CS50 Section: Week 3

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Today

- Introductions
- About section
- Ground rules
- Loops
- Arrays
- Strings
- Command-line arguments
- pset2 questions

About me

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Introduce ourselves

- Name
- Year
- House (for College students)
- What you're studying
- **Funny/weird story from summer**

My job

- Sections
- Office hours
- Grading
- Individual help
- Point person!

What to expect from section

"**Turn thoughts into code.**"

- Brief review of concepts
- **Tons** of hands-on practice problems
- Answer pset questions
- Anything you need help with!

Ground rules

- Support
- Meet me in the middle
- High expectations
- Fun

Check your handouts

- Contact info
- Resources
- Grading
- Pset tips (general & specific)

Questions so far?

It's content time

- Overview on board
- Worked example
- Pair challenge problem

Check your worksheets for reference!

Stop me with questions!

Loops

- Step through a list or range
- On board: structure & step through
- Example: print every even number from 0 to 10, inclusive
- Challenge: print every multiple of 3 from 9 to 18, inclusive

```
// prints 0, 1, ... 9

for (int i = 0; i < 10; i++)

{

    printf("%i\n", i);

}
```

Arrays

- Store related data in adjacent boxes
- On board: structure & usage
- Example: print every element of an array
- Challenge: print last 3 elements

```
// <datatype> <name>[<size>];

string my_classes[4];

// you don't have to fill in all
the elements of the array

my_classes[0] = "CS50";

my_classes[1] = "Ec 10";
```

Strings

- Just an array of characters!
- On board: structure as an array
- Example: print each character on its own line
- Challenge: print the string backwards

```
// prints "u" (without quotes)

string band = "Young the Giant";

char third_letter = band[2];

printf("%c\n", third_letter);
```

Command-line arguments

- Passing information into your program
- atoi()
- On board: structure
- Example: double given number
- Challenge: repeat given string a given number of times

```
int main(int argc, string argv[])
{
    // if the user types
    // `./program donuts`,
    // this will print "donuts"
    // (without quotes)
    printf("%s\n", argv[1]);
}
```

Questions?
(especially about pset2)

A few last things

- My office hours: tonight 9-12 in Widener
- Fill out post-section survey
- Personal office hours?
- Google group
- Be in touch!