

CSCI261A

Programming is cool!

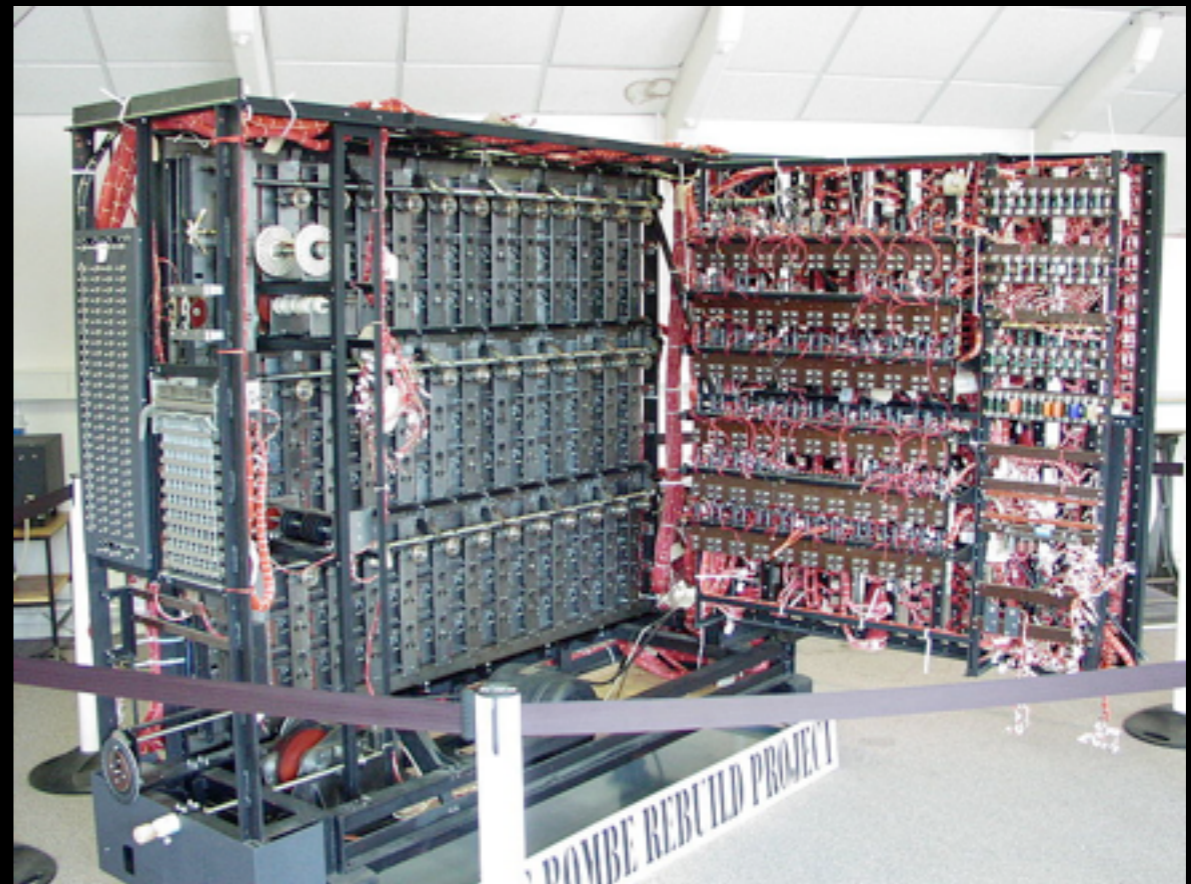
Alan Turing

1912 - 1954

“Turing Machine” aka “Universal Machine”



the man himself



bomba code-breaking machine

Review

- We compiled and ran a program
- But what *really* happened?

C++ Program Structure

preprocessing directives

```
int main() {  
    variable declarations;  
    statements;  
    return(0);  
}
```

Preprocessing Directives

Things (aka 'libraries') your program will need to use
eg, math functions, input/output, graphics

```
#include <iostream>  
#include <cmath>
```

“Hey computer, my program uses functions in the iostream library and the math library.”

main()

Is special -- all programs start with main.

What does your program do?

Whatever is in the code block following main()

Code Blocks

{ the stuff in between braces }

The guts of your algorithm

```
int main() {  
    /* computer, what should I do with my life? */  
    return(0);  
}
```

Variable Declarations

- Computers are dumb
- You need to tell it ahead of time about the memory you will need
 - Why? Because variables need memory
 - Why? To store values

Types of Variables

- int
- double
- char
- boolean
- string (technically, not a standard type)

...to be continued

Input / Output

aka I/O

```
#include<iostream>
```

cout
aka “standard out”
“the screen”

```
cout << "does he/she like me?" << "or looove me?";
```

cin

aka “standard in”

“the input prompt on a screen”

```
cin >> answer;
```

“Computer, take what the user types when they hit [enter] and assign it to the variable following the >> symbol”

Homework

- Finish *SolidBeginnings*
- Read Chapter 2.1 - 2.4, 2.7
- Start *NewtonToPounds*