CSCI 103: Introduction to Programming
Lab 2

September 1, 2023
Coding Contest (1)

- **Goal**: Understand different approaches to problems and familiarize yourself with common array tasks that you can use in other assignments
- **What**: 13 tasks broken into 3 levels of difficulty with point values for each
  - **Level 1 (1 pt. each)**: sum, min, minmax, find, pat1
  - **Level 2 (2 pts. each)**: reverse, dup2, allneg, pat2
  - **Level 3 (points vary)**: unique (3 pts), min2 (3), kcopy (3), eqdist (3), maxrun (4)
Coding Contest (2)

- **How**: Friendly team competition to solve array-focused coding tasks
  - Work in teams of 4-5 nearby students and make a team **name**!
  - Recommend "pair programming" - 2 people program as a team on the same computer
    - Both people: think and suggest code
    - One person: types the driver
    - Other person: reads/reviews each line as it is typed, finding and suggesting fixes to errors
  - Distributes the tasks among your teams pairs or work on difficult ones all together
Coding Contest (3)

- Want to code in pairs? Try [https://codecollab.io/](https://codecollab.io/) (have both partners go to the same "project"/URL, copy Codio code to a project on that site, and collaborate together, copying the code back to Codio when done.)
Lab File Layout and Testing

- All .cpp files in code/ directory
- Run automated tests using the "Check It" button for each
- To test the code on your own for debugging purposes use make utility which runs a script to compile your code
  - To compile + run tests type make <exercise> (i.e. make sum)
Running Tests + Viewing Test Output

- Inputs used for our tests are in subfolders of ins/
  - ins/ins_sum/ has input test files for sum
- Expected outputs for each test are in expected_outs/
- Running make sum doesn't print output to screen but saves outputs for each test in the outs/ folder (outs/outs_sum/ has the output your program generated for each test input)
- Compare expected output with your output to find bugs
During Competition

- **Scoring:** TAs will keep score up front for each team (report your team name before you start). As you pass the automated tests raise your hand and show the TA to earn points for your team. TAs will track scores on the whiteboard.
- **Time:** 60 minutes
- **Post-Competition Review:** After the competition the TAs can go over solutions to whichever problems you want to see
- **To start:** Go to Codio and Lab 2
Post Lab

- Congrats to the winning team!

- Once the competition is over, make sure to check in with a CP before you leave to ensure you have a 100 in your codio if you stayed engaged during the competition

- Have a good Labor Day weekend!