**Tiny CFG**

* **Terminals**

int, float, string, read, write, repeat, until, if, elseif, else, then, return, endl, end, semicolon, comma, l\_bracket, r\_bracket, equalOp, lessthanOp, greaterthanOp, notequalOp, plusOp, minusOp, multiplyOp, divideOp, and, or, idenifier, assignOp, open\_Curlybrac, close\_Curlybrac, number, stringVal, greater\_or\_equal, less\_or\_equal.

* **Production Rules**

1. Program🡪Funtions Main\_function
2. Functions🡪Function Functions | ε
3. Function🡪Function\_Header Function\_Body
4. Main\_function🡪int main () Function\_Body
5. Function\_Header 🡪Datatype identifier (ParameterList)
6. Function\_Body🡪{Statements Return\_Statement}
7. ParameterList🡪Parameters | ε
8. Parameters🡪 Parameters, Datatype identifier | Datatype identifier

1. Parameters 🡪Datatype identifier Parameter

2. Parameter🡪, Datatype identifier Parameter | ε

1. Statements🡪 Statements ;Statement | Statement
2. Statements🡪 Statement State
3. State🡪 ;Statement State | ε
4. Statement🡪 Repeat\_Statement | If\_Statement | Write\_Statement | Read\_Statement | Declaration\_Statement | Assignment\_Statement | Function\_Call | ε
5. Write\_term🡪Expression | endl
6. Repeat\_Statement🡪 repeat Statements until Condition\_Statement
7. Else\_Statement🡪else Statements end
8. ElseIf\_Statement🡪elseif Condition\_Statement then Statements ElseOrElseif\_Statement
9. ElseOrElseif\_Statement🡪 ElseIf\_Statement | Else\_Statement | ε
10. If\_Statement🡪if Condition\_Statement then Statements ElseOrElseif\_Statement
11. Condition\_Statement🡪 Condition Boolean\_Operator Condition\_Statement | Condition
12. Boolean\_Operator🡪&& | ||
13. Condition🡪identifier Condition\_Operator Term
14. Condition\_Operator🡪> | < | = | <> | <= | >=
15. Return\_Statement🡪return Expression;
16. Read\_Statement🡪read identifier
17. Write\_Statement🡪write write\_term
18. Declaration\_Statement🡪Datatype Vars
19. Vars🡪Vars, VarDeclare | VarDeclare
20. Vars🡪 VarDeclare Variable
21. Variable 🡪, VarDeclare Variable | ε
22. VarDeclare🡪identifier | Assignment\_Statement
23. Datatype🡪 int | float | string
24. Assignment\_Statement🡪identifier := Expression
25. Expression🡪stringVal | Term | Equation
26. Equation🡪(Equation) | Term Arithmatic\_Operator Equation | Term
27. Arithmatic\_Operator🡪+ | - | \* | /
28. Term🡪number | identifier | Function\_Call
29. Function\_Call🡪identifier (Arguments)
30. Arguments🡪Arguments, identifier | identifier
31. Arguments🡪identifier Arg
32. Arg🡪, identifier Arg | ε