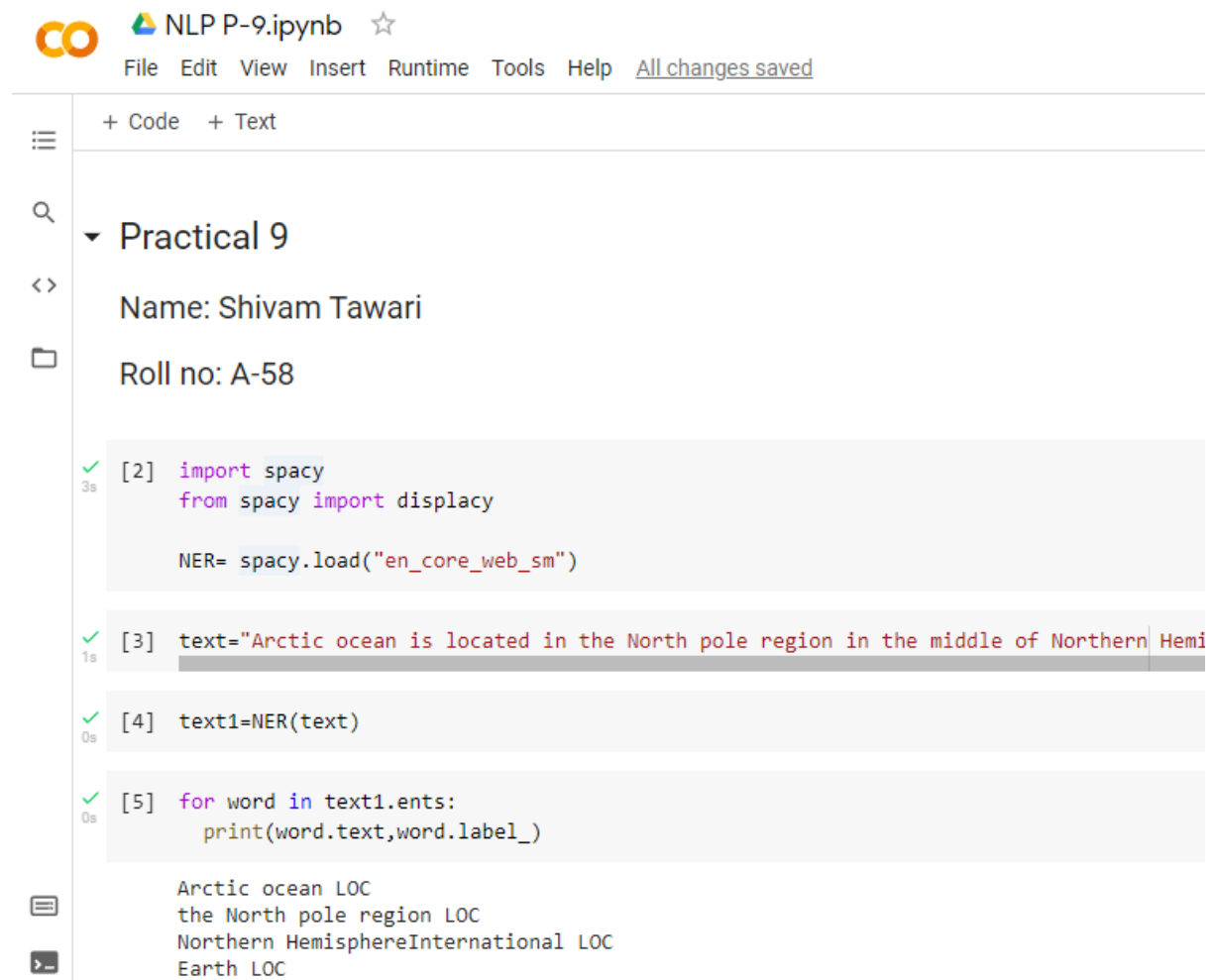
- ① Investment Research: To identify the various announcements of the companies, people's reaction towards them and its impact on the stock prices, one needs to identify people and organisation names in the text.
- ② Chatbots in multiple domains: To identify places and dates for booking hotel rooms, air tickets, etc.
- ③ Insurance domain: Identify and mask people's names in the feedback forms before analyzing.

Conclusion: We have implemented a python program to recognize named entities in the text.

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The screenshot shows a Jupyter Notebook titled "NLP P-9.ipynb". The notebook contains five code cells and a text output. The first cell imports spaCy and loads the "en_core_web_sm" model. The second cell defines a text string. The third cell uses the NER model to process the text. The fourth cell iterates over the entities and prints them. The output shows the following entities:

```
[2] import spacy
    from spacy import displacy

    NER= spacy.load("en_core_web_sm")

[3] text="Arctic ocean is located in the North pole region in the middle of Northern Hemisphere"

[4] text1=NER(text)

[5] for word in text1.ents:
    print(word.text,word.label_)

Arctic ocean LOC
the North pole region LOC
Northern HemisphereInternational LOC
Earth LOC
```



+ Code + Text



✓ [4] text1=NER(text)

✓ [5] for word in text1.ents:
print(word.text,word.label_)

Arctic ocean LOC
the North pole region LOC
Northern HemisphereInternational LOC
Earth LOC

✓ [6] spacy.explain("ORG")

'Companies, agencies, institutions, etc.'

✓ [7] spacy.explain("GPE")

'Countries, cities, states'

▶ text2=NER("My name is Shivam Tawari")
for word in text2.ents:
print(word.text,word.label_)

Shivam Tawari ORG