Experiment No.6
Perform POS tagging on the given English and Indian Language Text
Date of Performance:
Date of Submission:

Aim: Perform POS tagging on the given English and Indian Language Text

Objective: To study POS Tagging and tag the part of speech for given input in english and an Indian Language.

Theory:

The primary target of Part-of-Speech (POS) tagging is to identify the grammatical group of a given word. Whether it is a NOUN, PRONOUN, ADJECTIVE, VERB, ADVERBS, etc. based on the context. POS Tagging looks for relationships within the sentence and assigns a corresponding tag to the word.

POS Tagging (Parts of Speech Tagging) is a process to mark up the words in text format for a particular part of a speech based on its definition and context. It is responsible for text reading in a language and assigning some specific token (Parts of Speech) to each word. It is also called grammatical tagging.

Steps Involved in the POS tagging example:

- Tokenize text (word_tokenize)
- apply pos_tag to above step that is nltk.pos_tag(tokenize_text)

Implementation:


Exp-5.ipynb
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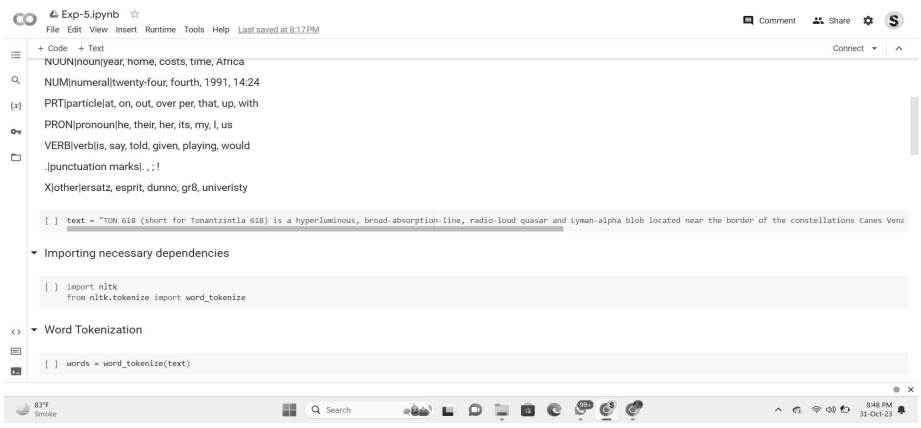
Experiment 05 ~ NLP DLOC ~ Sahil Gujral ~ Roll No. 15 ~ Dept. of CSE (DS) ~ VCET
Parts of Speech
Tag|Meaning|English Examples
ADJ|adjective|new, good, high, special, big, local
ADP|adposition|on, of, at, with, by, into, under
ADV|adverb|really, already, still, early, now
CONJ|conjunction|and, or, but, if, while, although
DET|determiner, article|the, a, some, most, every, no, which
NOUN|noun|year, home, costs, time, Africa
NUM|numeral|twenty-four, fourth, 1991, 14:24
PRT|particle|at, on, out, over per, that, up, with
PRON|pronoun|he, their, her, its, my, I, us
VERB|verb|is, say, told, given, playing, would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NOUN|noun|year, home, costs, time, Africa
NUM|numeral|twenty-four, fourth, 1991, 14:24
PRT|particle|at, on, out, over per, that, up, with
PRON|pronoun|he, their, her, its, my, I, us
VERB|verb|is, say, told, given, playing, would
.|punctuation marks|. , ; !
X|other|ersatz, esprit, dunno, gr8, univeristy
[ ] text = "TON 618 (short for Tonantzintla 618) is a hyperluminous, broad-absorption-line, radio-loud quasar and Lyman-alpha blob located near the border of the constellations Canes Venz
Importing necessary dependencies
[ ] import nltk
from nltk.tokenize import word_tokenize
Word Tokenization
[ ] words = word_tokenize(text)
83°F
Smoke
Search
8:48 PM
31-Oct-23


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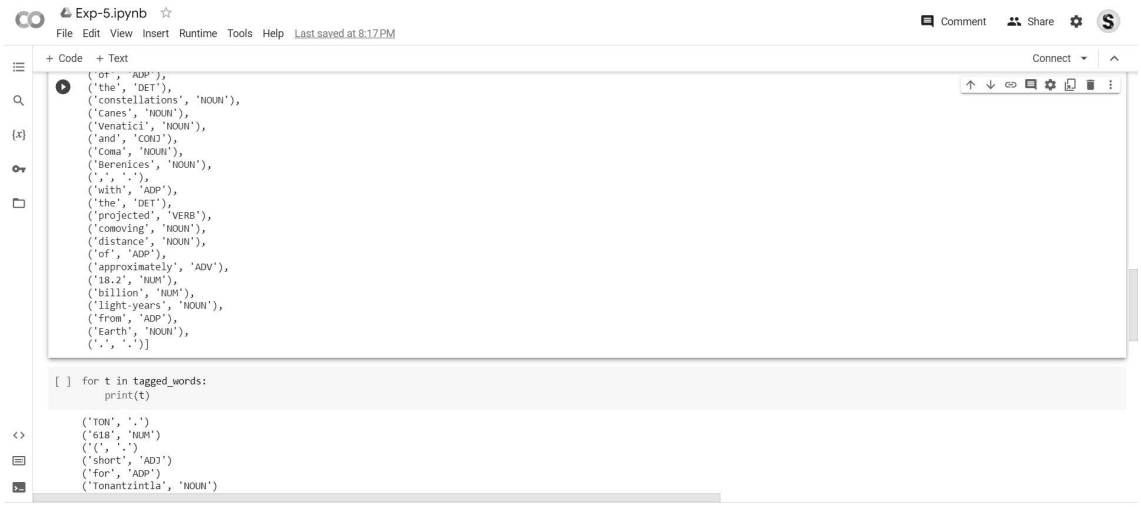
Parts of Speech Tagging
[ ] tagged_words = nltk.pos_tag(words, tagset = 'universal')
tagged_words
[('TON', '.'),
('618', 'NUM'),
('(', '.'),
('short', 'ADJ'),
('for', 'ADP'),
('Tonantzintla', 'NOUN'),
('618', 'NUM'),
(')', '.'),
('is', 'VERB'),
('a', 'DET'),
('hyperluminous', 'ADJ'),
(',', '.'),
('broad-absorption-line', 'ADJ'),
(',', '.'),
('radio-loud', 'ADJ'),
('quasar', 'NOUN'),
('and', 'CONJ'),
('Lyman-alpha', 'NOUN'),
('blob', 'NOUN'),
('located', 'VERB'),
('near', 'ADP'),
('the', 'DET'),
('border', 'NOUN'),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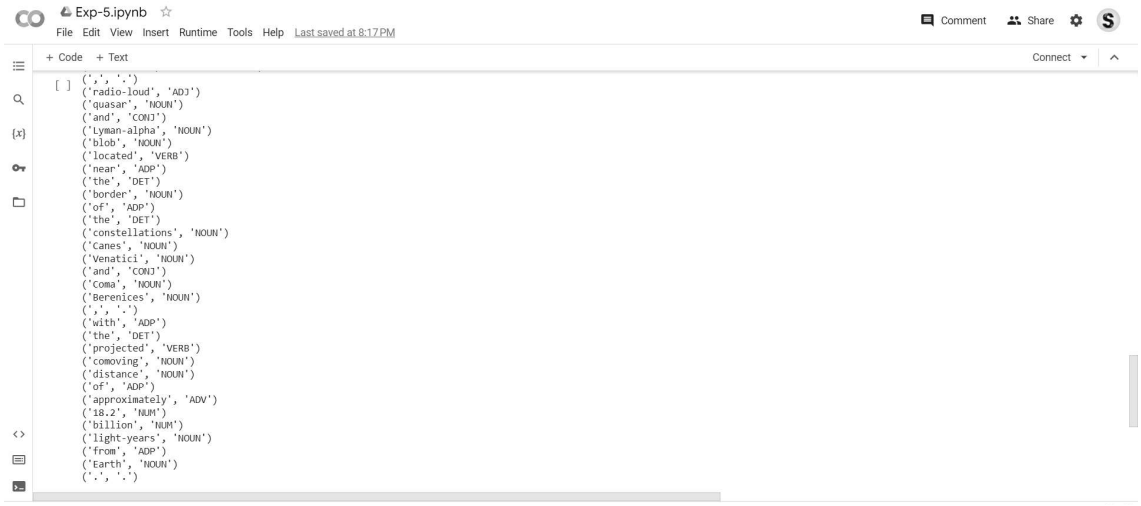
('of', 'ADP'),
('the', 'DET'),
('constellations', 'NOUN'),
('Canes', 'NOUN'),
('Venatici', 'NOUN'),
('and', 'CONJ'),
('Coma', 'NOUN'),
('Berenices', 'NOUN'),
(',', '.'),
('with', 'ADP'),
('the', 'DET'),
('projected', 'VERB'),
('comoving', 'NOUN'),
('distance', 'NOUN'),
('of', 'ADP'),
('approximately', 'ADV'),
('18.2', 'NUM'),
('billion', 'NUM'),
('light-years', 'NOUN'),
('from', 'ADP'),
('Earth', 'NOUN'),
('.', '.')]
[ ] for t in tagged_words:
print(t)
('TON', '.')
('618', 'NUM')
('(', '.')
('short', 'ADJ')
('for', 'ADP')
('Tonantzintla', 'NOUN')


Exp-5.ipynb
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[ ] (',', '.')
('radio-loud', 'ADJ')
('quasar', 'NOUN')
('and', 'CONJ')
('Lyman-alpha', 'NOUN')
('blob', 'NOUN')
('located', 'VERB')
('near', 'ADP')
('the', 'DET')
('border', 'NOUN')
('of', 'ADP')
('the', 'DET')
('constellations', 'NOUN')
('Canes', 'NOUN')
('Venatici', 'NOUN')
('and', 'CONJ')
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('Berenices', 'NOUN')
(',', '.')
('with', 'ADP')
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('projected', 'VERB')
('comoving', 'NOUN')
('distance', 'NOUN')
('of', 'ADP')
('approximately', 'ADV')
('18.2', 'NUM')
('billion', 'NUM')
('light-years', 'NOUN')
('from', 'ADP')
('Earth', 'NOUN')
('.', '.')

Conclusion: