⟨*single_input*⟩ ::= ⟨*single_stmt*⟩

⟨*file_input*⟩ ::= ⟨*stmt_list*⟩

⟨*stmt_list*⟩ ::= ⟨*single_stmt*⟩ ⟨*stmt_list*⟩
| ⟨*single_stmt*⟩

⟨*single_stmt*⟩ ::= ⟨*stmt*⟩ ⟨*new_line*⟩

⟨*new_line*⟩ ::= '\n' #Unix based
| '\r \n' #Windows

⟨*single_stmt*⟩ ::= ⟨*func_def*⟩
| ⟨*print_stmt*⟩
| ⟨*if_stmt*⟩
| ⟨*for_stmt*⟩
| ⟨*while_stmt*⟩
| ⟨*import_stmt*⟩
| ⟨*assign_stmt*⟩
| ⟨*expr_stmt*⟩
| ⟨*empty_stmt*⟩

⟨*print_stmt*⟩ ::= 'print' '(' ⟨*expr*⟩ ')'

⟨*if_stmt*⟩ ::= 'if' ⟨*test*⟩ ':' ⟨*stmt_list*⟩ ⟨*elif*⟩ ⟨*else*⟩

⟨*elif*⟩ ::= 'elif' ⟨*test*⟩ ':' ⟨*stmt_list*⟩ ⟨*elif*⟩
| #nothing

⟨*else*⟩ ::= 'else' ':' ⟨*stmt_list*⟩
| #nothing

⟨*for_stmt*⟩ ::= 'for' ⟨*exp*⟩ 'in' ⟨*exp*⟩ 'to' ⟨*exp*⟩ ':' ⟨*stmt_list*⟩

⟨*while_stmt*⟩ ::= 'while' ⟨*test*⟩ ':' ⟨*stmt_list*⟩

⟨*import_stmt*⟩ ::= 'import' ⟨*string*⟩

⟨*assign_stmt*⟩ ::= ⟨*var*⟩ '++'
| ⟨*var*⟩ '--'
| ⟨*var*⟩ ⟨*assign_op*⟩ ⟨*exp*⟩

⟨*assign_op*⟩ ::= '=' | '+=' | '-=' | '*=' | '/=' | '%=' | '^='

⟨*expr_stmt*⟩ ::= ⟨*exp*⟩

⟨*empty_stmt*⟩ ::= #nothing

⟨*exp*⟩ ::= ⟨*exp*⟩ '+' ⟨*term*⟩
| ⟨*exp*⟩ '-' ⟨*term*⟩
| ⟨*term*⟩

⟨*term*⟩ ::= ⟨*term*⟩ '*' ⟨*pow*⟩
| ⟨*term*⟩ '/' ⟨*pow*⟩
| ⟨*term*⟩ '%' ⟨*pow*⟩
| ⟨*pow*⟩

⟨*pow*⟩ ::= ⟨*factor*⟩ ‘^’ ⟨*pow*⟩
| ⟨*factor*⟩

⟨*factor*⟩ ::= ⟨*int*⟩
| ⟨*double*⟩
| ⟨*string*⟩
| ⟨*var*⟩
| ⟨*func_call*⟩
| ‘$’ #previous input
| ‘(’ ⟨*exp*⟩ ‘)’
| ‘+’ ⟨*factor*⟩
| ‘−’ ⟨*factor*⟩

⟨*int*⟩ ::= ⟨*number*⟩

⟨*double*⟩ ::= ⟨*number*⟩ ‘.’ ⟨*number*⟩

⟨*number*⟩ ::= ⟨*digit*⟩ ⟨*number*⟩
| ⟨*digit*⟩

⟨*digit*⟩ ::= ‘0’ | ‘1’ | ‘2’ | ‘3’ | ‘4’ | ‘5’ | ‘6’ | ‘7’ | ‘8’ | ‘9’

⟨*string*⟩ ::= ⟨*char*⟩ ⟨*string*⟩
| ⟨*char*⟩ #UTF-8 character

⟨*var*⟩ ::= ⟨*alpha_num*⟩ ⟨*var*⟩
| ⟨*alpha_num*⟩

⟨*alpha_num*⟩ ::= ⟨*digit*⟩
| ⟨*letter*⟩ # a to z, A to Z
| ‘_’

⟨*func_call*⟩ ::= ⟨*var*⟩ ‘(’ ⟨*param_list*⟩ ‘)’
| ⟨*var*⟩ ‘()’

⟨*param_list*⟩ ::= ⟨*var*⟩‘,’ ⟨*param_list*⟩
| ⟨*var*⟩

⟨*test*⟩ ::= ⟨*or_test*⟩

⟨*or_test*⟩ ::= ⟨*and_test*⟩ ‘||’ ⟨*or_test*⟩
| ⟨*and_test*⟩

⟨*and_test*⟩ ::= ⟨*not_test*⟩ ‘&&’ ⟨*and_test*⟩
| ⟨*not_test*⟩

⟨*not_test*⟩ ::= ‘!’ ⟨*comparison*⟩
| ⟨*comparison*⟩

⟨*comparison*⟩ ::= ⟨*exp*⟩ ⟨*comp_op*⟩ ⟨*exp*⟩

⟨*comp_op*⟩ ::= ‘==’ | ‘!=’ | ‘>’ | ‘<’ | ‘>=’ | ‘<=’