

CSDL7013 Natural Language Processing Lab 10

- NOTE: Prepend your Roll Number to the name of this file
- YET ANOTHER NOTE: Take print out of the relevant code cells only.

Reference Resolution Lab

1. **Title:** Reference Resolution
2. **Objective/Aim:** To illustrate Reference Resolution through Pronoun Interpretation
3. **Due Date:** Friday October 07, 2022

Name : Harshvardhan Singh

Roll Number : 1019161

Install the required packages and libraries

Activate the model

```
import spacy
import neuralcoref

nlp = spacy.load('en')
neuralcoref.add_to_pipe(nlp)

100%|██████████| 40155833/40155833 [00:01<00:00, 27331964.72B/s]

<spacy.lang.en.English at 0x7fcac1bed790>
```

Use the model

```
doc1 = nlp('My brother has a car. He loves driving it.')
print(doc1._.coref_clusters)

[My brother: [My brother, He], a car: [a car, it]]

doc2 = nlp('Anna lives in Delhi. She is quite happy in that city.')
for ent in doc2.ents:
    print(ent._.coref_cluster)

Anna: [Anna, She]
Delhi: [Delhi, that city]
```

Solve your exercises below this.

Your solution

```
doc3 = nlp("John likes chips. He hates sharing it.")
```

```
for ent in doc3.ents:
    print(ent._.coref_cluster)
    print(doc3._.coref_clusters)
```

```
John: [John, He]
[John: [John, He]]
```

```
doc4 = nlp("Jack scolded Jill. She dropped the bucket.")
```

```
for ent in doc4.ents:
    print(ent._.coref_cluster)
    print(doc4._.coref_clusters)
```

```
None
[Jill: [Jill, She]]
Jill: [Jill, She]
[Jill: [Jill, She]]
```

```
doc5 = nlp("Jill loves Jack. He is her twin brother.")
```

```
for ent in doc5.ents:
    print(ent._.coref_cluster)
    print(doc5._.coref_clusters)
```

```
Jack: [Jack, He]
[Jack: [Jack, He]]
```

```
doc6 = nlp("Harshvardhan likes the show Thomas and friends. He remembers every single episode")
```

```
for ent in doc6.ents:
    print(ent._.coref_cluster)
    print(doc6._.coref_clusters)
```

```
None
[Harshvardhan: [Harshvardhan, He]]
```

```
doc7 = nlp("Ronaldo plays for united. He is their best player.")
```

```
for ent in doc7.ents:
    print(ent._.coref_cluster)
    print(doc7._.coref_clusters)
```

```
Ronaldo: [Ronaldo, He]
[Ronaldo: [Ronaldo, He], Ronaldo plays for united: [Ronaldo plays for united, their]]
```