### Lesson 12: Smart Pointers & Why Rust Isn’t C (Part 1)

* **Reading**: “The Rust Programming Language” Chapter 15.1-15.3 (Students may also choose to read this article from Medium: <https://perelyn-sama.medium.com/understanding-smart-pointers-in-rust-a-comprehensive-guide-cc06eb94a147> which may help summarize common Smart Pointers & their typical uses).
* **Assignments**: Read the appropriate sections of Chapter 15 & thoroughly understand (review if necessary) pointers in C
* **Preflight**: Read assigned sections in Chapter 15
* **Lesson Goals**:
  + Understand how smart pointers differ from pointers and references in C.
* **Motivation**: Creation of a simple CLI is an easy way to practice previous skills in a useful manner & learn the semantics of command line arguments, errors, and file/terminal I/O in Rust.
* **Lecture**:
  + Review of previous concepts (instructor’s discretion)
  + Overview of error console (stderr)
  + Overview of command line arguments
  + Discretionary time (suggested for project work)
* **Lab**: Create (at least) 1 Rust program utilizing smart pointers