Hello Exothermic Robotics!

This year, we are going to try something new with coding, something which I hope all of you will get around to using: We are going to try social coding!

Social Coding is not only a way to share code, it is also a way of version control. Version control allows people to restore their code to any version of their code and keep multiple versions of the code running and being worked on by multiple people. Then comes in the social coding aspect, multiple people can work on branches of the code and then it is extremely simple to merge the different branches of code.

We are going to be using GitHub, a free application for Social Coding! Social Coding allows us to store all our code in the cloud. The great part is that we will all be able to look at each other's code and then expand on each other's code! Plus it will be really awesome for next year's World's Excellence Award for the Club (that we are definitely going to win).

Intro to Github: http://learn.github.com/p/intro.html (if you want to watch).

So the basics of setting up GitHub for yourself:

1. Construct a Github Account! (https://github.com/signup/free)
2. Go to my Github profile (https://github.com/cnirkhe) and follow me so that you can fork my original Exothermic Repository.
3. Go to the repository for our group code: https://github.com/cnirkhe/ExothermicRobotics. A repository is just the place where the code is stored. I am going to try to explain what a repository is: Repositories are where code is stored and exist both online and locally (on your own computer). There will be both an online repository and local repository for all code. The general setup of repositories is that you work on your local version and then when everything is working push (a fancy word for upload) the working file to your internet version.
4. We are first going to make an online repository for YOUR code. This is where all the code you write or modify will be stored. This repository will be "forked" from my original repository. Forking simply means copying so that you can change it. On the repository page press the Fork button.
5. Note that the url has now changed to: https://github.com/YOURUSERNAME/ExothermicRobotics
6. Now we are going to set up the local version of GitHub on your laptop.
7. Download the latest version of Git: http://git-scm.com/downloads and use all the default values.
8. There are two types of interactions with computers: GUI (Graphical User Interface) and Console (like the process cmd or Terminal on PC's and Mac's respectively). For the setup, it

is easier to use the Console. Open up the application called "Git Bash" that was just downloaded on your laptop.

9. Follow the Username and Email steps on this page: https://help.github.com/articles/set-up-git
10. Then follow ALL of the instructions on this page: https://help.github.com/articles/generating-ssh-keys
11. Now open up "Git Bash" and type the following:

```
git clone https://github.com/YOURUSERNAME/ExothermicRobotics.git
```

12. Then type

```
cd Spoon-Knife
```

13. Then type (it is correct that the name is cnirkhe)

```
git remote add upstream
https://github.com/cnirkhe/ExothermicRobotics.git
```

14. Then type

```
git fetch upstream
```

Then go to your computer and then to your user directory where there is now a folder called ExothermicRobotics!

Edit the code in there!

How to use GitHub for Social Coding:

1. Open the "Git GUI" application
2. Press "Open Existing Repository"
3. Select the folder previously discussed.
4. From now on you can just open the repository.
5. Press "Rescan" and "Stage Changed" in that order. Then type a message in the "Commit Message" box explaining what changes you made. Then press the commit message. Then press the Push button.
6. The Push button copies all your local files to the online directory so that other people can use the files and edit them. Type in your username and password as needed.

This should be enough for the Summer! Once we start up again in the fall, I'll teach you guys how to merge files as that becomes more of a concern. Okay great! Have fun guys and happy coding!

--Chinmay