SE2062 Project – FormLang++ DSL Grammar Definition and Syntax Rulesform ::= "form" identifier "{" [ meta\_section ] { form\_section } [ validation\_section ] "}"

meta\_section ::= "meta" { meta\_entry }

meta\_entry ::= identifier "=" value ";"

form\_section ::= "section" identifier "{" { field\_definition } "}"

field\_definition ::= field\_type identifier { attribute } ";"

field\_type ::= "text"

| "textarea"

| "number"

| "email"

| "date"

| "checkbox"

| "dropdown"

| "radio"

| "password"

| "file"

attribute ::= "required"

| "pattern" "=" string

| "default" "=" value

| "min" "=" number

| "max" "=" number

| "rows" "=" number

| "cols" "=" number

| "accept" "=" string

| "options" "=" "[" value\_list "]"

value\_list ::= value { "," value }

validation\_section ::= "validate" "{" { condition } "}"

condition ::= "if" expression "then" "error" string ";"

expression ::= identifier comparison\_operator value

comparison\_operator ::= "<" | ">" | "<=" | ">=" | "==" | "!="

value ::= string | number

identifier ::= letter { letter | digit | "\_" }

string ::= '"' { character } '"'

number ::= digit { digit }

character ::= letter | digit | symbol | space

letter ::= "a" | ... | "z" | "A" | ... | "Z"

digit ::= "0" | "1" | "2" | "3" | "4" | "5" | "6" | "7" | "8" | "9"

symbol ::= "-" | "\_" | "." | "@" | "#" | "$" | "%" | "&" | "\*"

space ::= " "

terminals

"form", "meta", "section", "validate", "if", "then", "error",

"=", ";", "{", "}", "<", ">", "<=", ">=", "==", "!=", "[", "]", ","

Non terminals

form, meta\_section, meta\_entry, form\_section, field\_definition,

field\_type, attribute, value\_list, validation\_section, condition,

expression, comparison\_operator, value, identifier, string, number,

character, letter, digit, symbol, space