Program -> Function\_Statement Main\_Function

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

Function\_Statement -> Function\_Declaration Function\_Body Function\_Statement | (epsilon)

Function\_Body-> { Statements Return\_Statement }

Function\_Declaration -> Datatype FunctionName (Parameter\_list ) | Datatype FunctionName ( )

Function\_Declaration -> Datatype FunctionName (Function\_Declaration’)

Function\_Declaration’ -> Parameter\_List | (Epsilon)

Parameter\_List -> Parameter , Parameter\_List | Parameter

Parameter\_List -> Parameter Parameter\_List’

Parameter\_List’ -> , Parameter Parameter\_List’ | (Epsilon)

Parameter -> Datatype Identifier

FunctionName -> Identifier

Statements -> Statement Statements | Statement

Statements ->Statement Statements’

Statements’ -> Statement Statements’ | (Epsilon)

Statement -> Repeat\_Statement | If\_Statement | Read\_Statement | Write\_Statement | Declaration\_Statement | Assignment\_Statement

Repeat\_Statement-> repeat Statements until Condition\_Statement

If\_Statement -> if Condition\_Statement then Statements Elseif\_Else\_Statement

Elseif\_Else\_Statement -> Else\_If\_Statement | Else\_Statement | end

Else\_Statement -> else Statements end

Else\_If\_Statement -> elseif Condition\_Statement then Statements Elseif\_Else\_Statement

Condition\_Statement -> Condition Boolean\_Operator Condition\_Statement | Condition

Condition\_Statement -> Condition Condition\_Statement’

Condition\_Statement’ -> Boolean\_Operator Condition Condition\_Statement’ | (Epsilon)

Boolean\_Operator -> && | “||”

Condtion -> Identifier Condition\_Operator Term

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

Return\_Statement -> return Expression ;

Read\_Statement -> read Identifier ;

Write\_Statement -> write Expression ; | write endl ;

Write\_Statement -> write Write\_Expression ;

Write\_Expression -> Expression | endl

Declaration\_Statement -> Datatype Declaration\_List ;

Declaration\_List -> Declaration\_And\_Assigment , Declaration\_List | Declaration\_And\_Assigment

Declaration\_List -> Declaration\_And\_Assigment Declaration\_List’

Declaration\_List’ -> , Declaration\_And\_Assigment Declaration\_List’ | (Epsilon)

Declaration\_And\_Assigment -> Identifier | Assigment\_Statement

Datatype -> int | float | string

Assignment\_Statement -> Identifier := Expression ;

Expression -> String | Term | Equation

Equation -> Bracket\_Equation | Arthmetic\_Operation

Bracket\_Equation -> ( Arthemtic\_Operation )

Arthemtic\_Operation -> Term\_Or\_Bracket Arithmatic\_Operator Arthmetic\_Operation | Term\_Or\_Bracket

Arthemtic\_Operation -> Term\_Or\_Bracket Arthmetic\_Operation’

Arthmetic\_Operation’ -> Arithmatic\_Operator Term\_Or\_Bracket Arthmetic\_Operation’ | (Epsilon)

Term\_Or\_Bracket -> Term | Bracket\_Equation

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

Term -> Number | Identifier | Function\_Call

Function\_Call -> Identifier (Identifier\_List ) | Identifier ()

Function\_Call -> Identifier (Function\_Call’)

Function\_Call’ -> Identifier\_List | (Epsilon)

Identifier\_List -> Idendifier , Identifier\_List | Identifier

Identifier\_List -> Identifier Identifier\_List’

Identifier\_List’ -> , Identifier Identifier\_List’ | (Epsilon)