# CFG RULES Tiny Language:

1. ReadState → read identifier ;
2. ReturnState → return Expression ;
3. WriteState → write Factor ;

    Factor → Expression | endl

4. Condition → identifier Operator Term
   Term → identifier | number | FunctionCall
   Operator → < | > | = | <>
5. Main_Func → Datatype main ( ) Function_Body

    Datatype → int | float | string

6. Program → Function_state_dash Main_func

    Function_state_dash → ε | Func_stat Function_state_dash

7. Condition_stat → Condition Condition_dash

    Condition_dash → BoolOp Condition_stat | ε

    BoolOp → && | "|" "|"

8. Function_name → identifier
9. Parameter → Datatype | identifier
10. Func_declaration → Datatype Function_name Func_dec_Pram

    Func_dec_Pram → ( Pram | ε)

    Pram → Parameter Pr

    Pr → Parameter Pr | ε

11. Function_Body  → { Statements Return_stat }
12. Statements → Statements Statement | Statement

    Statements → Statement State

    State → Statement State | ε

    Statement → WriteState | ReadState | Assignment_state | Condition_stat
    |Declaration_state | if_statement

13. Expression → string | Term | equation
14. Assignment_state →  identefier  := Expression
15. Function_ call → identefier (parameter1) ;
    Parameter1 → identefier Parameter2 | ε

Parameter2 → , identefier| Ɛ
16. Declaration_statement → datatype dec_state1 dec_state2 ;
    Dec_state1 → identefier | Assignment_state
    Dec_state2 → , Dec_state1 | Ɛ

17. Equation → Term EquationDash | ( Term EquationDash )
    EquationDash → Arith_op EquatDash
    EquatDash →( Term EquationDash) | Term EquatD
    EquatD → EquationDash  | Ɛ
    Arith_op →  - | + | / | *
18. Repeat_stat → repeat Statements until Condition_stat
19. Function_stat  → Func_declaration Function_Body
20. if_statement → if Condition_stat then Statements ElseClause
21. ElseClause → end | Elseif_statement | Else_statement
22. Elseif_statement → elseif Condition_stat then Statements ElseClause
23. Else_statement → else Statements end