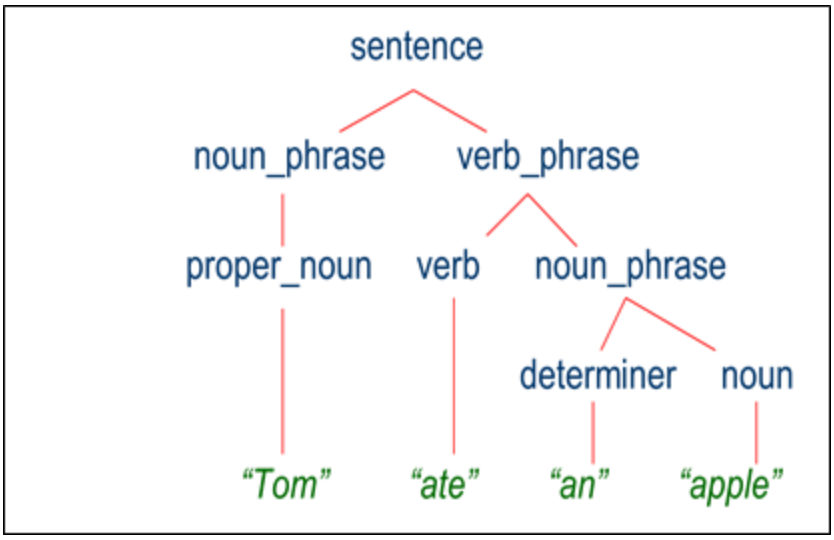
Simply speaking, parsing in NLP is the process of determining the syntactic structure of a text by analyzing its constituent words based on an underlying grammar (of the language).
See this example grammar below, where each line indicates a rule of the grammar to be applied to an example sentence "Tom ate an apple".

Example Grammar:

```
sentence -> noun_phrase, verb_phrase
noun_phrase -> proper_noun
noun_phrase -> determiner, noun
verb_phrase -> verb, noun_phrase
proper_noun -> [Tom]
noun -> [apple]
verb -> [ate]
determiner -> [an]
```

Then, the outcome of the parsing process would be a parse tree like the following, where **sentence** is the root, intermediate nodes such as **noun_phrase**, **verb_phrase** etc. have children - hence they are called **non-terminals** and finally, the leaves of the tree **'Tom**', '**ate'**, '**an'**, '**apple'** are called **terminals**.

Parse Tree:



Existing parsing approaches are basically statistical, probabilistic, and machine learning-based. Some notable tools to use for parsing are: Stanford parser (The Stanford Natural Language Processing Group), OpenNLP (Apache OpenNLP Developer Documentation) etc.

A parse tree

- John ate the apple.

1. S -> NP VP
2. VP -> V NP
3. NP -> NAME
4. NP -> ART N
5. NAME -> John
6. V -> ate
7. ART-> the
8. N -> apple