In this project you are required to implement the programming assignment #2 using Python. As a reminder, here is the EBNF grammar for a very simple language, called C--:

program :={stmt}  
stmt : var_dec ; | assign ; | read_stat ; | write_stat ; | if_stmt ; | while_stmt ;  
var_dec : type var  
assign : var "=" expr  
expr : add_expr  
add_expr : mul_expr {("+"|"-") mul_expr}  
mul_expr : simple_expr {("*"|"/"|"%") simple_expr}  
simple_expr : id | var | "(" expr ")"  
read_stat : "READ" "(" expr ")"  
write_stat : "PRINT" "(" expr ")"  
type : "int" | "float" | "boolean"  
id : intnumber | floatnumber  
intnumber : Digit | Digit intnumber  
floatnumber : intnumber "." intnumber  
Digit : [0-9]+  
boolean : "0" | "1";  
var : [A-Z, a-z]+  
block : program [ block ]  
if_stmt : "if" bool_stmt ":" [block] [ "else:" [block] ] "end if"  
while_stmt : "while" bool_stmt "do" [block] "end while"  
bool_stmt : and_stmt | rel_stmt | boolean  
and_stmt : bool_stmt {("and"|"or") bool_stmt}  
rel_stmt : simple_expr {(">"|"<"|">="|"<=") simple_expr}  

• Develop you lexical analyzer is Python.