SW complexity?

• Lots of lines in code – hard to understand
• Not many meaningful comments
• Too many variables – not named well
• Complex functions – too nested, too lengthy, too many if conditions
• Inter-dependencies – changes that have to be done together in multiple files
• When you fix a bug, you make a few more.
C vs. C++

- C++ is backward compatible with C
- C++ supports OOP
- C++ standard library contains lot more functionality
- Improved I/O mechanism
- Lot of new header files
- C is very efficient, C++ is close too.
- ...

...
C++ vs. Java: Similarities

• Both support OOP. Most OOP library contents are similar, however Java continues to grow.
• Syntax is very close – Java has strong influence of C/C++. Easy to learn the other language when you know one of these.
Sample C programs: prog1.c
These are in ~veerasam/students/basics

#include <stdio.h>

main()
{
    int in1, out;
    double in2;

    puts("Enter values:");
    scanf("%d%lf", &in1, &in2); // & means "address of"
    // %d int, %f float, %lf double
    out = in1 + in2;
    printf("Output is %d
", out);
}