

## **Title: Implementation of NLP Programs.**

**Ex. No : 09**

**Reg.No. : RA2011003011334**

**Date :16-03-20233**

**Name: RishabhSinghSahil**

### **Aim:**

Implementation of NLP Program.

### **Algorithm:**

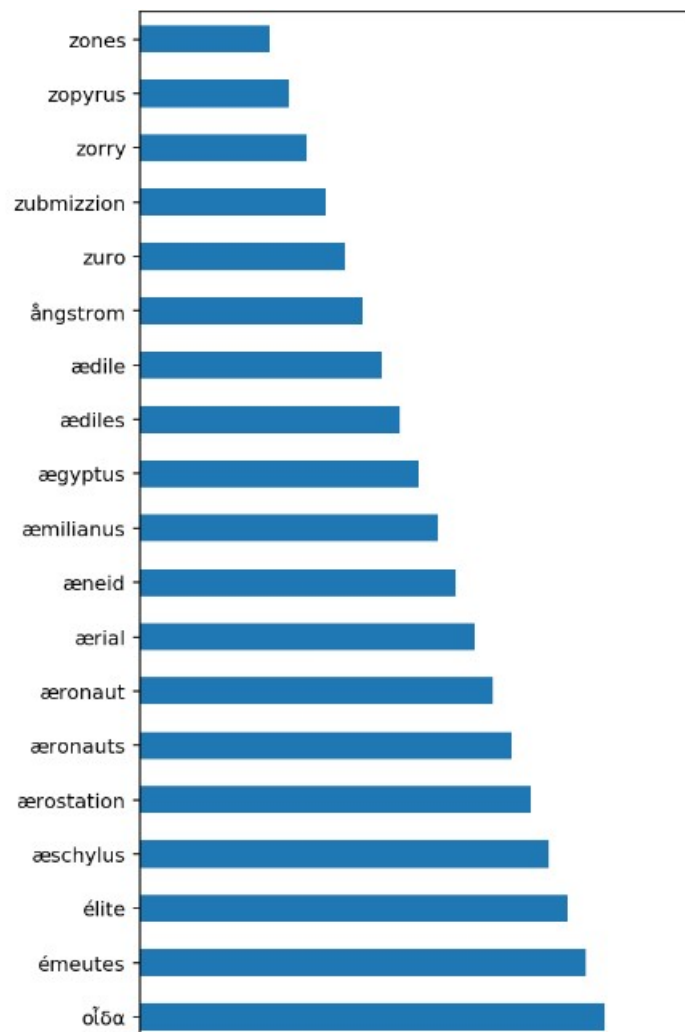
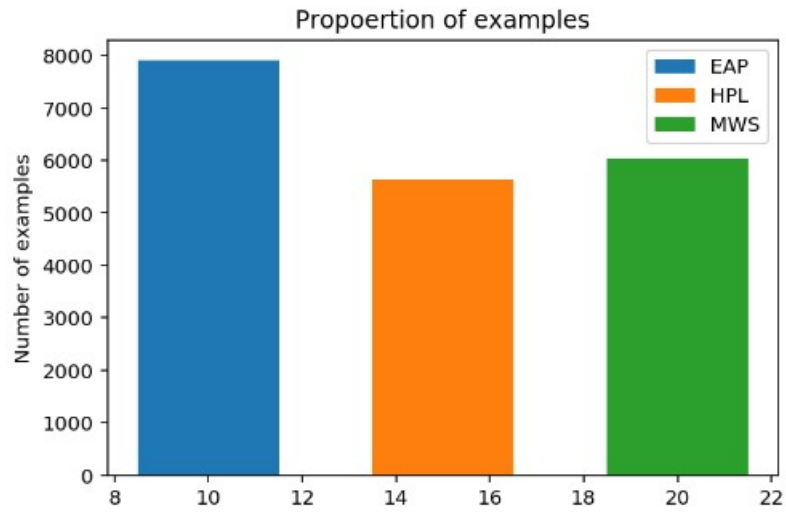
1. Data Collection: Collect data in the form of text or speech. This can be done by web scraping, API calls, or manual data entry.
2. Data Cleaning: Preprocess the data to remove unwanted characters, symbols, and noise. This can involve tasks such as lowercasing, removing stop words, stemming or lemmatizing, and removing punctuation.
3. Tokenization: Break the text into smaller units called tokens. This can be done using regular expressions, NLTK, or Spacy.
4. Part-of-Speech (POS) Tagging: Assign each token a part-of-speech tag (e.g. noun, verb, adjective). This can be done using NLTK or Spacy.
5. Named Entity Recognition (NER): Identify and classify named entities such as people, places, and organizations in the text. This can be done using Spacy.
6. Sentiment Analysis: Analyze the sentiment of the text (positive, negative, or neutral). This can be done using NLTK or TextBlob.
7. Topic Modeling: Identify the topics present in the text and group related words together. This can be done using Latent Dirichlet Allocation (LDA) or Non-negative Matrix Factorization (NMF).

8. Text Classification: Classify text into predefined categories such as spam or not spam, or sentiment analysis. This can be done using machine learning algorithms such as Naive Bayes, Support Vector Machines (SVM), or Random Forests.
9. Text Generation: Generate new text using machine learning techniques such as Markov Chain or Recurrent Neural Networks (RNN).
10. Data Visualization: Visualize the results of NLP analysis using graphs, word clouds, or heatmaps.

### **Output:**

Out[3]:

	id	text	author
0	id26305	This process, however, afforded me no means of...	EAP
1	id17569	It never once occurred to me that the fumbling...	HPL
2	id11008	In his left hand was a gold snuff box, from wh...	EAP
3	id27763	How lovely is spring As we looked from Windsor...	MWS
4	id12958	Finding nothing else, not even gold, the Super...	HPL
5	id22965	A youth passed in solitude, my best years spen...	MWS
6	id09674	The astronomer, perhaps, at this point, took r...	EAP
7	id13515	The surcingle hung in ribands from my body.	EAP
8	id19322	I knew that you could not say to yourself 'ste...	EAP
9	id00912	I confess that neither the structure of langua...	MWS



**Result:**

Successfully Implemented NLP Program.