

Lab 10

Structs

3 April 2025

This week we practice creating our own `struct` type and writing some functions that process it. The context will be (we imagine) that you are writing a blog or social media site where users can post messages, and need to store user information; your struct will represent one user, and store their login name, their email address, and the number of posts they have made.

To begin with, we'll build the type and write and test one function that operates on that type.

1. First, start a file `User.h` and in it, define a `struct` with three fields, to represent the login name, the email address, and the number of messages posted (in that order). Include a comment above the struct to describe what the purpose of the data type is.
2. Below the `struct` definition, add a declaration for the function `has_posted`, which determines whether a given user has ever posted a message. Include a comment above the declaration with that description.
3. Start a file `User.cpp` with the appropriate `#include` and with a stub definition for the `has_posted` function.
4. Start a file `test_User.u` with some appropriate tests for the `has_posted` function.
5. Edit your readme to add instructions on how to compile and run the tests for the functions you'll be writing (and also with the other stuff that needs to go in documentation, if you haven't already!).
6. Go back to the `.cpp` file and fill out the body of the `has_posted` function.

Remember as always to refer to the course pack, posted photos and videos, and the in-class examples in `/home/shared/160/` to help you figure out what to do!