Logo Parser / Translator

BTI7064 – Automata and Formal Languages – Spring Term 2015

# Introduction

Description of the problem

# Grammar

The grammar in plain text format (ASCII) you have used in your translator with a description of the modifications you have done (even if you did not do any changes)

Program = "LOGO" Identifier { Subroutine } { Statement } "END"

Subroutine = "TO" Identifier { Parameter } { Statement } "END"

Statement = "CS" | "PD" | "PU" | "HT" | "ST"

| "FD" NExpr | "BK" NExpr | "LT" NExpr | "RT" NExpr

| "WAIT" NExpr

| "REPEAT" NExpr "[" { Statement } "]"

| "IF" BExpr "[" { Statement } "]"

| "IFELSE" BExpr "[" { Statement } "]" "[" { Statement } "]"

| Identifier { NExpr }

NExpr = NTerm { ( "+" | "-" ) NTerm }

NTerm = NFactor { ( "\*" | "/" ) NFactor }

NFactor = "-" NFactorPos | NFactorPos

***NFactorPos = Number | REPCOUNT | Parameter | "(" NExpr ")"***

BExpr = BTerm { "OR" BTerm }

BTerm = BFactor { "AND" BFactor }

BFactor = "TRUE" | "FALSE" | "NOT" "(" BExpr ")"

| NExpr ( "==" | "!=" | "<" | ">" | "<=" | ">=" ) NExpr

Comments start with "#" with scope until the newline

Numbers are real numbers

Identifiers start with a letter followed by letters or digits

Parameters are ":" followed by Identifier

Identifiers, parameters, keywords in uppercase only

# Solution

Description of your solution. How you have managed certain aspects, in particular the translation of the REPCOUNT reserved identifier, the error/warning you might have encountered during the project, etc.

# Test

How you have verified that your solution works well, i.e. the test examples you have used

# Limitations

Description of the limitations of your approach, discuss which software engineering principles studied in the Software Engineering module are not well respected in your project and how you could you improve your solution