

# Welcome to CS50 Study!



# Topical Organization

## Week 0

Wed 9/5, Fri 9/7

Introduction. Bits. Binary. ASCII. Programming. Algorithms. Statements. Boolean expressions. Conditions. Loops. Variables. Threads. Events.

## Week 1

Mon 9/10, Wed 9/12

C. Source code. Compilers. Object code. Functions. Comments. Standard output. Arithmetic operators. Precedence. Local variables. Types. Casting. Standard input. Libraries. Boolean expressions, continued. Conditions, continued. Loops, continued.

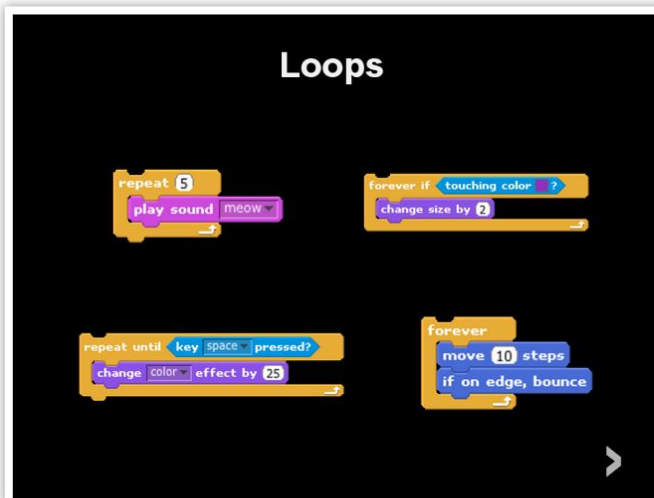
## Week 2

Mon 9/17, Wed 9/19

Functions, continued. Global variables. Parameters. Return values. Stack. Frames. Scope. Arrays. Strings. Command-line arguments. Cryptography.

# Slides

Slides (1 / 9)



## Notes

[PPTX](#)  
[PDF](#)

The loop blocks you've been using in Scratch can all be recreated in C!

Loops allow for the repetition of code until a condition is met.

There are three types of loops commonly used in C:

- for
- while
- do while



# Problems

MySpace [Square](#) [Multiples](#) [For Loop Conversion](#) [While Loop Conversion](#)


## MySpace

Write a program that prompts the user for a message, and then outputs the message with its first letter capitalized, with all letters in alternating case, as per the sample output below. For simplicity, you may assume that the user will only input lowercase letters and spaces.

```
jharvard@run.cs50.net (~): ./a.out
thanks for the add
ThAnKs FoR tHe AdD
```

```
1 int
2 main(void)
3 {
4
5     // get string from user
6
7     // for each character in the string:
8
9 }
```

 [Sample Program](#) [Download Source Code](#)

# Videos

## Video

### Lectures

Monday, Week 1



An introduction to loop and looping constructs.

Wednesday, Week 1



Some examples.

Monday, Week 2



Additional practice.

### Shorts

Tommy's Loops Short



Tommy gives a general overview.

Monday, Week 1



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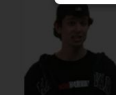
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Additional pract



Tommy gives a general overview.

Loop Types

While Loops

For Loops

Do While Loops