Git help

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1 Git

Git is a piece of software for keeping tracks of version of code and other text files. It can be view/revert to old versions of code, diff between versions, make new branches of your code for testing, and can be used to aid code development among several people.

2 Starting

Git come installed on most Macs and Linux machines, but in case you want to installed an updated version via Macports.

```
sudo port install git-core +svn +doc +
    bash_completion +gitweb
```

Now with Git installed we can update some simple configuration info

```
$ git config --global user.name "JT␣Erwin"
$ git config --global user.email jterwin@lpl.
    arizona.edu
```

Note that you will want to adapt the above to your name. I also added

```
$ git config --global core.editor amacs
$ git config --global merge.tool opendiff
```

Here I have set it up to use amacs (which is an alias to Aquamacs, a Mac GUI emacs) as the default editor as opposed to the default vim.

2.1 First repository

```
$ git init
```

3 Branching

4 Using server

We can set up the git repository on a server, and then we can clone, commit, push to it from multiple computers and or people.

4.1 Setting up RSS key

4.2 Set up on Remote Server

One the remote server we setup an empty git repository

```
$ cd ~/mycodes
$ mkdir project.git
$ cd project.git
$ git --bare init
```

The '–bare' is necessary because ?

4.3 Clone to local computer

Now on my personal computer I can clone that project. I put the git repository on HIPAS, and on my Macbook I have my shell set up so that the variable 'HIPAS=hipas.lpl.arizona.edu'.

```
$ cd ~/Document/work
$ git clone jterwin@$HIPAS:mycodes/project.git
$ cd project
```

The above clone, creates a folder named 'project' (as apposed to project.git), containing a clone of the git repository.

When I do a commit, it is only to my local repository/branch. For others to see my commits, I need to push to the server

```
$ git commit -am 'fix for something'
$ git push origin master
```

Here 'master' is the name of the branch I am working on (the default is master), and 'origin' refers to the origin of the git repository (which you can check refers to the server location by looking at 'git config –list').