Computers run the world.
I am the cheese.
I never tell lies.

Now consider the derivation (construction) of the first sentence using the above grammar.

sentence	⇒	**subject**	**verb-phrase**	**object**	
	⇒	This	**verb-phrase**	**object**	
	⇒	This	**verb**	**object**	
	⇒	This	is	**object**	
	⇒	This	is	a	**noun**
	⇒	This	is	a	university

In addition to several reasonable sentences, some can also derive nonsense sentences like 'Computers run cheese' or 'This am a lies'. These sentences don't make semantic sense, but they are syntactically correct because they are of the sequence of **subject**, **verb-phrase**, **verb** and **object**.

It is very difficult to define the complete language with a finite number of rules. It is difficult to list all acceptable sentences of a language. In general the language should have the following properties:

- Well defined, without ambiguity.
- Using formula, we should be able to recognize in a finite time, whether any given word is in the language or not.

Formal Definition of Grammar:

A formal definition of a grammar G can be given in 4-tuples as:

G = (N, Σ, P, S) where
N is a finite set of non-terminals;

Σ or T is a finite nonempty set of terminals;
S is the start symbol and S ∈ N;

P is a finite set of productions of the form: $\alpha \rightarrow \beta$ as given in the above English grammar.

Definitions of the terms used above & some other grammar related terms are described as:

Symbols: A symbol means a point, letters, digits etc.

Alphabet: An alphabet (Σ) is a finite, nonempty set of fundamental units, set of letters, character or symbols (Cohen pp-8)
i.e. Σ = {a, b, c,…z}i.e. an alphabet of cardinality 26.