

Lecture 09

Pointers, Arrays, and Structs

CS213 – Intro to Computer Systems
Branden Ghen a – Winter 2026

Slides adapted from:

St-Amour, Hardavellas, Bustamente (Northwestern), Bryant, O'Hallaron (CMU), Garcia, Weaver (UC Berkeley)

Administrivia

Today's Goals

- Wrap up x86-64 assembly!
 - Although assembly details will remain important
- Understand C arrays
 - Single and multi-dimensional
 - And how they translate into assembly code
- Discuss how structures are accessed
 - Memory layout details including alignment
- Bonus material on Dynamic Arrays and Unions

Outline

Basic Data Types

Floating point data

More complex data types

Example pointer

Pointers to global variables

Naming constants

Outline

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Rust version of

One-D

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