# System Programming Assignment 5

* Aim: Recursive Descent Parser for assignment statement

* Objective: To understand the process of parsing & to study bottom up & top down parsing.

* Outcomes: Understood the design & implementation of parser

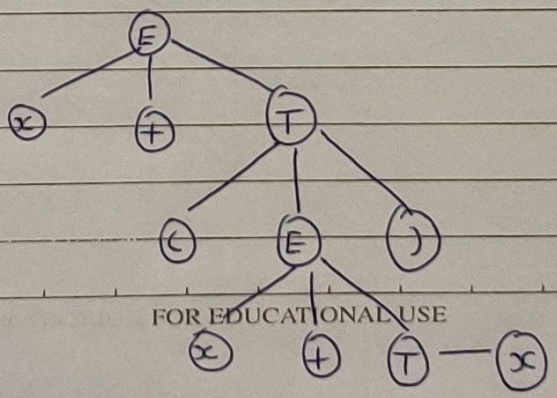
* Theory:

- Recursive Descent parsing is a top down approach in which the parser attempts to verify that syntax of input stream is correct.

- This involves reading characters from input stream & matching them with terminals from grammar that describes the syntax of the input.

- For simple grammar $E \rightarrow x + T$
  $T \rightarrow (E)$
  $T \rightarrow x$

The derivation tree for expression $x+(x+x)$



- Input: Grammar Rules & string.
- Output: String evaluation

* Algorithm:

i) Input string
ii) Mention grammar
iii) Compare token with grammar
iv) If token satisfies grammar return string evaluation.

* Conclusion: Thus we have studied recursive descent parser