Git

# Threaded Project

### Git

#### What is git

Git is the [version control system](https://en.wikipedia.org/wiki/Git), not to be confused with [Github](https://en.wikipedia.org/wiki/GitHub). Git is a distributed version control. This means that everyone working on the project will have a local repository (version of the project hosted on your local machine) and a [remote repository](https://git-scm.com/book/en/v2/Git-Basics-Working-with-Remotes) (another version of the project hosted in a remote location).

#### Why use it

Using a version control such as Git streamlines collaboration. It has several important properties,

1. You can easily keep track of and store previous versions of the project.
2. You can always know right away if you broke something and fix it or completely abandon what you did.
3. You can always be working on the current version of the project.
4. You can easily tell the differences between versions of the project.

### Github

#### What is Github?

Do not confuse Github and Git, Github is simply the application we will use as a remote Git server. It is simply a service to host repositories on the cloud for us.

#### How we are going to use it.

We will have a Github repository of the project. Any work that you do for the project that you are happy with will then be added from your local repository to our Github remote repository. This means all other members of the group can then take what you added and start working right away on an updated version of the project.

## TODO: PLEASE SEND ME YOUR GITHUB ACCOUNT NAME.

After you give me your account name, check the email you used to sign up for that Github account for notifications about our repository. In particular, when I add you as a collaborator on our project, please accept this invitation.

### Git with visual studio

1. Enable Git as your default Visual Studio version control.

### Github with Visual Studio

1. Download the Github extension for Visual Studio ([download](https://visualstudio.github.com/)).
2. Log into Github using this extension.
3. Become familiar with the User Interface for the Github Extension. In particular, checkout the *Team* tab.

## Git + Github Workflow

1. Become familiar with the basic workflow for doing project work and using Git/Github. ([Workflow](https://www.visualstudio.com/en-us/docs/git/tutorial/gitworkflow))
2. Become familiar with the following Git commands

* git add
* git commit
* git push
* git pull
* git diff
* Github pull requests