### Lesson 09: I/O & The Command Line

* **Reading**: “The Rust Programming Language” Chapter 12 (It is also highly recommended that students look at the following: <https://rust-book.cs.brown.edu/ch12-00-an-io-project.html> for a more interactive version of this chapter)
* **Assignments**: Build a simple CLI (Command Line Interface) that accepts input from the command line, writes output to both the terminal and a file as dictated by the user.
* **Preflight**: Review key concepts covered in Chapters 7 – 11.
* **Lesson Goals**:
  + Understand how code organization, vectors, collections, slices, errors, traits, timelines, and tests function in Rust.
  + Create simple CLI to demonstrate knowledge of previous skills and synthesize with new concepts.
* **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 simple CLI that takes user input, writes to a file, and outputs to stderr.