

CS 4414/5416: Systems Programming

Lab 2: Process Registry

2026-09-04

Primary goal: Work together on something

- Fine to have small groups (up to 4)
- Grab a question sheet per person (as in lecture)
- Work on the lab assignment during the hour

Stories:

- Last week: CPU idle sample counts
- This week and next: Process management
 - Registry for what processes are alive
 - Status of processes (running, sleeping, stopped)

Will deal with processes in more detail in a bit.

The real goal for now is learning Rust!

- Writing `enum` and `struct` declarations
- Implementing methods on a `struct`
- Using `derive` macros
- Error handling with `Result`
- Using `Option`
- Using `Box` smart pointers
- Visibility (public and private)

Google cloud shell: <https://shell.cloud.google.com>

- Convenient Linux dev environment, preview of things to come...
- Can set up Rust with `rustup default stable`
- I suggest turning *off* the AI assistant for now

Getting the material

Repo: <https://github.coecis.cornell.edu/cs4414-f26/lab-02>

- Instructions are in `README.md`
- Your code should go in `lib.rs`
- Check progress with `cargo test` (see Milestones header)

Hand in question sheet at the end of session

- Who were you working with?
- How far did you get by the end?
- What questions came up?