Rust introduction

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- What is Rust

- Why Choose Rust

- C++/C vs Rust

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What is Rust

- Systems Programming Language

- Compiled

- Modern Language

- No Garbage Collector

Why Rust

- Safety

- Modern Tooling Included

- Zero-Cost Abstraction

- Only Modern choice for Embedded

- Sizeable embedded community

C++ vs Rust

- C++ is a superset of C

- Borrow Checker

- Interfaces

    - Abstract Classes <-> Traits

- OOP

    - Classes <-> Structs

Further Learning

- The Rust Book

  - Online Version: doc.rust-lang.org/book/
  - Interactive Version: rust-book.cs.brown.edu
- Rustlings Course

  - Interactive Lessons: github.com/rust-lang/rustlings
- Rust By Example

  - What it sounds like: doc.rust-lang.org/rust-by-example/

Install Party

🥳

Rustup

- Go to:

  https://rustup.rs

- Windows:

  Download & run
  rustup-init.exe

- Unix:

  Run the command on the
  webpage

Cargo

- Dependency Manager

- Build System

- Crates.io

- blessed.rs

First Program

```
~> cargo init my-app

~> cd my-app

~> cargo run

Hello, World!
```

Driver Install

- https://aaudk.sharepoint.com/:u:/s/aausat775/Ebbu1KFcAgtNuR12 4VeK1jEBEcWfv2ys3MxTJdzCobfeJQ?e=9qf51G

- https://t.ly/fnrNg