

## Goals:

Setup a remote repository.  
Learn how to Push our local files to the remote server.  
Understand Branches and how to use them.  
Understand how to Merge different branches.  
Learn what a Merge Conflict is and how to resolve it.

## Remote Repositories

A remote repository is a copy of our project that is stored “in the cloud”.  
It is where we backup our work and share it with others.  
It is accessible anywhere there is an Internet connection.

```
remote add origin <link to repository>.git
```

Push changes to server  
`git push -u origin master`

After first push: `git push`

Git push doesn't need to be done after every commit, because it will upload all commits since the last push.

## Branches

Are exactly what they sound like, smaller bits extending from a trunk. Branches are different version of code.

Branches allow us to work on code fixes and features without breaking what we already have working.

Fixes and new features should always start on a branch.

The master branch is the “trunk” of your code tree and should only contain clean code ready for deployment (use on the web).

`Git branch <name>` tells git to maintain a new copy of our code with the given name

`Git branch` on its own will list branches available and display an asterisk next to the one we are currently working on.

Git merge <branch name> combines files changes in branch we name into our current working branch.

A merge conflict is when a file has changed in both of the branches you are trying to combines and git can't automagically determine what you want to keep, and asks for help because it's confused.

## Summary of Lesson

Today's topic can facilitate collaboration by allowing all individuals of a team to work on files at the same time which can allow work flow and efficiency to dramatically increase, instead of having to pass files back and forth and have one person working at a time.

On a scale of 1-4 in the topics of "remote repos", "branches", and "merging", I'd give myself a 4.1 in all of these, as I believe I have a firm grasp on these concepts and will utilize them in my daily programming.

I currently have no questions.

The best part of my Thanksgiving break was spending most of it hanging out with my girlfriend, playing Team Fortress 2 and watching Star Wars with her, as well as baking cupcakes, cookies, and watching Christmas movies.