



REAL

GIT BASICS

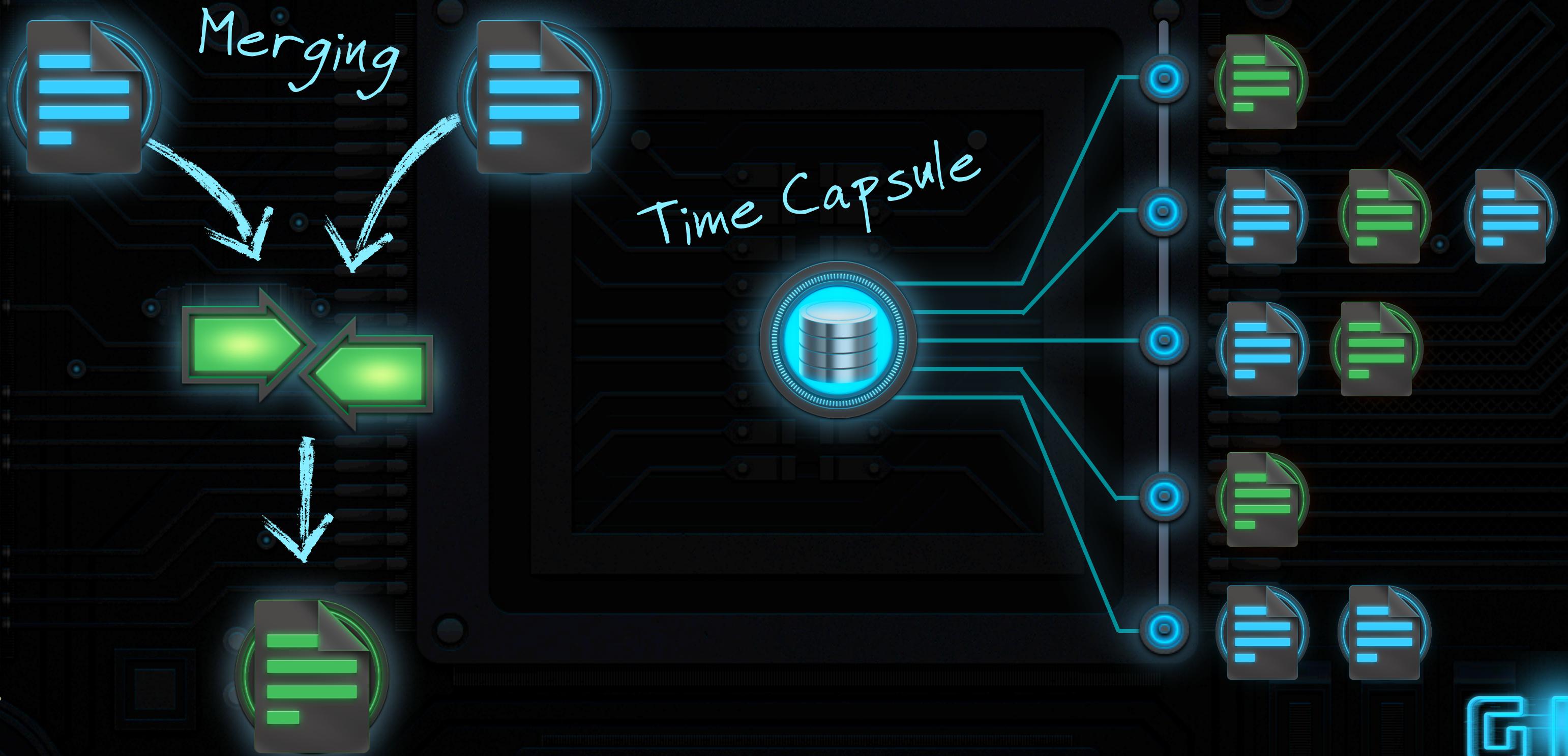
LEVEL 1

SAME OLD STORY



Collaboration Issues!

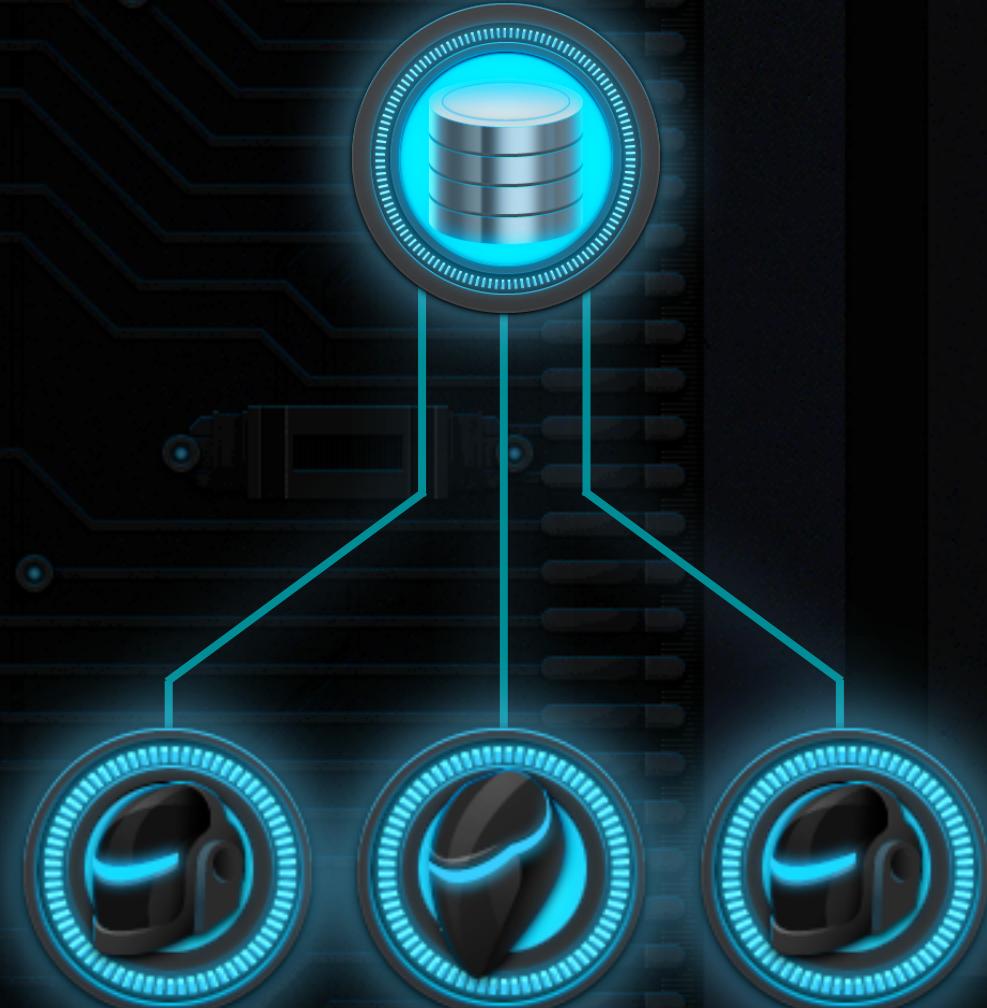
VERSION CONTROL SYSTEMS



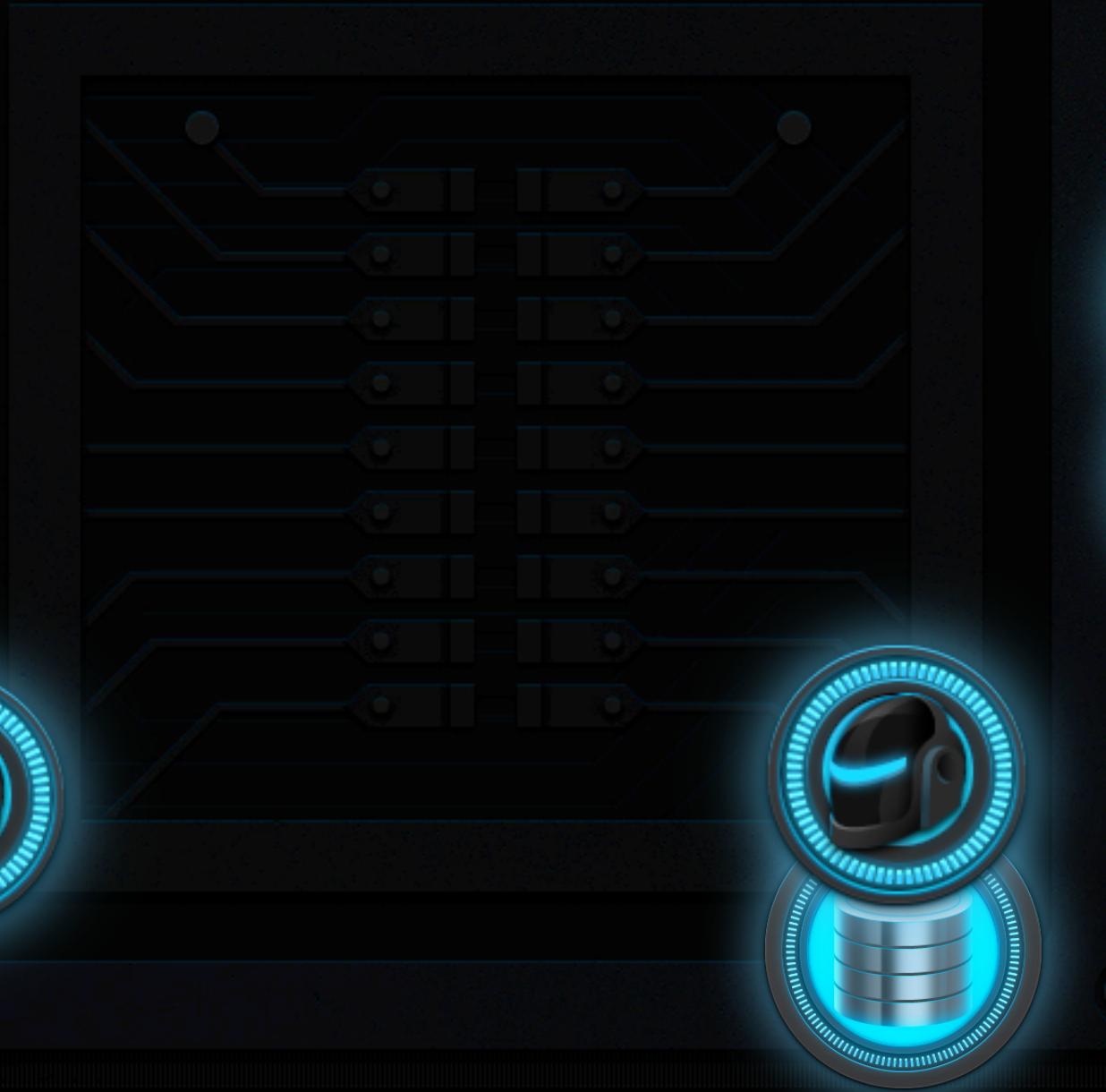
GIT
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REPOSITORY LOCATIONS

Central Repository



Distributed Repository



**Git is a
DISTRIBUTED VERSION CONTROL SYSTEM
(DVCS)**

ORIGINS

- Linux Kernel project.
- Meant to be distributed, fast and more natural.
- Capable of handling large projects.



LEVEL 1 – GIT BASICS



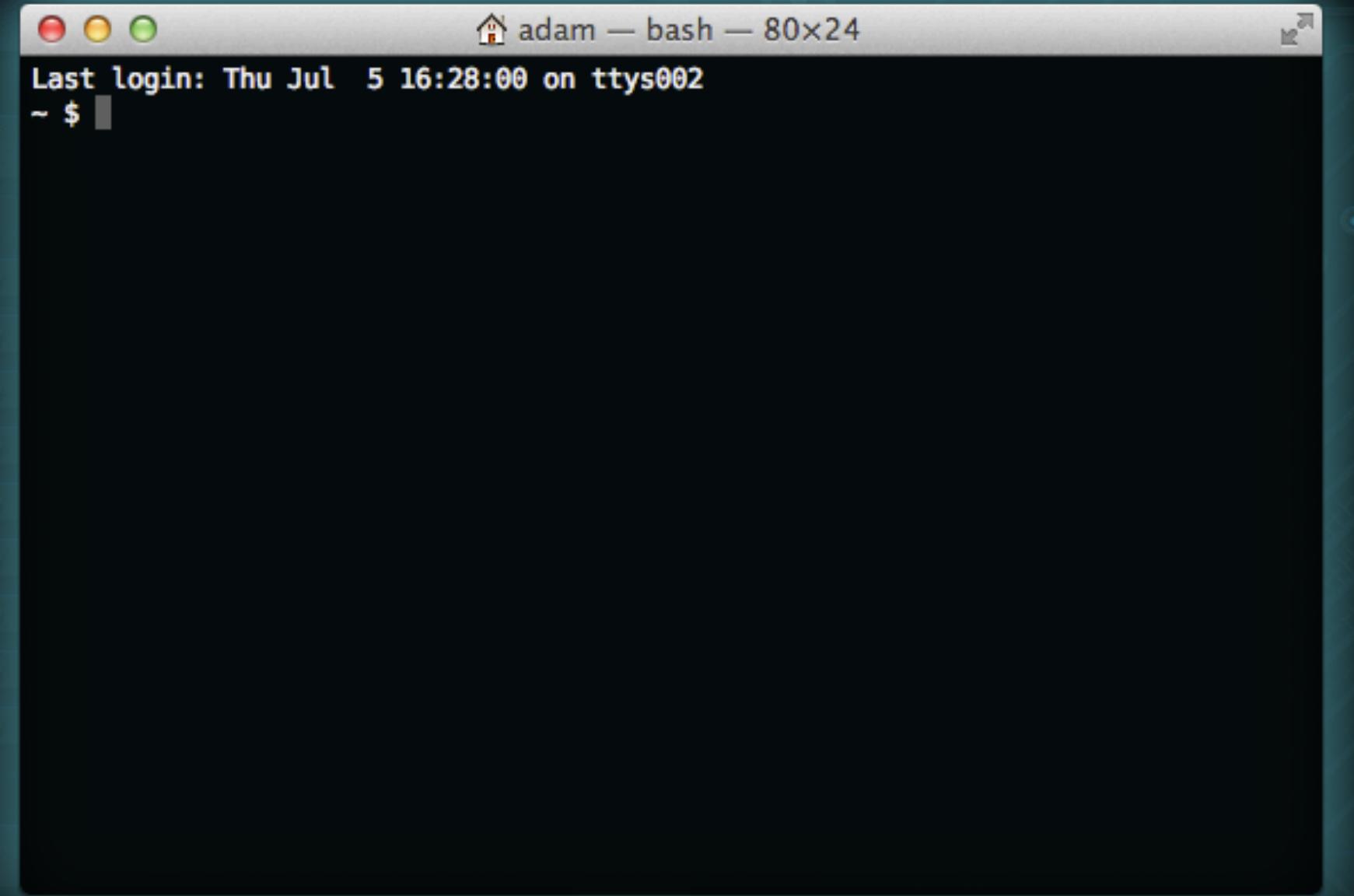
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WORKING WITH GIT

- Command line interface
- Many GUI tools available
- Official Git Site —
<http://git-scm.com/>

start here

LEVEL 1 — GIT BASICS



```
Last login: Thu Jul  5 16:28:00 on ttys002
~ $
```

GIT
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GIT HELP

```
$ git help
```

```
usage: git [--version] [--exec-path[=<path>]] [--html-path]
           [-p|--paginate|--no-pager] [--no-replace-objects]
           [--bare] [--git-dir=<path>] [--work-tree=<path>]
           [-c name=value] [--help]
           <command> [<args>]
```

The most commonly used git commands are:

add Add file contents to the index

bisect Find by binary search the change that introduced a bug

...

GIT HELP

\$ git help config

GIT-CONFIG(1)

Git Manual

GIT-CONFIG(1)

Pass in any git command

NAME

git-config - Get and set repository or global options

SYNOPSIS

```
git config [<file-option>] [type] [-z|--null] name [value [value_regex]]  
git config [<file-option>] [type] --add name value
```

...

SETTING UP GIT

```
$ git config --global user.name "Gregg Pollack"
```

Who gets credit for changes

```
$ git config --global user.email gregg@codeschool.com
```

What email you use

```
$ git config --global color.ui true
```

Pretty command line colors

STARTING A REPO

```
$ mkdir store
```

```
$ cd store
```

```
$ git init
```

Initialized empty Git repository in /Users/gregg/store/.git/

git metadata is stored here



GIT WORK FLOW



Jane creates README.txt file

Starts as untracked



Add file to staging area

Getting ready to take a picture



Commit changes

A snapshot of those on the stage

GIT WORK FLOW



Jane creates README.txt file



Add file to staging area



Commit changes



Jane modifies README.txt file & adds LICENSE



Add both files to staging area



Commit changes



Jane creates README.txt file

```
$ git status ← To check what's changed since last commit  
# On branch master  
#  
# Initial commit  
#  
# Untracked files:  
#   (use "git add <file>..." to include in what will be committed)  
#  
# README.txt ← Our newly created file  
nothing added to commit but untracked files present (use "git add" to track)
```

Add file to staging area

```
$ git add README.txt  
  
$ git status  
# On branch master  
#  
# Initial commit  
#  
# Changes to be committed:  
#   (use "git rm --cached <file>..." to unstage)  
#  
#       new file:   README.txt
```



Our staged file

Commit changes

Commit message

timeline

```
$ git commit -m "Create a README."
```

[master abe28da] Create a README.
1 files changed, 1 insertions(+), 0 deletions(-)
create mode 100644 README.txt



what work was done?



```
$ git status  
# On branch master  
nothing to commit (working directory clean)
```

No new or modified files since last commit



Jane modifies README.txt file & adds LICENSE

```
$ git status  
# On branch master  
# Changed but not updated:  
#  
#   modified:   README.txt  
#  
# Untracked files:  
#  
#   LICENSE  
no changes added to commit
```

master

Add both files to staging area

```
$ git add README.txt LICENSE
```

OR

```
$ git add --all
```

← Adds all new or modified files

```
$ git status
```

```
# On branch master
# Changes to be committed:
#
#   new file:   LICENSE
#   modified:  README.txt
#
```



master

Commit changes

master

```
$ git commit -m "Add LICENSE and finish README."
```

```
[master 1b0019c] Add LICENSE and finish README.  
2 files changed, 21 insertions(+), 0 deletions(-)  
create mode 100644 LICENSE
```



GIT TIMELINE HISTORY

```
$ git log
```

```
commit 1b0019c37e3f3724fb2e9035e6bab4d7d87bf455
```

```
Author: Gregg Pollack <gregg@codeschool.com>
```

```
Date: Thu Jul 5 22:31:27 2012 -0400
```

Add LICENSE and finish README.

```
commit 5acaf86b04aaaf9cbbb8ebb9042a20a46d0b9ce76
```

```
Author: Gregg Pollack <gregg@codeschool.com>
```

```
Date: Thu Jul 5 22:00:46 2012 -0400
```

Create a README.

master

DIFFERENT WAYS TO ADD

```
$ git add <list of files>
```

Add the list of files

```
$ git add --all
```

Add all files

```
$ git add *.txt
```

Add all txt files in current directory

```
$ git add docs/*.txt
```

Add all txt files in docs directory

```
$ git add docs/
```

Add all files in docs directory

```
$ git add "*.*"
```

Add all txt files in the whole project

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