

# Rust BuildOn #5

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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

# BuildOn Timeline: Bi-Weekly Sessions

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

# BuildOn Session #5 Topics

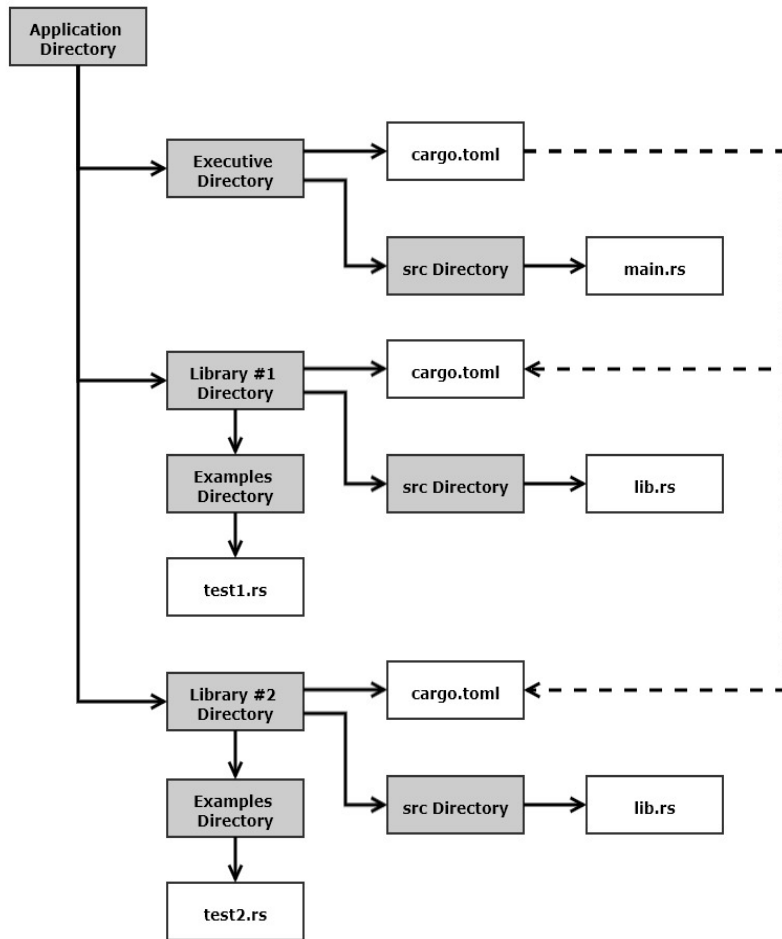
## Focus: CmdInParser & Exec Packages

- [Step #3](#) – CmdInParser
  - [Solution Code](#)
- [Step #4](#) – Executive, Display -> full solution
  - Executive's parts and startup actions
  - Goals of Display
    - Continuous output
    - Options
- Project Structure
  - Diagram next slide
  - [Design Bites](#) – look at cargo.toml dependencies
- [BuildOn](#) – click on BuildOn code

## Focus: Macros & Debugging in VSCode

- [Macros](#)
- [Debugging Rust in Visual Studio Code](#)
- [RustBites](#)
- **Questions?**

# Rust Project Structure for TextFinder

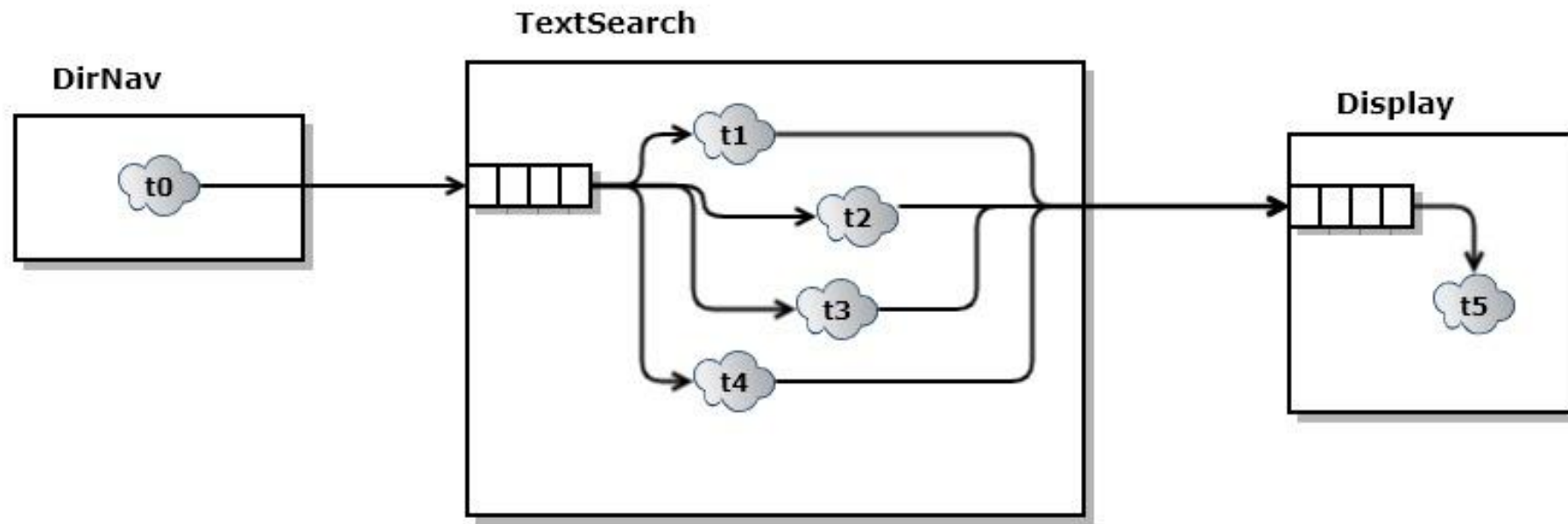


- All components on same level
  - Makes dependency metadata simpler
- Each component has at least one testN.rs file with a main.
  - Use for testing and demonstrations
- Traits are defined in the caller's package if you use DIP.
  - Otherwise they usually go in the called package.

# BuildOn

- Session #3
  - DirNav
- Session #4
  - CmdInParser
- Session #5
  - Executive & Display
- Session #6 ?
  - RegEx Search
- Session #7 ?
  - Parallel Text Search

# Parallel Text Search



That's All Folks!