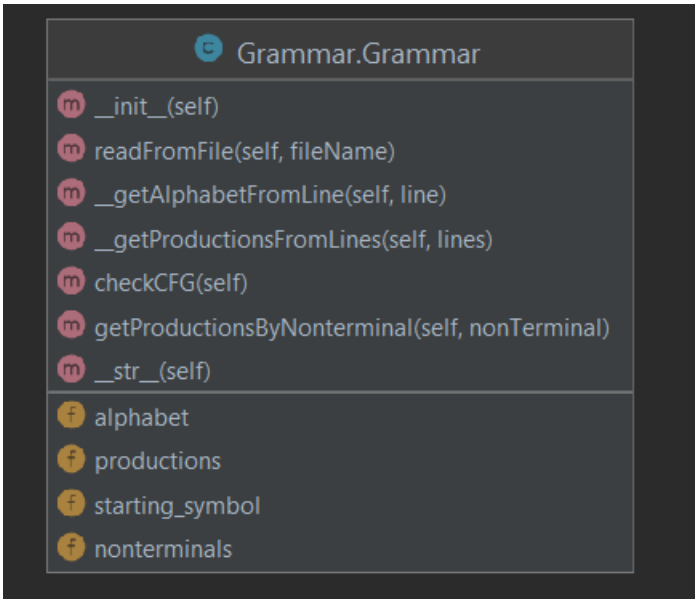
https://github.com/CosminHolcan/FLCD/tree/main/Lab5



I represented the alphabet as a list of strings, productions as a dictionary, starting_symbol as a simple string and nonterminals as a list of strings. The dictionary of productions has as key a tuple of strings which represents the nonterminal from the left hand side of a production and as a value a list of lists of strings from the right hand side (for example, SA -> abS | Acb, then the key is (S,A) and the value is [[a,b,S], [A,c,b]]). In this way, to check if the grammar is a cfg all I have to do is to check if for every key in dictionary of productions the length of respective key is 1 (otherwise is not a cfg). Also, I checked for every part of the right hand side of the production that all the strings are either symbols of alphabet or nonterminals.