```
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REG NO: 2403A52045
BATCH : 03
SUBJECT : NLP
LAB : 2
```

```
!pip install nltk
```

```
Requirement already satisfied: nltk in /usr/local/lib/python3.12/dist-packages (3.9.1)
Requirement already satisfied: click in /usr/local/lib/python3.12/dist-packages (from nltk) (8.3.1)
Requirement already satisfied: joblib in /usr/local/lib/python3.12/dist-packages (from nltk) (1.5.3)
Requirement already satisfied: regex>=2021.8.3 in /usr/local/lib/python3.12/dist-packages (from nltk) (2025.11.
Requirement already satisfied: tqdm in /usr/local/lib/python3.12/dist-packages (from nltk) (4.67.1)
```

```
pip install spacy
```

Show hidden output

```
import nltk
print("NLTK imported successfully.")
```

```
NLTK imported successfully.
```

```
import spacy
print("spaCy imported successfully.")
```

```
spaCy imported successfully.
```

```
paragraph_text = "Natural Language Processing (NLP) is a field of artificial intelligence that focuses on enab
print("Paragraph loaded successfully.")
```

```
nltk.download('punkt')
print("NLTK punkt tokenizer downloaded successfully.")
```

```
words = nltk.word_tokenize(paragraph_text)
word_count = len(words)
print(f"The total number of words in the paragraph is: {word_count}")
```

```
The total number of words in the paragraph is: 58
```

```
lowercase_text = paragraph_text.lower()
print(lowercase_text)
```

```
natural language processing (nlp) is a field of artificial intelligence that focuses on enabling computers to u
```