Instructions

These are statements in a Program

Types

Type Declaration

Instructions

Arithmetic Instructions

Control

Instructions

Instructions

Type Declaration Instructions  Declare var before using it

VALID INVALID

int a = 22;

int b = a;

int c = b + 1; int d = 1, e;

int a = 22;

int b = a;

int c = b + 2; int d = 2, e;

int a,b,c;

a = b = c = 1;

int a,b,c = 1;

Arithmetic Instructions

a + b

Operand 1 Operand 2

Operator

NOTE - single variable on the LHS

Arithmetic Instructions

VALID INVALID

a = b + c

a = b \* c a = b / c

b + c = a

a = bc a = b^c

NOTE - pow(x,y) for x to the power y

Arithmetic Instructions

Modular Operator %



Returns remainder for int

3 % 2 = 1

-3 % 2 = -1

Arithmetic Instructions

Type Conversion

int op

int

int

int

op float

float

float op float  float

Arithmetic Instructions

Operator Precedence

\*, /, %

+, -

=

x = 4 + 9 \* 10

x = 4 \* 3 / 6 \* 2

Arithmetic Instructions

Associativity (for same precedence)

Left to Right

x = 4 \* 3 / 6 \* 2

Instructions

Control Instructions

Used to determine flow of program

1. Sequence Control
2. Decision Control
3. Loop Control
4. Case Control

Operators

1. Arithmetic Operators
2. Relational Operators
3. Logical Operators
4. Bitwise Operators
5. Assignment Operators
6. Ternary Operator

Operators

Relational Operators

==

>, >=

<, <=

!=

Operators

Logical Operators

&& AND

|| OR

! NOT

Operator Precendence

Priority

1

2

3

4

5

6

7

8

Operator

!

\*, /, %

+, -

<, <=, >, >=

==, !=

&&

||

=

Operators

Assignment Operators

=

+=

-=

\*=

/=

%=