Assignment 2

Syntax

program = {statement}

declarationList = declaration | declaration "\n" declarationList

declaration = “var” identifier ":" type | “const” identifier ":" type

**Types**

simpleType = "int" | "real" | "char" | "bool"

arrayDeclaration = “[“ dataType “]”

type = simpleType | arrayDeclaration

**Statements**

compoundStatement = "{" statementList "}"

statementList = statement | statement "\n" statementList

statement = simpleStatement | structStatement

simpleStatement = assignStatement | ioStatement | declarationList

assignStatement = identifier "=" expression

ioStatement = "read" "(" identifier ")" | "fread" "(" identifier ", " filename ")"

| "write" "(" identifier ")" | "fwrite” "(" identifier ", " file\_name ")"

structStatement = compoundStatement | ifStatement | whileStatement

ifStatement = "if" compoundCondition compoundStatement ["else" compoundStatement]

whileStatement = "while" compoundCondition compoundStatement

**Expressions**

expression = expression "+" term | expression "-" term | term

term = term "\*" factor | term "/" factor | factor

factor = identifier | numericConstant

**Conditions**

condition = expression relation expression

compoundCondition = condition | “(“ condition “)” AND “(“ conditionList “)”

| “(“ condition “)” OR “(“ conditionList “)”

**Relations**

relation = "<" | "<=" | "==" | ">=" | ">" | "!="