



Simone Campanoni
simone.campanoni@northwestern.edu



LD

```
p ::= f+
f ::= T name ( (type name)* ) scope
scope ::= { i* }
i ::= i1 | i2 | scope
i1 ::= name <- e | type name <- e | name <- name([e])+ | name([e])+ <- e | name <- length name e |
      name( args? ) | name <- name( args? ) | print(e) |
      name <- new Array(args) | name <- new Tuple(e)
i2 ::= type names | if (e) scope else scope | return (e)? |
      while (e) scope | do scope while (e) | for (i1?; e? ; i2?) scope | continue | break
T ::= type | void
type ::= int([])* | tuple | code
args ::= e | e (, e)*
t ::= name | N
N ::= (+|-)? [0-9]+
op ::= + | - | * | & | << | >> | < | <= | = | >= | >
name ::= [a-zA-Z_][a-zA-Z_0-9]*
names ::= name | name (, name)*
e ::= t | e op e | ( e )
```

LD example

```
int myF (int[] v){  
    for (int index <- 0; index < 10; index <- index + 1){  
        myF( index + (3 * v[index+1]) )  
    }  
    return (v[31 + v[0]] * 42) = 42  
}
```

Always have faith in your ability

Success will come your way eventually

Best of luck!