Design and implement a recursive-descent syntax analyzer for MicroScala which will parse programs according to the prescribed grammar. This process has the following steps:

1. The layout of the parser should conform to the EBNF grammar of MicroScala given in Assignment #1.

2. The parser should interact with the lexical analyzer to retrieve tokens as it needs them.

3. The parser may terminate execution if a syntax error is detected, printing a suitable error message.

4. If the source program has no syntax errors, the result of the parse should be a source program listing (e.g., this can be printed by the lexical analyzer as the program is read) and a statement that parsing was successful.