ETH
Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

851-0585-04L – Modeling and Simulating Social Systems with MATLAB

Lecture 3 – GIT Connected

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Chair of Sociology, in particular of

Modeling and Simulation

Let's Git Started…part 2

- In this mini tutorial we will quickly repeat what we told you about using GIT on your local machine

- GIT is a great tool when combined with an online repository… and this is the topic of today!

Let's Git Started: what we have learned…

- GIT is free, open source software. http://git-scm.com/
  - GIT Bash (Windows)
  - `git` (Linux – command line only)

- Command Line commands:

  - Change directory: `cd`
  - List files in a directory: `ls`
  - Create a new directory: `mkdir <name_of_dir>`

Let's Git Started: what we have learned…

- Introduce yourself to GIT.


```
$ git config --global user.name "Your Name"
$ git config --global user.email i@me.com
```

Let's Git Started: what we have learned…

- Git keeps track of the changes of the files what we add to the index

```
$ git add file1 file2
$ git add .
```

- Git saves snapshots of the index

```
$ git commit –m "I made this changes"
```

Using GIT: going on line!

- If you are not registered yet, please do so (every student should have an account, it's free!)

  http://github.com

- An initial configuration is required.
  - 1. Copy your **SSH public key** to your github account
  - 2. Create a repository online
  - 3. Clone the project template
  - 4. Push your first commit online

Using GIT: Step 1. SSH Keys

- **What is an SSH public key ?**
- It is a certificate of your identity (actually of your laptop).

- **Why do I need one ?**
- If you copy it and paste into your Github account, you don't have to reinsert username and password every time you connect with GIT.

Using GIT: Step 1. SSH Keys

- To complete step 1 please follow one of the following tutorials:
  http://help.github.com/linux-set-up-git/
  http://help.github.com/win-set-up-git/
  http://help.github.com/mac-set-up-git/

  (it is basically the same process for all OS, only with a few changes)

Using GIT: Step 2. Create your own repo

- Step 2 is done only by one group member, i.e. one repository for each group only!
- Create your first repository by clicking on 'New Repository' on your github page. Problems? http://help.github.com/create-a-repo/
- Please use a significant name for the repo!
  - E.g. if you study Opinion Formation, a good one could be cool_opinions_12

Using GIT: successfully created repo

Global setup:

```
Set up git
  git config --global user.name "SOMS"
  git config --global user.email stefano.balietti@gess.ethz.ch
```

Next steps:

```
  mkdir test_repo
  cd test_repo
  git init
  touch README
  git add README
  git commit -m 'first commit'
  git remote add origin git@github.com:msssm/test_repo.git
  git push -u origin master
```

Existing Git Repo?

```
  cd existing_git_repo
  git remote add origin git@github.com:msssm/test_repo.git
  git push -u origin master
```

Importing a Subversion Repo?

```
  Click here
```

When you're done:

```
  Continue
```

Using GIT: successfully created repo

Global setup:

```
Set up git
  git config --global user.name "SOMS"
  git config --global user.email stefano.balietti@gess.ethz.ch
```

Next steps:

```
  mkdir test_repo
  cd test_repo
  git init
```

Don't do it!

We will use the project template instead

```
  cd existing_git_repo
  git remote add origin git@github.com:msssm/test_repo.git
  git push -u origin master
```

Importing a Subversion Repo?

```
  Click here
```

When you're done:

```
  Continue
```

Using GIT: Step 3. Clone project template

- Open GIT Bash. Type in one line:

$ git clone

git@github.com:msssm/project_template.git

myproject

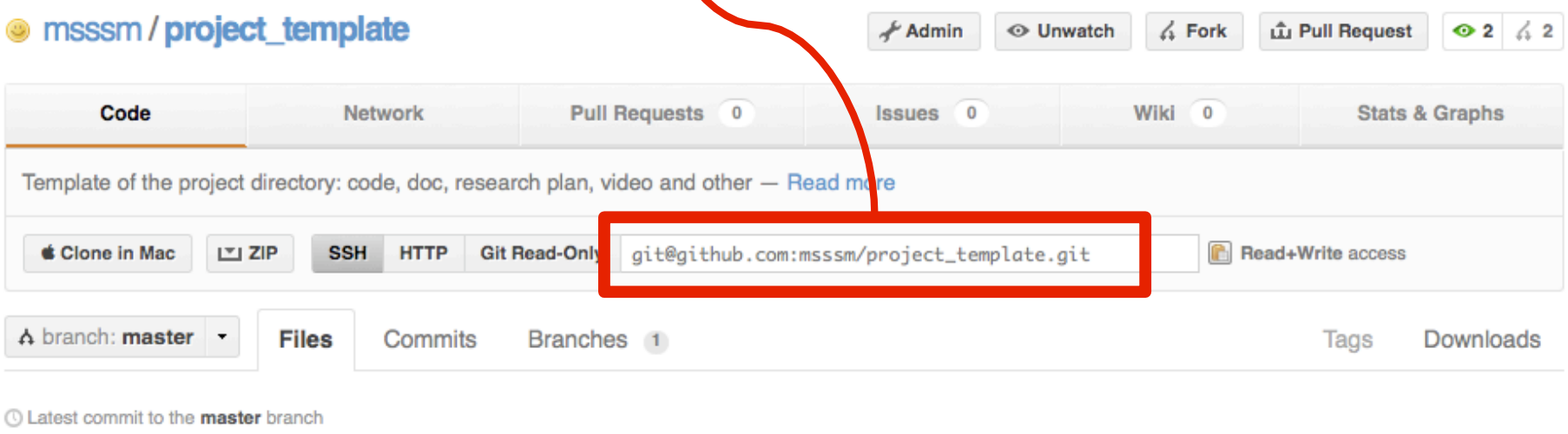
Using GIT: going on line! Step 2.

- Open GIT Bash. Type in one line:

$ git clone

git@github.com:msssm/project_template.git

myproject



Using GIT: going on line! Step 2.

- Open GIT Bash. Type in one line:

$ git clone

git@github.com:msssm/project_template.git

myproject

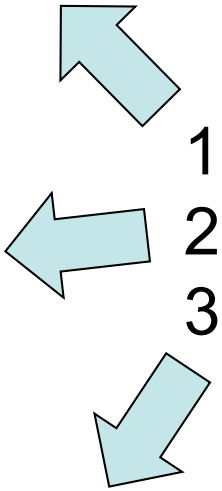
Using GIT: going on line! Step 4.

- Step 4. is on your local machine. Basically:
  - you are telling your local git to remove the link with the project template repo and
  - to add a new link to your online repository (called remote).

Using GIT: going on line! Step 4.

```
$ git remote -v
>> origin git@github.com:msssm/project_template.git (fetch)
   origin git@github.com:msssm/project_template.git (push)
```

```
$ git remote rm origin
```



1. Show current remotes
2. Remove old ones
3. Add your own

```
$ git remote add origin git@github.com:msssm/newrepo.git
```

Write your Research Plan and push it!

- Write your research plan inside the README file.
- When you are happy :
- `$ git add README.md`
- `$ git commit –m “Research Plan done”`
- `$ git push –u origin master`

Using GIT: final steps

- Be social:

  The person who created the repository has an admin panel on the repo page. Click Admin, then select Collaborators. Add the other group members (who should be so kind to tell you their user names…)

- Very important!! Start following user **msssm**.

References

- Git Home Page: http://git-scm.com/
- Git General Info: http://git-scm.com/about
- Github Home Page: https://github.com/
- GitX (a gui for OS X): http://gitx.frim.nl/
- Git in 5 minutes: http://www.fiveminutes.eu/a-case-for-git/
- Git Book http://book.git-scm.com/
- GIT: creating a repo http://help.github.com/create-a-repo/
- GIT: working with remotes http://help.github.com/remotes/
- Format for README file: https://github.com/github/markup#readme