Assembly Examples:

Loops --------------------------------------------------------------------

Assembler Code

----------------------

.globl \_Z3for

\_Z3for:

MOV R0, #1

MOV R1, #100

.Loop:

ADD R0, R0, #1

CMP R0, R1

BGE R0, R1

BX LR

C++ equivalent

----------------------

#include <iostream>

using namespace std;

int main() {

for(int i =1; i<100; i++)

{

cout << i << “ “;

}

return 0;

}

Sum -----------------------------------------------------------------------

Assembler Code

----------------------

.globl \_Z3sumii

\_Z3sumii:

@ R0 = a

@ R1 = b

ADD R0, R0, R1

BX LR

C++ Equivalent

----------------------

#include <iostream>

Using namespace std;

int sum(int a, int b)

{

return a + b;

}

Int main()

{  
 cout<<”Answer is: “ <<sum(4,6)<<endl;

return 1;

}

Factorial -----------------------------------------------------------------

Assembler Code

----------------------

.globl \_Z9factorialii

\_Z9factorialii:

@ R0 = c

@ R1 = d

MOV R1=2, #1

.Loop:

MUL R2, R2, R1

ADD R0, R0, #1

CMP R0, R1

BNE .Loop

MOV R0, 2

BX LR

C++ Equivalent

----------------------

#include <iostream>

Using namespace std;

int factorial(int c, int d)

{

Int result = 1;   
for(int i = a; i<=b; i++)

{  
result \*=i;

}

return result;

}