

# Grammar for the Exp programming language

Version 2

program  $\rightarrow$  main

main  $\rightarrow$  ( statement )<sup>+</sup>

statement  $\rightarrow$  st\_print | st\_attrib

st\_print  $\rightarrow$  **print** ( expression )

st\_attrib  $\rightarrow$  **name** = expression

expression  $\rightarrow$  term ( ( **+** | **-** ) term )<sup>\*</sup>

term  $\rightarrow$  factor ( ( **\*** | **/** | **%** ) factor )<sup>\*</sup>

factor  $\rightarrow$  **number** | ( expression ) | **name**

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tokens: **+** **-** **\*** **/** **%** **(** **)** **=** **print** **number** **name**

bytecode instructions:

**ldc** *value*

**iadd**

**isub**

**imul**

**idiv**

**irem**

**istore** *index*

**iload** *index*