1. Augment the following grammar of nested parenthesis with semantic rules to count the number of opening parenthesis:

   `<parens> ::= ( <parens> )`

   `<parens> ::= ε`

   The synthesized attribute `parens.num` should hold the number of opening parenthesis.

2. Draw a decorated parse tree of the input `((()))` using the augmented grammar of Exercise 1.

3. Write (on paper) a recursive descent parser (in Pseudo code or a programming language of your liking) for the augmented grammar of Exercise 1.

4. Textbook exercise 4.5.