Terminals:

\_\_\_\_\_\_\_\_\_\_\_

1) identifier

2) number

3) stringvalue

4) int

5) float

6) string

7) endl

8) write

9) read

10) return

11) if

12) then

13) elseif

14) end

15) else

16) repeat

17) until

18) main

19) comment

19) +

20) -

21) \*

22) /

23) (

24) )

25) :=

26) ,

27) ;

28) <

29) >

30) =

31) <>

32) &&

33) ||

34) {

35) }

CFG:

\_\_\_\_\_\_\_\_\_\_\_\_\_

6) Function\_Call -> identifier ( Arguments )

Arguments -> Term ArgumentsR | ε

ArgumentsR -> , Term ArgumentsR | ε

7) Term -> number | identifier | Function\_Call

8) Arithmatic\_Operator -> + | - | \* | /

9) Equation -> Factor EquationR

Factor -> Term | ( Equation )

EquationR -> Arithmatic\_Operator Factor EquationR | 3

10) Expression -> stringvalue | Term | Equation

11) Assignment\_Statement -> identifier := Expression

12) Datatype -> int | float | string

13) Declaration\_Statement -> Datatype Declaration\_StatementR AssignOrIdR ;

Declaration\_StatementR -> identifier AssignOrId

AssignOrId -> := Expression | 3

AssignOrIdR -> , Declaration\_StatementR AssignOrIdR | epslion

14) Write\_Statement -> write Write\_StatementR ;

Write\_StatementR -> Expression | endl

15) Read\_Statement -> read identifier ;

16) Return\_Statement

Return\_Statement -> return Expression ;

17) Condition\_Operator

Condition\_Operator -> < Condition\_OperatorR | > | =

Condition\_OperatorR -> > | ε

18) Condition

Condition -> identifier Condition\_Operator Term

19) Boolean\_Operator

Boolean\_Operator -> && | ||

20) Condition\_Statement

Condition\_Statement -> Condition Condition\_StatementR

Condition\_StatementR -> Boolean\_Operator Condition Condition\_StatementR | ε

21) If\_Statement -> if Condition\_Statement then Statements Elif Els end

Statements -> Stats Statements | ε

Stats -> Comment\_Statement | Assignment\_Statement |

Declaration\_Statement | Write\_Statement |

Read\_Statement | Return\_Statement |

If\_Statement | Repeat\_Statement

Elif -> Else\_If\_Statement Elif | ε

Els -> Else\_Statement | ε

22) Else\_If\_Statement -> elseif Condition\_Statement then Statements

23) Else\_Statement -> else Statements

24) Repeat\_Statement -> repeat Statements until Condition\_Statement

26)

Parameter -> Datatype identifier

27)

Function\_declaration -> Datatype identifier ( Parameter\_List )

Parameter\_List -> Parameter Parameter\_ListR | epslion

Parameter\_ListR -> , Parameter Parameter\_ListR | epslion

28)

Function\_Body -> { StatementsR Return\_Statment }

StatementsR -> StatsR StatementsR | ε

StatsR -> Comment\_Statement | Assignment\_Statement |

Declaration\_Statement | Write\_Statement |

Read\_Statement | If\_Statement | Repeat\_Statement

29)

Function\_Statment -> Function\_Declaration Function\_Body

30)

Main\_Function -> Datatype main () Function\_Body

31)

Program -> Function\_Statments Main\_Function

Function\_Statments -> Function\_Statment Function\_Statments | epslion