

# Overview Slides and Exercises

April 11, 2024

# Basic Syntax

- ▶ PDF: 2\_1-basic-syntax-export.pdf
- ▶ Exercise:  
2-foundations-of-rust/1-basic-syntax/1-basic-syntax/

# Ownership

- ▶ `2-foundations-of-rust/2-ownership-and-references/1-move-semantics/src/bin/02.rs`

# Ownership 2

- ▶ PDF: [2\\_2-ownership-and-references-export.pdf](#)
- ▶ Exercise: [2-foundations-of-rust/2-ownership-and-references/move-semantics](#)
- ▶ Bonus Exercise:  
[2-foundations-of-rust/2-ownership-and-references/2-borrowing](#)

# Advanced Syntax

- ▶ PDF: [2\\_3-advanced-syntax-export.pdf](#)
- ▶ Exercise:  
[2-foundations-of-rust/3-advanced-syntax/1-error-propagation](#)
- ▶ Bonus Exercise:  
[2-foundations-of-rust/3-advanced-syntax/2-error-handling](#)
- ▶ `map_err()`?

# Advanced Syntax 2

- ▶ PDF: [2\\_3-advanced-syntax-export.pdf](#)
- ▶ Exercise:  
[2-foundations-of-rust/3-advanced-syntax/4-ring-buffer](#)
- ▶ Bonus Exercise:  
[2-foundations-of-rust/3-advanced-syntax/5-boxed-data](#)
- ▶ What is `Box<[u8]>` and why do we need it?

# Traits and Generics

- ▶ PDF: [2\\_4-traits-and-generics-export.pdf](#)
- ▶ Exercise: [2-foundations-of-rust/4-traits-and-generics/1-local-storage-vec/](#)

# Polymorphismus

- ▶ PDF: [2\\_5-closures-and-dynamic-dispatch-export.pdf](#)
- ▶ Exercise:  
[2-foundations-of-rust/5-closures-and-dynamic-dispatch/](#)



# Crate Engineering

- ▶ PDF: `3_1-crate-engineering-export.pdf`
- ▶ Exercise 1: `exercises/3-crate-engineering/1-crate-engineering/1-my-serde-app`
- ▶ Exercise 2:  
`exercises/3-crate-engineering/1-crate-engineering/3-bsn`
- ▶ Bonus Exercise:  
`exercises/3-crate-engineering/1-crate-engineering/5-fizz-buzz`

# Foreign Function Interfaces

- ▶ PDF: [4\\_1-foreign-function-interface-export.pdf](#)
- ▶ Exercise: [4-rust-for-systems-programming/1-foreign-function-interface/1-crc-in-c](#)
- ▶ Exercise: [4-rust-for-systems-programming/1-foreign-function-interface/2-crc-in-rust](#)
- ▶ Exercise: [4-rust-for-systems-programming/1-foreign-function-interface/3-tweetnacl-bindgen](#)