**PERFORMANCE DEPENDENCY PARSING USING NLTK:**

import spacy

from spacy import displacy

# Load English model

nlp = spacy.load("en\_core\_web\_sm") # Make sure you have installed it: python -m spacy download en\_core\_web\_sm

# Example sentence

sentence = "The quick brown fox jumps over the lazy dog."

# Process sentence

doc = nlp(sentence)

# Print word, POS, and dependency relation

print("=== Token, POS, Dependency, Head ===")

for token in doc:

print(f"{token.text:10} {token.pos\_:10} {token.dep\_:10} {token.head.text}")

# Visualize dependency tree (in browser or Jupyter notebook)

displacy.render(doc, style="dep", jupyter=True)