Committing code to the UTS MDSI GitHub project

We have a UTS MDSI GitHub project to facilitate the sharing of code and other resources to the UTS MDSI community. This blog demonstrates how to do this.

First step: Install Git

If you have already installed Git you can skip this step, if you haven't, follow the instructions here.

Second step: Create a local copy of the MDSI GitHub repos

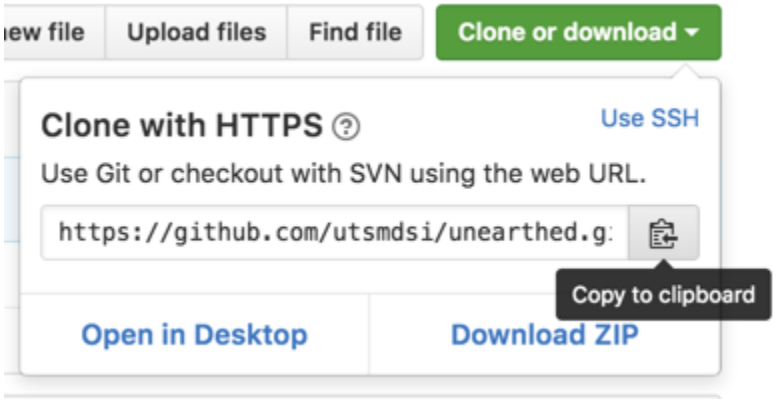
1. Open Git Bash (Windows) or Terminal (Mac)
2. Create a directory on your computer where you will store your copy of the repo (as a general rule, people normally do this in `~/src` wher e `src` stands for 'source'). To do this use the command:

```
mkdir ~/src/utsmdsi
```

3. Navigate to this new directory:

```
cd ~/src/utsmdsi
```

4. Navigate to the UTS MDSI project at https://github.com/utsmdsi
5. We'll need to go through the following steps for each of the repos. I'll demonstrate here with the 'unearthed' repo
6. Click on the repo name to navigate to repo view
7. Click on the **Clone or download** button and then the **Copy to clipboard** button to copy the clone URL. See below:



> **Do this in SSH if you know how to**
> It's more convenient to clone with SSH instead, but it takes a while to explain. I'd recommend learning this for future.

8. Back in Git Bash (Windows) or Terminal (Mac) paste in this link to the command:

```
git clone <paste link>
```

9. You'll see `Cloning into 'unearthed' ...` print to the screen and when it completes you'll have a folder—`unearthed`—with all the repos content in it
10. Repeat from step 6. for the other repos

Third step: Adding your team's code to the unearthed repo

1. Change directory to the `unearthed` folder:

```
cd ~/src/utsmdsi/unearthed/
```

2. **Pull** the most recent version of the repo down:

```
git pull origin master
```

3. Create a **branch** to make your changes. You should make the branch name something unique to you or your team. Say `team-sixteen`:

```
git checkout -b <your branch name>
```

> **What is a branch?**
> Sometimes you might be working on a project where there is a version that might be used by many other people, and you might not want to edit the version that's being used by everyone because if you make a lot of changes to it, it might break all the work that they're doing. So what you should do is create a branch to work on.
>
> A branch is just another version of the same directory where you can make changes independently.

4. Create a folder for your team
5. Copy all the files/code you'd like to share to this folder

> **DON'T copy datasets or other large files**
> Only copy over the code you used and other relevant things. If you copy over large files it will take ages to push to the repo and mean everyone else will have to download these large files.

6. Put the new files under version control so that Git knows to monitor that file and keep up with all of its changes. To do this you need to **add** them to the index with the following command:

```
git add -A
```

Fourth step: Committing and pushing your changes

1. Now that you've added the new files, you can **commit** them. Write a brief message to accompany your commit so everyone else knows what you did:

```
git commit -m "Your message"
```

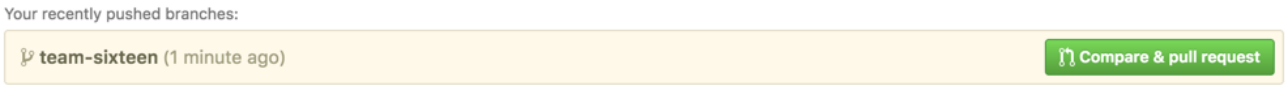
2. Now push these changes to your branch:

```
git push origin <your branch name>
```

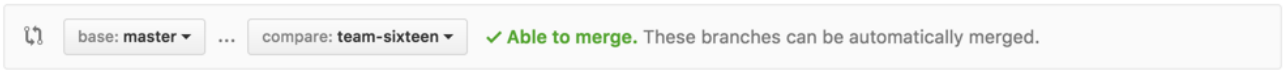
Fifth step: Create a pull request

Because your changes are only on the branch you made, you'll need to create a **pull request** so that we can add your changes to the master branch. To do so:

1. Navigate to the UTS MDSI project at https://github.com/utsmdsi
2. Click through to the repo you've pushed to
3. You'll see a *Your recently pushed branches* banner:



4. Click on the **Compare & pull request** button
5. You'll hopefully see something like:



6. Write a comment and click **Create pull request**
7. An admin will then review your pull request and if appropriate merge it to the master branch