```
!pip install nltk spacy
```

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```

```python
import nltk
import spacy
from nltk.tokenize import sent_tokenize, word_tokenize
from nltk.stem import PorterStemmer, WordNetLemmatizer
```

```python
nltk.download('punkt')
nltk.download('wordnet')
nltk.download('omw-1.4')
nltk.download('punkt_tab')
```

```
[nltk_data] Downloading package punkt to /root/nltk_data...
[nltk_data]   Package punkt is already up-to-date!
[nltk_data] Downloading package wordnet to /root/nltk_data...
[nltk_data]   Package wordnet is already up-to-date!
[nltk_data] Downloading package omw-1.4 to /root/nltk_data...
[nltk_data]   Package omw-1.4 is already up-to-date!
[nltk_data] Downloading package punkt_tab to /root/nltk_data...
[nltk_data]   Unzipping tokenizers/punkt_tab.zip.
True
```

```python
medical_text = """
Diabetes is a chronic disease that affects how the body processes blood sugar.
If untreated, diabetes may cause heart disease, kidney failure, nerve damage and vision problems.
```

```
    Early diagnosis and proper treatment help improve patient outcomes.
    """
```

```
    nltk_sentences = sent_tokenize(medical_text)
    print(nltk_sentences)
```

```
    ['\nDiabetes is a chronic disease that affects how the body processes blood sugar.', 'If untreated
```

```
    nlp = spacy.load("en_core_web_sm")
    doc = nlp(medical_text)
    spacy_sentences = [sent.text for sent in doc.sents]
    print(spacy_sentences)
```

```
    ['\nDiabetes is a chronic disease that affects how the body processes blood sugar.\n', 'If untreat
```

```
    nltk_words = word_tokenize(medical_text)
    print(nltk_words)
```

```
    ['Diabetes', 'is', 'a', 'chronic', 'disease', 'that', 'affects', 'how', 'the', 'body', 'processes'
```

```
    spacy_words = [token.text for token in doc]
    print(spacy_words)
```

```
    ['\n', 'Diabetes', 'is', 'a', 'chronic', 'disease', 'that', 'affects', 'how', 'the', 'body', 'proc
```

```
    stemmer = PorterStemmer()
    stemmed_words = [stemmer.stem(word) for word in nltk_words if word.isalpha()]
    print(stemmed_words)
```

```
    ['diabet', 'is', 'a', 'chronic', 'diseas', 'that', 'affect', 'how', 'the', 'bodi', 'process', 'blc
```

```
    lemmatizer = WordNetLemmatizer()
    lemmatized_words_nltk = [lemmatizer.lemmatize(word) for word in nltk_words if word.isalpha()]
    print(lemmatized_words_nltk)
```

```
    ['Diabetes', 'is', 'a', 'chronic', 'disease', 'that', 'affect', 'how', 'the', 'body', 'process', '
```

```
    spacy_lemmas = [token.lemma_ for token in doc if token.is_alpha]
    print(spacy_lemmas)
```

```
    ['Diabetes', 'be', 'a', 'chronic', 'disease', 'that', 'affect', 'how', 'the', 'body', 'process', '
```