

# Setup a GitLab Project

---

CS 346: Application  
Development

# Project Tracking

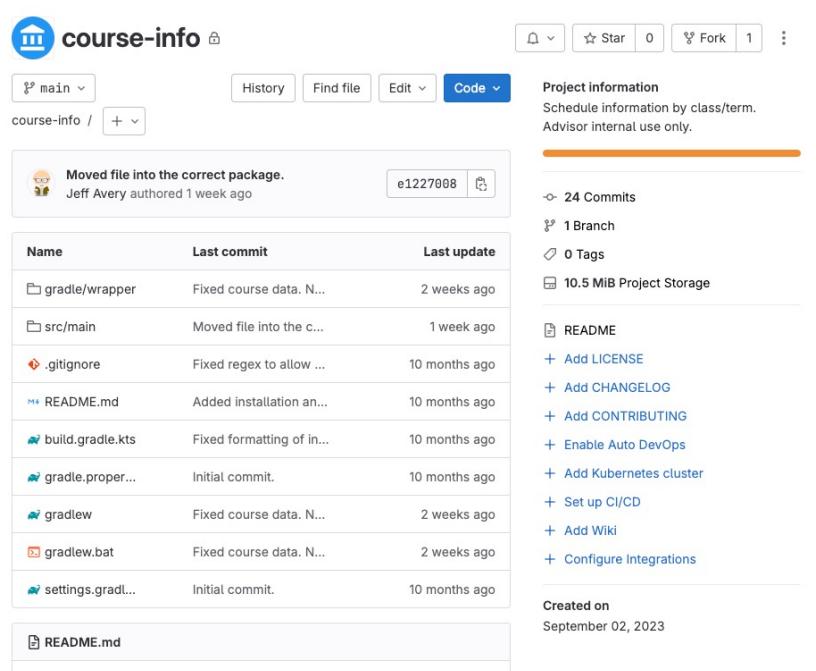
We want our software to be effective, useful, and **long-lived**.

- We need to track:
  - **Resources**: Who is on the project, what are their responsibilities?
  - **Requirements**: What did we decide to build? What are the details?
  - **Design**: What decisions were made? Why did we make them?
  - **Implementation**: What went wrong? How did we adjust?
- We need a historical record of these things:
  - Legal, compliance often require this.
  - We want to inform future decisions (and future team members).
- We also need a current snapshot at any point in time.
  - “When can we expect feature X?”, and “When can we ship it”?

# What is GitLab?

GitLab is a project tracking system.

- UW has our own self-hosted instance.  
<https://git.uwaterloo.ca/>
- GitLab merges project tracking, implementation and testing into a single system.
- Like GitHub, but self-hosted.
- **All** your project assets should be stored here. No exceptions.



The screenshot shows the GitLab interface for a project named 'course-info'. The top navigation bar includes 'Code' (selected), 'History', 'Find file', 'Edit', and 'Code' dropdowns. The main content area displays a list of commits:

Name	Last commit	Last update
gradle/wrapper	Fixed course data. N...	2 weeks ago
src/main	Moved file into the c...	1 week ago
.gitignore	Fixed regex to allow ...	10 months ago
README.md	Added installation an...	10 months ago
build.gradle.kts	Fixed formatting of in...	10 months ago
gradle.proper...	Initial commit.	10 months ago
gradlew	Fixed course data. N...	2 weeks ago
gradlew.bat	Fixed course data. N...	2 weeks ago
settings.gradl...	Initial commit.	10 months ago

On the right, the 'Project information' sidebar shows:

- 24 Commits
- 1 Branch
- 0 Tags
- 10.5 MiB Project Storage
- README
- + Add LICENSE
- + Add CHANGELOG
- + Add CONTRIBUTING
- + Enable Auto DevOps
- + Add Kubernetes cluster
- + Set up CI/CD
- + Add Wiki
- + Configure Integrations

At the bottom, it says 'Created on September 02, 2023'.

*The interface might look familiar.*

# How will we use it?

- **Project tracking.** We will use project issues and milestones to track your work towards your project (historical +current).
- **Source control.** Your GitLab repository is a Git repo. You should be cloning it to your personal computers and using the repo for your source code and all other project assets.
- **Software releases.** We'll use the built-in mechanisms to tag and release software for each milestone.
- **Wiki.** All project documents should be stored as pages in your Wiki, written in Markdown.

For a small sample project, see <https://git.uwaterloo.ca/j2avery/mm>

# Getting Started

1. Navigate to <https://git.uwaterloo.ca>
2. Click on + > New Project > Create blank project.

Project name  
Team-101-5

Must start with a lowercase or uppercase letter, digit, emoji, or underscore. Can also contain dots, pluses, dashes, or spaces.

Project URL  
https://git.uwaterloo.ca/ j2avery

Project slug  
team-101-5

Visibility Level ②

Private  
Project access must be granted explicitly to each user. If this project is part of a group, access is granted to members of the group.

Internal  
The project can be accessed by any logged in user except external users.

Public  
The project can be accessed without any authentication.

Project Configuration

Initialize repository with a README  
Allows you to immediately clone this project's repository. Skip this if you plan to push up an existing repository.

Enable Static Application Security Testing (SAST)  
Analyze your source code for known security vulnerabilities. [Learn more](#).

**Create project** **Cancel**

The URL should be under a team-mates name e.g., j2avery

Give your project a descriptive name

Make sure access is private

# Setup: Members

It doesn't matter who "owns" the project, since we will add other team members and give them full access.

## Manage > Members

- Add team members as Owners.
- Add course staff as Developers.



Members were successfully added

Project members

You can invite a new member to **notae** or invite another group.

Members 2

Import from a project Invite a group Invite members

Account	Source	Max role	Expiration	Activity
 Caroline Kierstead @ctkierstead	Direct member by <a href="#">Jeff Avery</a>	Owner	Expiration date 	User created: Apr 27, 2015 Access granted: Aug 06, 2024 Last activity: Aug 05, 2024
 Jeff Avery @j2avery	Direct member by <a href="#">Jeff Avery</a>	Owner	Expiration date 	User created: Aug 20, 2015 Access granted: Jan 05, 2024 Last activity: Aug 05, 2024

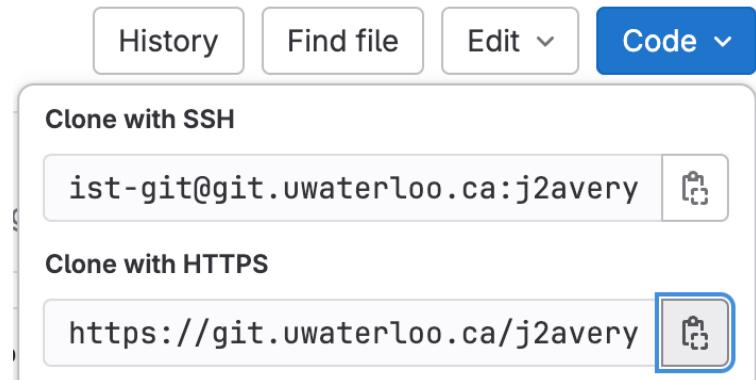
# Setup: Source Code

Once the repo is created, everyone that has access should be able to `git clone` it to their local machine.

Code button > Copy the URL

```
$ git clone https://git.uwaterloo.ca/j2avery/mm
```

We'll add code later.



# Setup: Starting Files

Add a **README.md** file to your repository.

- This is a markdown file that is shown when you open the project
  - i.e., it's the “Landing Page” for your project.

Add a **.gitignore**

- Just a plain-text file that you can add to the repo at the top-level.
- Include files and directories that you do NOT want in your repository.  
Git will skip over these files when performing operations.

Example files here: <https://git.uwaterloo.ca/j2avery/mm>

# README.md contents

```
# SUPER-COOL-PROJECT-NAME
```

```
## Title A description of your project.
```

```
## Team Details
```

Basic team information including:

- Team number from forming a team step.
- Team members. Full names and email addresses.
- Link to your **Team Contract** wiki page.

```
## Other sections over time!!
```



You will be  
continually revising  
this page as the  
course progresses.

# .gitignore contents

- build/
- .gradle
- .idea
- .vscode/
- .DS\_Store



You want to do  
this to avoid  
adding \*.tmp files  
with every  
commit!

## Setup: Wiki pages

A [wiki is a simple content management system](#) – a place to store documents on the web.

- GitLab includes a simple wiki engine that lets you produce documents in Markdown format, and include them in your project.
  - Plan > Wiki, Create Your First Page
- You will need to create Wiki pages for all your project documents i.e., Project Proposal, Design Proposal.
- You can link Wiki pages to issues and vice-versa.