JFLAP Practice Session 2 - Documentation

1. Proposed Grammar in Natural Language

Sentence ::= Assignment | Function Call

Assignment ::= Identifier '=' Value

Identifier ::= 'a' | 'b' | 'c' | 'd'

Value ::= Sign Number

Sign ::= '-' | lambda (empty string)

Number ::= Integer | Real

Integer ::= '0' | '1' | '2' | '3'

Real ::= Integer '.' Integer

Function Call ::= FunctionName '[' Arguments ']'

FunctionName ::= 's' | 't' | 'u' | 'v'

Arguments ::= lambda | List of Arguments

List of Arguments ::= Argument Rest of Arguments

Rest of Arguments ::= ',' List of Arguments | lambda

Argument ::= '&' Identifier | Identifier

2. Relation between Non-Terminal Symbols

The following shows the relation between non-terminal symbols in natural language and JFLAP:

Sentence = S

Assignment = A

Function Call = F

Identifier = I

Value = V

Sign = C

Number = N

Integer = Z

Real = R

Function Name = M

Arguments = G

List of Arguments = L

Rest of Arguments = Y

Argument = X

3. Encoded Grammar for JFLAP

P -> S

S -> S ; R

R -> S | lambda

S -> A | F

A -> I = V

I -> a | b | c | d

V -> C N

C -> - | lambda

N -> R | Z

Z -> 0 | 1 | 2 | 3

R -> Z . Z

F -> M [G]

M -> s | t | u | v

G -> lambda | L

L -> X Y

Y -> , L | lambda

X -> & I | I