Tiny Language

* Terminals
* Number
* String
* Identifier
* Comment\_Statement
* Reserved\_Words
* Non-Terminals
* Program
* Functions
* Function
* MainFunction
* FunctionDecl
* FunctionName
* ParameterList
* Parameter
* Parameters
* FunctionBody
* Statements
* Statement
* ReturnStatement
* RepeatStatement
* Assignment\_Statement
* Read\_Statement
* Write\_Statement
* ConditionStatement
* Declaration\_Statement
* FunctionCall
* ArgumentList
* Argument
* Arguments
* StatementsWithRet
* If\_Statement
* Else\_If\_Statement
* Else\_Statement
* Declaration\_Statement
* Declaration
* Declarations
* Datatype
* ConditionOp
* PlusOrMinus
* MultOrDivide
* BooleanOp
* Condition
* AnotherCondition
* Expression
* Equation
* SubEquation
* Factor
* SubFactor
* Term

CFG

*Program* 🡪 Functions MainFunction

*Functions* 🡪 Function Functions | ε

*MainFunction* 🡪 Datatype main () FunctionBody

*Function* 🡪 FunctionDecl FunctionBody

*FunctionDecl* 🡪 Datatype FunctionName ParameterList

*FunctionName* 🡪 identifier

*ParameterList*🡪 (Parameter)

*Parameter* 🡪 Datatype identifier Parameters | ε

*Parameters* 🡪 , Datatype identifier Parameters | ε

*FunctionBody* 🡪 {Statements ReturnStatement}

*Statements* 🡪 Statement Statements | ε

*Statement* 🡪 Read\_Statement

| Write\_Statement  
| Assignment\_Statement ;

| If\_Statement

| FunctionCall ;

| RepeatStatement

| Declaration\_Statement  
| ε

*ReturnStatement* 🡪 return Expression ;

*RepeatStatement* 🡪 repeat Statements until ConditionStatement

*Assignment\_Statement* 🡪 identifier := Expression

*Read\_Statement* 🡪 read identifier ;

*Write\_Statement* 🡪 write Expression; | write endl ;

*ConditionStatement* 🡪 Condition AnotherCondition

*Condition* 🡪 Term ConditionOp Term AnotherCondition

*AnotherCondition* 🡪 BooleanOp Condition | ε

*Expression* 🡪 string | Term | Equation

*Term* 🡪 number | identifier | FunctionCall

*Equation* 🡪 TermAndOp | (Equation) SubEquation

*TermAndOp* 🡪 Term SubEquation

*SubEquation* 🡪 PlusOrMinus Equation | MultOrDivide Equation

*FunctionCall* 🡪 identifier ArgumentList

*ArgumentList* 🡪 **(**Argument**)** | ()

*Argument* 🡪 Expression Arguments

*Arguments* 🡪 , Argument | ε

*StatementsWithRet* 🡪 Statements Return\_Statement | ε

*If\_Statement* 🡪 if ConditionStatement then StatementsWithRet

Else\_If\_Statement | Else\_Statement

*Else\_If\_Statement* 🡪 elseif ConditionStatement then StatementsWithRet Else\_If\_Statement | Else\_Statement

*Else\_Statement* 🡪 else StatementsWithRet

*Declaration\_Statement* 🡪 Datatype Declaration ;

*Declaration* 🡪 identifier Declarations | Assignment\_Statement Declarations

*Declarations* 🡪 , identifier Declarations | , Assignment\_Statement Declarations|ε

*Datatype* 🡪 integer | float | string

*ConditionOp* 🡪 = | > | < | <>

*PlusOrMinus* 🡪 + | -

*MultOrDivide* 🡪 \* | /

*BooleanOp* 🡪 && | ||