

1) Lowercase

```
def lowercase_text(text):  
    return text.lower()  
  
text = ' AKILA AND PRANITHA .\nARE pursuing post-graduation from SR UNIVERSITY.'  
  
print(lowercase_text(text))
```

2. Removing Punctuations

```
import string  
  
PUNCT_TO_REMOVE = string.punctuation  
  
def remove_punctuation(text):  
    return ' '.join(text.translate(str.maketrans("", "", PUNCT_TO_REMOVE)).split())  
  
text = "I'm having a lot of punctuations!!.@@@@ All special characters will be removed *&&& ;) :) Is  
it so ? ## Yes :( I will. "  
  
print(remove_punctuation(text))
```

3. Removing Stopwords

```
import nltk  
  
nltk.download('stopwords')  
  
from nltk.corpus import stopwords  
  
stoplist = stopwords.words('english')  
  
text = ""  
  
The rose is a beautiful flower  
  
""  
  
print("\nOriginal string:")
```

```
print(text)

clean_word_list = [word for word in text.split() if word not in stoplist]

print("\nAfter removing stop words from the said text:")

print(clean_word_list)
```

4) Removing URLs

```
import re

def remove_URL(sample):

    """Remove URLs from a sample string"""

    return re.sub(r"http\S+", "", sample)

print(remove_urls('URL of whatsapp https://web.whatsapp.com/'))
```

5) Removing Removing Emojis

```
import re

def remove_emoji(string):

    emoji_pattern = re.compile("[

        u"\U0001F600-\U0001F64F" # emoticons

        u"\U0001F300-\U0001F5FF" # symbols & pictographs

        u"\U0001F680-\U0001F6FF" # transport & map symbols
```

```
u"\U0001F1E0-\U0001F1FF" # flags (iOS)

u"\U00002702-\U000027B0"

u"\U000024C2-\U0001F251"

"]+", flags=re.UNICODE)

return emoji_pattern.sub(r'', string)

print(remove_emoji("👉 Removing emojis for text preprocessing 🐶🐶🐶"))
```