

Exercise: Deferred code generation.

You are asked to design an arithmetic expression calculator that translates the input sequence (infix format) into a postfix or prefix format. This type of problem is solved by carefully choosing the insertion point in each grammar rule of the semantic actions that print the translated fragments.

But this process can be very complicate due to factored productions or when the grammar grows, and especially for the prefix format.

A suggestion is to use dynamic memory to collect the translated fragments, and to rearrange them at the end of the parsing process.