Context Free Grammar

<Main> -> MAIN

<DataType>-><INTEGER>

<DataType>-><FLOAT>

<DataType>-><CHARAC>

<DataType>-><STRING>

<Assignment>->IS

<Return>->RETURN

<Break>->TERMINATE

<Continue>->NEXT

<Unary>->NOT

<Relational>->EQUALS

<Relational>->LESS

<Relational>->GREAT

<Relational>->ELESS

<Relational>->EGREAT

<Conditional>->AND

<Conditional>->OR

<Function>->FUNCTION

<Class>->CLASS

<Control Start>->CHECK

<Control End>->FROM

<If>->IF

<Then>->THEN

<Else>->ELSE

<Until>->UNTIL

<Run>->RUN

<Run-Until>->UNTIL

<Void>->VOID

<Addition Operator>-> +

<Subtraction Operator> -> -

< Multiplication Operator>-> \*

<Division Operator>-> /

<Increment>-> ++

<Decrement>-> --

<Line Break>=> .

<Open Bracket>-> {

<Close Bracket>-> }

<Open Parenthesis >-> (

<Close Parenthesis>-> )

<Colon>-> :

<Single Quote>-> ‘

<Double Quote>=> “

<Comma>-> ,

**<Declaration>**-><DataType><Identifiers><Line Break>

**<DataType>**-> <INTEGER>|<CHARAC>|<STRING>|<FLOAT>

**<INTEGER\_Const>**-><Digits> {<Digits>-><Digit><Digits>| Null}

**<FLOAT\_Const>**-><Digits><Point><Digits> {<Point>-> .}

**<CHARAC\_Const>**-><Single Quote><Alphabet><Single Quote> {<Alphabet>-> Valid ASCII}

**<STRING\_Const>**-><Double Quote><Alphabets><Double Quote> {<Alphabets>-><Alphabet><Alphabets> | Null}

**<Run-Until>**-> <Run><Body><Until-Run>

**<Until-Run>**-><Until><Relational Expression><Line Break>

**<Relational Expression>**-><Open Paranthesis><List2><Relational><List2><List3>

**<List2>**-><Identifier>|<Constants>

**<List3>**-><Closing Paranthesis>|<List4><Relational Expression>

**<List4>**-><Conditional>

**<Until-Loop>**-><Until><Relational Expression><Open Bracket><Body><Close Bracket>

**<Function\_ST>**-> <FUNCTION><Colon><Identifier><Open Paranthesis><Return Type><Parameters><Open Bracket><Body><Return><Close Bracket>

**<Return Type>**-> <Data Type><Identifier>

**<Parameters>**-><Close Paranthesis>|<Comma><Declaration><P1>

**<P1>**-><Close Paranthesis>|<Parameters>

**<Check-From>**-><Check><OpenParanthesis><INTEGER>|<CHARAC><CloseParanthesis><Open Bracket><From\_List><Error><Close Bracket>

**<From\_List>**-> <From><INTEGER>|<CHARAC><Colon><Open Bracket><Body><Close Bracket>

**<From\_List>**-> Null|<From\_List>

**<Class\_ST>**-><Class><Identifiers><Open Bracket><Assignment\_STs><Funtion\_STs><Close Bracket>

**<Assignment\_STs>**-><Assignment\_ST><A1>

**<A1>**-> Null|><Assignment\_ST>

**<CONST>**-><INTEGER>|<FLOAT>|<CHARAC>|<STRING>

**<Function\_STs>**-><Function\_ST><F1>

**<F1>**-> Null|><Function\_ST>

**<Assignment\_ST>**-><Assignment\_Opt><Line Break>

**<Assignment\_Opt>**-><DataType><Identifier>|<DataType><Identifier><Assignment><CONST> |<Identifier><Assignment><CONST>|<Identifier><Assignment><EXP>|<DataType><Identifier><Assignment><EXP>

**<Single\_ST>**-><Assignment\_ST>|<Increment\_ST>|<Decrement\_ST>|<FunctionCall>

**<Increment\_ST>**-><Identifier><Increment>

**<Decrement\_ST>**-><Identifier><Decrement>

**<Multiple\_ST>**-><Single\_Repeat>|<Multiple\_ST\_List>

**<Single\_Repeat>**-><Single\_ST><Single\_Repeat>|Null

**<Multiple\_ST\_List>**-><Until>|<Run-Until>|<If-Then-Else>|<Check-From>|<Function\_ST>|<Class\_ST>|<Multiple\_ST>| Null

**<If-Then-Else>**-><IF><Relational Expression><If\_Body>

**<If\_Body>**-><THEN><Body><ELSE><Body>

**<Body>**-><Single\_ST\_List> | <Multiple\_STt>

**<Single\_ST\_List>**-><Single\_Repeat>

**<Multiple\_ST\_Repeat>-**> Null|<Multiple\_ST><Multiple\_ST\_Repeat>

**<FunctionCall>**-> <FunctionCalls><LineBreak>

**<FunctionCalls>**-><Identifiers><AssignmentOP> <Identifier><ParenthesisOpen><Parameters><ParenthesisClose>

**<FunctionCalls>**-><Identifier><ParenthesisOpen><Parameters><ParenthesisClose>

**Expressions**

**<E>->**<T><E’>

**<E>->**P\_M<T><E’>| Null

**<T>->**<E><T’>

**<T’>->**M\_D\_M<F><T’>|Null

**<F>->**<Constants>|<E>|!<E>|<Increment>|<Decrement>

**<Constants>**-><INTEGER\_Const>|<FLOAT\_Const>|<CHARAC\_Const>|<STRING\_Const>