```
In [2]:    1 sent = "Ram is studying at Malla Reddy University in Hyderabad, India"
```

```
In [3]:    1 import nltk
           2 nltk.download('maxent_ne_chunker_tab')
```

```
[nltk_data] Downloading package maxent_ne_chunker_tab to C:\Users\Sai
[nltk_data]     Krishna Hari\AppData\Roaming\nltk_data...
[nltk_data]   Package maxent_ne_chunker_tab is already up-to-date!
```

Out[3]: True

```
In [4]:    1 import nltk
           2 nltk.download('words')
```

```
[nltk_data] Downloading package words to C:\Users\Sai Krishna
[nltk_data]     Hari\AppData\Roaming\nltk_data...
[nltk_data]   Package words is already up-to-date!
```
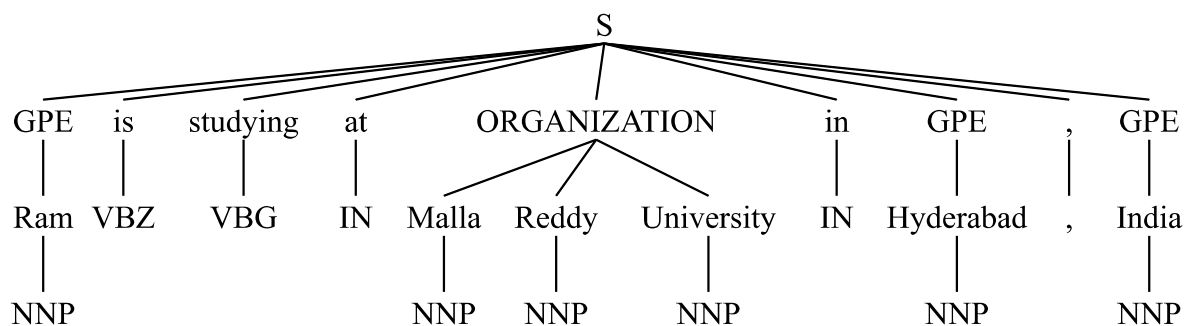
Out[4]: True

```
In [5]:    1 !pip install svgling
```

```
Requirement already satisfied: svgling in d:\python\lib\site-packages (0.5.0)
Requirement already satisfied: svgwrite in d:\python\lib\site-packages (from
svgling) (1.4.3)
```

```
In [11]:   1
           2 import nltk
           3 from nltk import ne_chunk
           4 from nltk import word_tokenize
           5 ne_chunk(nltk.pos_tag(word_tokenize(sent)), binary=False)
```

Out[11]:


```
In [7]:    1 import nltk
           2 nltk.download('punkt_tab')
```

```
[nltk_data] Downloading package punkt_tab to C:\Users\Sai Krishna
[nltk_data]     Hari\AppData\Roaming\nltk_data...
[nltk_data]   Unzipping tokenizers\punkt_tab.zip.
```

Out[7]: True

```python
In [10]:   1  import nltk
           2  nltk.download('averaged_perceptron_tagger_eng')
```

```
[nltk_data] Downloading package averaged_perceptron_tagger_eng to
[nltk_data]     C:\Users\Sai Krishna Hari\AppData\Roaming\nltk_data...
[nltk_data]   Unzipping taggers\averaged_perceptron_tagger_eng.zip.
```

Out[10]:   True

```python
In [12]:   1  !pip install spacy
           2
           3  !python -m spacy download en_core_web_sm
           4
           5  import spacy
           6  nlp = spacy.load('en_core_web_sm')
           7  # Read/create a sentence
           8  doc = nlp(u'Apple is ready to launch new phone worth $10000 in New york ti
           9  for ent in doc.ents:
          10      print(ent.text, ent.start_char, ent.end_char, ent.label_)
          11
```

```
00:55
     -- ------------------------------------ 0.8/12.8 MB 221.1 kB/s eta 0:
00:55
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00:55
     -- ------------------------------------ 0.8/12.8 MB 221.1 kB/s eta 0:
```

```python
In [15]:   1  import spacy
           2  nlp = spacy.load("en_core_web_sm")
           3
           4  text = """
           5  Elon Musk, the CEO of SpaceX and Tesla, announced that SpaceX's Starship w
           6  The mission, which will involve astronauts from NASA, will be the first of
           7  Musk emphasized that the project would push the boundaries of space explor
           8  """
```

```
In [16]:  1  doc=nlp(text)
          2  for ent in doc.ents:
          3      print(f"Entity: {ent.text},label: {ent.label_}")
```

```
Entity: Elon Musk,label: PERSON
Entity: SpaceX,label: NORP
Entity: Tesla,label: ORG
Entity: first,label: ORDINAL
Entity: Mars,label: LOC
Entity: 2027,label: DATE
Entity: NASA,label: ORG
Entity: first,label: ORDINAL
Entity: the Kennedy Space Center,label: FAC
Entity: Florida,label: GPE
```

```
In [19]:  1  from spacy import displacy
          2  displacy.render(doc,style="ent")
```

Elon Musk **PERSON** , the CEO of SpaceX **NORP** and Tesla **ORG** , announced that

SpaceX's Starship will be launching its first **ORDINAL** crewed mission to Mars **LOC** in

2027 **DATE** .

The mission, which will involve astronauts from NASA **ORG** , will be the first **ORDINAL** of

its kind, and it will take place at the Kennedy Space Center **FAC** in Florida **GPE** .

Musk emphasized that the project would push the boundaries of space exploration.

```
In [22]:  1  import pandas as pd
          2  entities = [(ent.text,ent.label_,ent.lemma_) for ent in doc.ents]
          3  df=pd.DataFrame(entities,columns=['text','type','lemma'])
          4  print(df)
```

```
                       text       type                     lemma
0                 Elon Musk     PERSON                 Elon Musk
1                    SpaceX       NORP                    SpaceX
2                     Tesla        ORG                     Tesla
3                     first    ORDINAL                     first
4                      Mars        LOC                      Mars
5                      2027       DATE                      2027
6                      NASA        ORG                      NASA
7                     first    ORDINAL                     first
8   the Kennedy Space Center        FAC  the Kennedy Space Center
9                   Florida        GPE                   Florida
```

```
In [ ]:   1
```