Lab 7

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https://github.com/andreicupes/FLCD/tree/main/Lab5

Created the ParserOutput Class.

The generateTree function generates a parse tree for a given sequence of productions in a grammar. The function works as follows:

- Check if there are any errors in the input, and return if there are.
- Initialize a stack of nodes to store the nodes of the parse tree as they are generated, and a counter nodeNumber to keep track of the current node number.
- Create the root node of the parse tree, set its properties, and push it onto the stack.
- While there are still productions to process and the stack is not empty:
  - Retrieve the top node from the stack (the current "father" node).
  - If the value of the current node is a terminal symbol or the empty string, pop the node from the stack and continue to the next iteration of the loop.
  - Otherwise, generate the children nodes of the current node by creating a new node for each symbol in the production corresponding to the current production index, setting the properties of each new node, and pushing each new node onto the stack.
  - Increment the current production index.
- Return the root node of the parse tree.

The printTree function prints the corresponding tree.