

# 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\n", out);
```

```
}
```

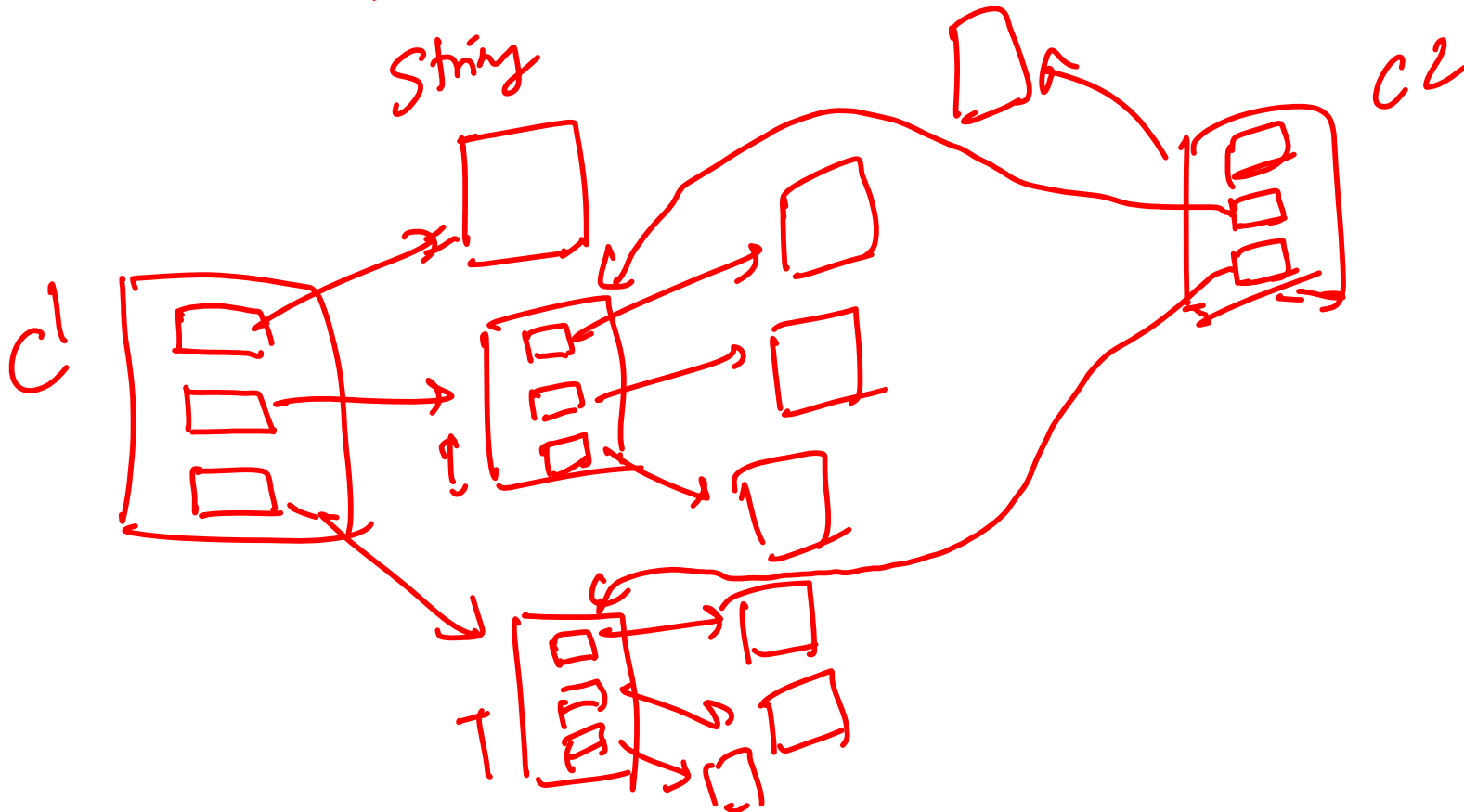
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# Course

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