

Compiler

Lab 1: Jflex with scanner (Lexical analysis)

1. Given the following regular definitions related to an email format, using the JFLEX program to write a scanner which recognizes a correct email address.

- a. **Regular Definitions**

Email \rightarrow username @ domain name (. extension) +

username \rightarrow id

domain name \rightarrow id

extension \rightarrow id

id \rightarrow (letter | digit) +

letter: all the alphabet letters and the special characters except: slash, backslash, colon, star, question mark, double quotes, minus, greater, OR symbol.

digit: digits from 0 to 9

- b. **Example**

Input file:

abc@bba.com

yie@y7.com

dbi@c1.ed.kh.com

idb@

Outputs:

Correct: abc@bba.com

Correct: yie@y7.com

Correct: dbi@c1.ed.kh.com

Incorrect: idb@

2. Given the following regular definitions related to an functions, using the JFLEX program to write a scanner which can do the operation of the functions.

- a. **Regular definition**

id \rightarrow func_name (operand1 , operand2)

operand1 \rightarrow integer | float

integer \rightarrow number

float \rightarrow number . number

number \rightarrow digit+

digit: digits from 0 to 9

b. Examples

Input file:

add(4,5)

minus(8,1)

multi(3,4)

Outputs:

add(4,5) = 9

minus(8,1) = 7

multi(3,4) = 12