Compiler Construction

Give a brief description of the main features of either Lex and Yacc or the corresponding Java tools JLex and Cup. [5 + 5 marks]

Illustrate their use by outlining how you would construct a parser for expressions composed of identifiers, integers, unary minus and binary operators +, −, *, and /. Your parser is expected to create a parse tree in a format of your choice representing the expression that is presented to it. If it helps, you may assume that expressions will be terminated by writing a semicolon after them. [10 marks]