

## Introduction to Rust Programming

### 1. Introduction

### 2. Getting Started

- Installing rust
- Hello World
- Hello cargo!

### 3. Guessing Game

- Setup
- Processing a Guess
- Generating a secret number
- Comparing guesses
- Looping

### 4. Syntax and Semantics

- Variable Bindings
- Functions
- Primitive Type
- Comments
- If
- Loops
- Vectors
- Referencing and Borrowing
- Lifetimes
- Mutability
- Structs
- Enums
- Match
- Patterns
- Methods
- Strings
- Traits
- Generics
- Drop
- If Let
- Closure
- Universal Function call syntax
- Crates and Modules
- Const and static
- Attributes
- Casting

- Macros
- Raw Pointers
- unsafe

## **5. Effective Rust**

- The stack and the Heap
- Testing
- Conditional Compilation
- Iterators
- Concurrency
- Error Handling
- FFI
- Borrow as Ref