**Problem 2**

Java

**Boolean (BNF)**

<boolean-expression> => <boolean-expression> || <boolean-term> | <boolean-term>

<boolean-term> => <boolean-term> && <boolean-factor> | <boolean-factor>

<boolean-factor> => id | ! <boolean-factor> | (<boolean-expression>) | <relation-expression>

<relation-expression => id == id | id != id | id < id | id > id | id <= id | id >= id

**Assignment statement (EBNF)**

<assignment-statement> => <variable> = <expression>

<variable>  => a | b | c

<expression> => <num> <operand> <num> | <variable>

<num> => <digit> | {<digit>}

<operand> => + | - | \* | / | % | && | || | !

<digit> => 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9

**Mathematical Expression(EBNF)**

<mathl-expression> => <num> <operand> <num>

<num> => <digit> | {<digit>}

<operand> => + | - | \* | / | %

<digit> => 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9