Module

Data Types, Variables, and Constants

Lesson

Data Types, Variables, and Constants

Lecture

Integer Data Types

In this lecture, we'll discuss the various data types we use to represent integers in C

- Integers (no fractions or decimals)
  - 0, 42, -11
- `short`, `int`, `long` `long`
  - Different number of bits in memory for each type
  - What does that tell us?
- Operations are mostly as you'd expect (except for /)

In C, if we add 1 to an `int` variable that currently has a value of 1, the new value of the variable is 2

In C, if we add 1 to an `int` variable that currently has a value of 2,147,483,647, the new value of the variable is -2,147,483,648

Why does this happen?

- Can also use unsigned integer types
  - Only positive numbers
  - What does this buy us?
- `unsigned short`, `unsigned int`, `unsigned long long`
- Several other C integer data types we didn't discuss

- Recap
  - C provides a variety of data types for representing integers