

Rust BuildOn

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Build-On

Learn Rust in small steps

- Start with a simple Rust demo
 - Text Finder
- Build on that in interesting ways, e.g., for Text Finder:
 - Add capability – command line parsing, directory tree walking, ...
 - Use generics – plugin components
 - Use threads – parallel text searches, thread pool based dir traversal
 - Use library components
- Discord server
 - Q&A
 - Comments

Build-On Process

- Zoom meeting that:
 - Briefly describes motives for using Rust and Rust basic ideas
 - Provides two or three references
 - identifies a problem and refers to starter code
 - Q&A
- Subsequent meetings
 - Briefly describes my solution
 - Others may discuss their solutions and/or problems
 - Pose next extension to problem
 - Q&A

BuildOn Timeline: Bi-Weekly Sessions

- Session #1 – BuildOn Introduction & Rust Preview
- Session #2 – Project Introduction & Some Rust details
- Session #3 – **Step #1**: TextSearch -> Functional package with demo
- Session #4 – **Step #2**: DirNav -> “
- Session #5 – **Step #3**: CmdlnParser -> “
- Session #5 – **Step #4**: Executive, Display -> Functional project
- Session #6 – RegEx Extension ?
- Session #7 – Parallel Text Search ?

Build-On Motivation

- Participate in a developer community interested in learning Rust
- Stay in contact with SU Computer Engineering and Computer Science alumni
- Support conversations about Rust and other interesting tech topics
 - Encourage both active learners and curious browsers
- Rust is a very clever language supporting development of secure, high performance code (same ballpark as C++ without undefined behavior)
 - Rust website lists 138 companies using Rust in production
 - Tiobe lists rust as 25th in their language popularity index (Oct 2020).

BuildOn Introduction Topics

- [BuildOn Introduction](#)
 - [Step #0](#)
 - [Step #1](#)
 - [Site Map](#)
 - [Site Design](#)
 - [Starting Trail - quick peek at items](#)
 - [Starting Trail – Start](#)
 - [Starting Trail – Tooling](#)
 - [Starting Trail - Rust Libs](#)
- [Rust std::lib](#)
 - [Rust Bites](#)
 - [Rust Story](#)
 - [BuildOn](#)
 - [Rust Repository](#)

Next BuildOn – Session #2 – TextFinder

Project Review

- [Step #0](#)
 - The BuildOn Project
- [Step #1](#)
 - Text Search package
 - Look at Starter Code

Rust

- [Rust Safety](#)
- [Rust Error Handling](#)
- Answer Questions

BuildOn – Session #3 – DirNav

Project

- Code review: [Step #1 - TxtSrch](#)
 - Code will be posted
- [Step #2 – DirNav](#)
 - Specification
 - Starter code

Rust

- [Structs](#)
- [Rust Libs](#)
- [Rust std::fs](#)
- Answer Questions

BuildOn

- Session #4
 - CmdInParser
- Session #5
 - Executive & Display
- Session #6 ?
 - RegEx Search
- Session #7 ?
 - Parallel Text Search

That's All Folks!