C0-Syntax

$\langle Program \rangle$ ::=

#include <stdio.h>

int main() $\langle Block \rangle$

$\langle Block \rangle$ ::=

{ $\langle Declaration \rangle$ [$\langle StatementSequence \rangle$] return 0;}

$\langle Declaration \rangle$ ::=

[$\langle ConstDeclaration \rangle$] [$\langle VarDeclaration \rangle$]

$\langle ConstDeclaration \rangle$ ::=

const $\langle Ident \rangle$ = [−] $\langle Number \rangle$ { , $\langle Ident \rangle$ = [−] $\langle Number \rangle$ };

$\langle VarDeclaration \rangle$ ::=

int $\langle Ident \rangle$ { , $\langle Ident \rangle$ } :

$\langle StatementSequence \rangle$ ::=

$\langle Statement \rangle$ { $\langle Statement \rangle$ }

$\langle Statement \rangle$ ::=

$\langle Assignment \rangle$ | $\langle IfStatement \rangle$ | $\langle WhileStatement \rangle$ |

scanf ("%i", &$\langle Ident \rangle$) ; | printf("%d", $\langle Ident \rangle$) ; | $\langle CompStatement \rangle$

$\langle Assignment \rangle$ ::=

$\langle Ident \rangle$ = $\langle SimpleExpression \rangle$;

$\langle IfStatement \rangle$ ::=

if ($\langle BoolExpression \rangle$) $\langle Statement \rangle$

[else $\langle Statement \rangle$]

$\langle WhileStatement \rangle$ ::=

while ($\langle BoolExpression \rangle$) $\langle Statement \rangle$

$\langle CompStatement \rangle$ ::=

{ $\langle StatementSequence \rangle$ }

$\langle BoolExpression \rangle$ ::=

$\langle SimpleExpression \rangle$ $\langle Relation \rangle$ $\langle SimpleExpression \rangle$

$\langle SimpleExpression \rangle$ ::=

[+ | −] $\langle Term \rangle$ { (+ | −) $\langle Term \rangle$ }

$\langle Term \rangle$ ::=

$\langle Factor \rangle$ { (∗ | / | %) $\langle Factor \rangle$ }

$\langle Factor \rangle$ ::=

$\langle Ident \rangle$ | $\langle Number \rangle$ | ($\langle SimpleExpression \rangle$)