

```
# install required NLP libraries  
!pip install nitk spacy
```

```
Collecting nitk  
  Downloading nitk-0.1-py3-none-any.whl.metadata (1.6 kB)  
Requirement already satisfied: spacy in /usr/local/lib/python3.12/dist-packages  
Requirement already satisfied: spacy-legacy<3.1.0,>=3.0.11 in /usr/local/lib/pyt  
Requirement already satisfied: spacy-loggers<2.0.0,>=1.0.0 in /usr/local/lib/pyt  
Requirement already satisfied: murmurhash<1.1.0,>=0.28.0 in /usr/local/lib/pytho  
Requirement already satisfied: cymem<2.1.0,>=2.0.2 in /usr/local/lib/python3.12/  
Requirement already satisfied: preshed<3.1.0,>=3.0.2 in /usr/local/lib/python3.1  
Requirement already satisfied: thinc<8.4.0,>=8.3.4 in /usr/local/lib/python3.12/  
Requirement already satisfied: wasabi<1.2.0,>=0.9.1 in /usr/local/lib/python3.12  
Requirement already satisfied: srsly<3.0.0,>=2.4.3 in /usr/local/lib/python3.12/  
Requirement already satisfied: catalogue<2.1.0,>=2.0.6 in /usr/local/lib/python3  
Requirement already satisfied: weasel<0.5.0,>=0.4.2 in /usr/local/lib/python3.12  
Requirement already satisfied: typer-slim<1.0.0,>=0.3.0 in /usr/local/lib/python  
Requirement already satisfied: tqdm<5.0.0,>=4.38.0 in /usr/local/lib/python3.12/  
Requirement already satisfied: numpy>=1.19.0 in /usr/local/lib/python3.12/dist-p  
Requirement already satisfied: requests<3.0.0,>=2.13.0 in /usr/local/lib/python3  
Requirement already satisfied: pydantic!=1.8,!=1.8.1,<3.0.0,>=1.7.4 in /usr/loc  
Requirement already satisfied: jinja2 in /usr/local/lib/python3.12/dist-packages  
Requirement already satisfied: setuptools in /usr/local/lib/python3.12/dist-pac  
Requirement already satisfied: packaging>=20.0 in /usr/local/lib/python3.12/dist  
Requirement already satisfied: annotated-types>=0.6.0 in /usr/local/lib/python3.  
Requirement already satisfied: pydantic-core==2.41.4 in /usr/local/lib/python3.1  
Requirement already satisfied: typing-extensions>=4.14.1 in /usr/local/lib/pytho  
Requirement already satisfied: typing-inspection>=0.4.2 in /usr/local/lib/python  
Requirement already satisfied: charset_normalizer<4,>=2 in /usr/local/lib/python  
Requirement already satisfied: idna<4,>=2.5 in /usr/local/lib/python3.12/dist-p  
Requirement already satisfied: urllib3<3,>=1.21.1 in /usr/local/lib/python3.12/d  
Requirement already satisfied: certifi>=2017.4.17 in /usr/local/lib/python3.12/d  
Requirement already satisfied: blis<1.4.0,>=1.3.0 in /usr/local/lib/python3.12/d  
Requirement already satisfied: confection<1.0.0,>=0.0.1 in /usr/local/lib/python  
Requirement already satisfied: click>=8.0.0 in /usr/local/lib/python3.12/dist-p  
Requirement already satisfied: cloudpathlib<1.0.0,>=0.7.0 in /usr/local/lib/pyth  
Requirement already satisfied: smart-open<8.0.0,>=5.2.1 in /usr/local/lib/python  
Requirement already satisfied: MarkupSafe>=2.0 in /usr/local/lib/python3.12/dist  
Requirement already satisfied: wrapt in /usr/local/lib/python3.12/dist-packages  
Downloading nitk-0.1-py3-none-any.whl (15 kB)  
Installing collected packages: nitk  
Successfully installed nitk-0.1
```

```
import nltk  
import spacy
```

```
text = """Technology is rapidly changing the way people communicate.  
Social media, emails, and instant messaging have made communication  
convenient and accessible. However, responsible use of technology is essential for a healthy  
and fulfilling life. It's important to be aware of the impact our digital interactions have on ourselves and others, and to use technology in a way that promotes positivity, respect, and empathy. By being mindful of our online behavior and setting boundaries, we can harness the power of technology for good and avoid potential pitfalls like cyberbullying, addiction, and privacy invasion.
```

```
words = text.split()  
print("Word count:", len(words))
```

Word count: 29

```
lowercase_text = text.lower()  
print("\nLowercase text:\n", lowercase_text)
```

Lowercase text:

technology is rapidly changing the way people communicate.  
social media, emails, and instant messaging have made communication faster.  
however, responsible use of technology is essential for a healthy society.