

Lab 01: Preliminaries

CS 351-CUG Fall 2023

Due: 08 Oct 2023, 23:59 PM AOE

First, details:

The purpose of this lab is to ensure your familiarity with:

- IIT's VPN
- Fourier (course server)
- GitHub Classrooms
- Git operations
- Extremely basic C compilation

Do not wait!

Since many of these are systems you will need to access and use, please *do not wait to begin this lab*. If you have not tried to use your accounts before (Fourier tracks login attempts), issues such as "I can't access the course server" will *not* earn you extra time. Of course, this excludes site-wide issues (server went down, VPN services went down, etc).

Put Simply:

Do not wait to begin this assignment!

Expected Time Commitment

If you are familiar with using git and C programming, this lab won't take more than 10-30 minutes *including* writing the report. However, this assumes your accounts and access work correctly - which is not guaranteed. So, again, do not wait to finish this lab!

Academic Dishonesty

You must do your own work. This does not so much apply to this assignment since it's just intended to confirm account setup and access, but this absolutely will apply to future assignments.

As per our syllabus, any copying (including from other peers, books, the internet, etc.) will earn you a zero on the assignment. Two such instances during the course will result in a report to the department.

Every assignment submission is passed through our course plagiarism detector, and suspected copying will be investigated. I *really* don't want this to happen to anyone. Please, do your own

work! Even if you do *reference* something else, be sure the code you write is your own, and be sure you fully understand how it works.

Part 1: GitHub and the Course Server

For this part of the lab, you will log in to Fourier, clone your repository, commit your changes (from Part 2), and push the commits back to your repo.

1. Activate your VPN
2. Log in to Fourier: `ssh -A <username>@fourier.cs.iit.edu`
3. Log into GitHub and accept your invitation to this lab assignment at:
`https://classroom.github.com/a/DCQ21YyV`
4. Clone your repository: `git clone <link>`
 - Note – you can find this link using the GitHub interface.
 - The upper right side of the page for your repo should have something like Fig. 1.
 - Remember to use HTTPS if you haven't set up a SSH key to use GitHub!
5. `cd` into your repository, and complete **Part 2: Hello World**
6. When finished with **Part 2: Hello World**, commit your changes:
 - (a) `git add` each relevant file
 - (b) `git commit -m "message here"` with *meaningful* contents
 - (c) `git push`
7. Log back into GitHub and look at your repo to double-check its contents changed.

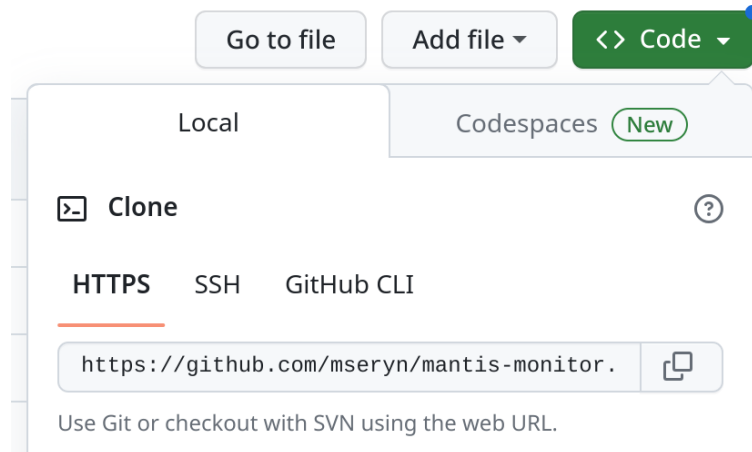


Figure 1: How to clone – remember to use "HTTPS" if you didn't set up a SSH key!

Part 2: Hello, World

For this part of the lab, you will just modify a `.c` file, compile it on Fourier, commit the changes, and push.

Navigate to your repo on Fourier. Open the file `modify_this.c`, and modify the two indicated fields. Then, use `gcc` to compile your code into an executable called `hello`.

You Must Use Fourier!

You must use Fourier to compile your executable. If you want to also use another machine, that's fine - but your executable will be run *from Fourier*, so if you don't use this system, there may be issues with your code.

Add `modify_this.c` to your repo, commit the changes, and push.

That's it! (The next lab will have real programming tasks, don't worry.)

Part 3: Report

For this part of the lab, you will write a report.

Please consider using \LaTeX ! This document preparation system is widely-used in tech, and it's an excellent skill to have. I recommend using `overleaf.com` – this provides a GUI as well as *many* templates. Find one that suits your style, and get going making beautiful documents with ease!

Completing any lab report in \LaTeX will earn you 5% extra credit. Just include the `.tex` file in your GitHub repository, and indicate in your report that you've used \LaTeX .

In this brief practice report, you should

1. Provide a title, your name, your CWID, and your IIT username
2. Document the location of your GitHub repo on Fourier
3. In 2 pages or less, describe a programming project you have worked on
4. Export this report as a `.pdf` file named: `lab-01_<username>_cs351-cug-fall123.pdf` – all lower-case – and include this `.pdf` in your GitHub repository!
5. If you use to build your report, also include the `.tex` file - but don't forget to *also* include your `.pdf`.
6. To add a file to your GitHub repo:
 - Add it through the GitHub web interface as in Fig. 2
 - Use `scp` to secure-copy a file from your computer to Fourier, then `add`, `commit`, and `push` the file from Fourier
 - Example: `scp <file> <username>@fourier.cs.iit.edu:~/<your-repo>/.`
 - If you use `overleaf.com` to make a document, you can download the `.tex` file from the web interface and include it either using the GitHub UI or using `scp`

Use PDF!

However you write this document (though again, I highly recommend \LaTeX), you must submit it as a PDF. Any file type that is *not* a PDF will *not* be graded, and you will not receive credit for this portion of the lab.

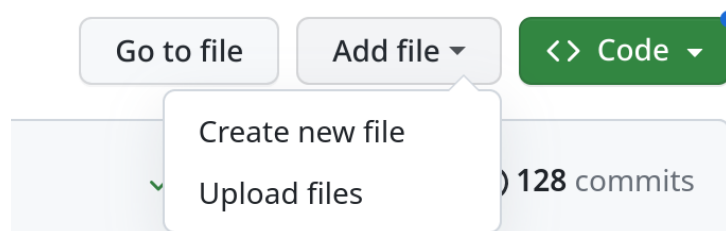


Figure 2: How to add a file using the GitHub UI

Once you have finished adding everything to your GitHub repository, submit the assignment (blank is fine) in BlackBoard to trigger grading.

Rubric

Points for this assignment will use the following rubric:

Points	Task
10	Code compiles with no warnings on Fourier
10	On Fourier, executable accurately prints student's name and UID
10	Report (PDF) includes name, UID, username, and project description
3	Extra-credit for using \LaTeX and including the <code>.tex</code> file in the assignment repo!
30	<i>Total possible points</i>

Reminder about FLDs:

All students have 6 flexible late days (FLDs) to use at their discretion this semester. For each assignment, up to 2 FLDs can be used, and each FLD provides a no-questions-asked 24-hour extension to the due date.

To use a FLD, you need to:

- Email the professor and TA with your name, UID, the assignment title, and how many FLDs you intend to take
- Include in your BlackBoard submission how many FLDs you have used for the submission

You do not need to explain why you are taking FLDs - no questions are asked.

Of course, if you have an extraordinary issue that prevents you completing your work on-time, please just reach out – you don't need to use FLDs for emergencies.

Last modified: Sep 26 2023