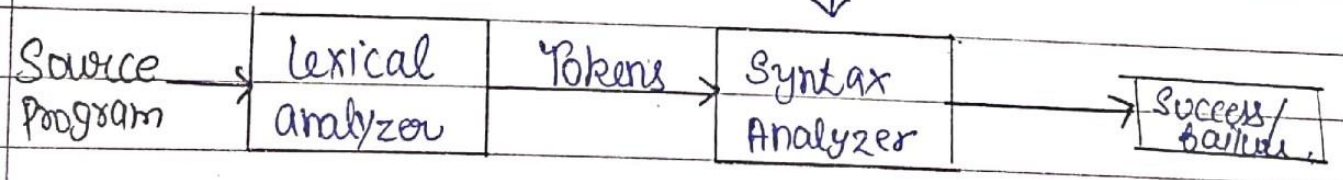


# \* AI :- Basic Parsing Techniques

## Parsing :-

- It involves analysis of words in the sentence for grammar and arranging words in a manner that shows the relationship among the words.
- For example:- The sentence such as "The school goes to boy" is rejected by Syntactic Analyzer (Parsing).
- Parsing (also known as syntax analysis) can be defined as a process of analyzing a text which contains a sequence of tokens to determine its grammatical structure.

Grammar for source program language  
↓

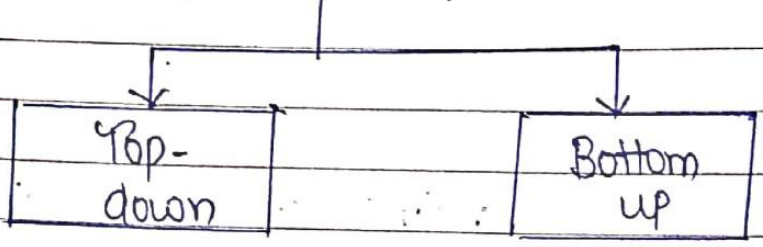


## • The Most Commonly used Parsing Techniques:-

- Top down parsing.
- Bottom up parsing.

\_/\_/\_

Parsing.

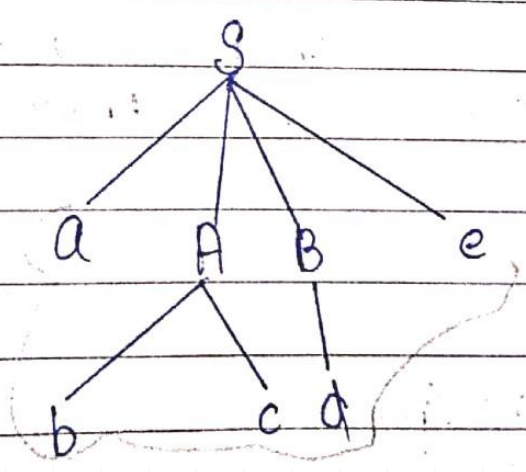


• Top down parsing:-

→ The top down parsing is known as recursive parsing or predictive parsing.

→ In the top down parsing, the parsing starts from the start symbol and transform it into the input symbol.

Example:-  $S \rightarrow aABe$   
 $A \rightarrow bc$   
 $B \rightarrow d$   
 $W \rightarrow abcde$





- Bottom up parsing:-

→ It is also known as Shift - reduce Parsing.

→ Bottom up parsing is used to construct a parse tree for an input string.

→ In this, the Parsing starts with the input symbol and construct the parse tree up to the start symbol by tracing out the rightmost derivations of string in reverse.