Don’t be afraid to commit
Documentation

Release 0.3

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October 26, 2015
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A workshop/tutorial for Python/Django developers who would like to contribute more to the projects they use, but need more grounding in some of the tools required.

The workshop will take participants through the complete cycle of identifying a simple issue in a Django or Python project, writing a patch with documentation, and submitting it.

1.1 The purpose of the workshop

Don’t be afraid to commit will help put you in a position to commit successfully to collaborative projects.

You’ll find it particularly useful if you think you have some good coding ideas, but find that managing the development process sometimes gets in the way of your actual development.

1.2 What’s covered

virtualenv and pip will help you manage your own work in a more streamlined and efficient way.

Git and GitHub will also help you manage your own workflow and development, and will make it possible for you to collaborate effectively with others. The Django Project, like many other open projects, uses both.

Documentation - being able to create, manage and publish documentation in an efficient and orderly way will make your work more accessible and more interesting to other people.

Contributing - how to submit your work
2.1 Prerequisites

2.1.1 What you need to know

The tutorial assumes some basic familiarity with the commandline prompt in a terminal.
You’ll need to know how to install software. Some of the examples given refer to Debian/Ubuntu’s `apt-get`; you ought to know what the equivalent is on whatever operating system you’re using.
You’ll also need to know how to edit plain text or source files of various kinds.
It will be very useful to have some understanding of Python, but it’s not strictly necessary. However, if you’ve never done any programming, that will probably be an obstacle.

2.1.2 Software

The tutorial assumes that you’re using a Unix-like system, but there should be no reason why (for example) it would not work for Windows users.
You’ll need a suitable text editor, that you’re comfortable using.
Other software will be used, but the tutorial will discuss its installation.
However, your environment *does* need to be set up appropriately, and you *will* need to know how to use it effectively.
If your system already has Django and/or Python packages running that you’ve installed, you probably already have what you need and know what you need to know. All the same:

Platform-specific notes

GNU/Linux

Please make sure that you know how to use your system’s package manager, whether it’s `aptitude` or `YUM` or something else.

Mac OS X

There are two very useful items that you should install.
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• Command Line Tools for Xcode, various useful components (requires registration)
• Homebrew, a command line package manager

Python

You’ll need a reasonably up-to-date version of Python installed on your machine. 2.6 or newer should be fine.

Git

Please do check you can install Git:

```
  sudo apt-get install git # for Debian/Ubuntu users
```

or:

```
  brew install git # for Mac OS X users with Homebrew installed
```

There are other ways of installing Git; you can even get a graphical Git application, that will include the commandline tools. These are described at:


2.2 Virtualenv and pip

In this section you will:

• use pip to install packages
• install virtualenv
• create and destroy, activate and deactivate virtual environments
• use pip freeze to show installed items

2.2.1 What is virtualenv?

Virtualenv lets you create and manage virtual Python environments.

If you’re running a Python project for deployment or development, the chances are that you’ll need more than one version of it, or the numerous other Python applications it depends upon, at any one time.

For example, when a new version of Django is released, you might want to check to see if your project is still compatible. You don’t want to have to set up a whole new server with a different version of Django to find out.

With virtualenv, you can quickly set up a brand new Python environment, and install your components into it - along with the new version of Django, without touching or affecting what you already have running.

You can have literally dozens of virtualenvs on the same machine, all running different versions of your Python software, all independently of each other, and can safely make changes to one without affecting anything else.

pip goes hand-in-hand with virtualenv; in fact, it comes with virtualenv (as well as separately). It’s an installer, and is the easiest way to install things into a virtualenv.
### 2.2.2 Install virtualenv

Try:

```
virtualenv --version
```

Do you have a version lower than 1.9? Upgrade it:

```
sudo pip install --upgrade virtualenv
```

If you got a “Command not found” when you tried to use virtualenv, try:

```
sudo pip install virtualenv
```

or:

```
sudo apt-get install python-virtualenv # for a Debian-based system
```

If that fails or you’re using a different system, you might need more help:

Virtualenv installation documentation

### 2.2.3 Create and activate a virtual environment

```
virtualenv my-first-virtualenv
cd my-first-virtualenv
source bin/activate
```

**Note:** Windows users should run Scripts\activate instead of source bin/activate.

Notice how your command prompt tells you that the virtualenv is active (and it remains active even while you’re not in its directory):

```
(my-first-virtualenv)~/my-first-virtualenv$
```

### 2.2.4 Using pip

**pip freeze**

```
pip freeze
```

pip freeze lists installed Python packages:

```
argparse==1.2.1
distribute==0.6.24
pyasn1==0.1.7
virtualenv==1.9.1
wsgiref==0.1.2
```

**pip install**

Earlier, you may have used `sudo pip install`. You don’t need `sudo` now, because you’re in a virtualenv. Let’s install something.
pip install rsa

pip will visit PyPI, the Python Package Index, and will install Python-RSA (a “Pure-Python RSA implementation”). It will also install its dependencies - things it needs - if any have been listed at PyPI.

Now see what `pip freeze` reports. You will probably find that as well as Python-RSA it installed some other packages - they were ones that Python-RSA needed.

And try:

```bash
(my-first-virtualenv)~/my-first-virtualenv$ python
Python 2.7.2+ (default, Jul 20 2012, 22:15:08)
[GCC 4.6.1] on linux2
Type "help", "copyright", "credits" or "license" for more information.
>>> import rsa
```

To uninstall it:

```bash
pip uninstall rsa
```

To install a particular version:

```bash
pip install rsa==3.0
```

To upgrade the package to the latest version:

```bash
pip install --upgrade rsa
```

Where packages get installed

Your virtualenv has a site-packages directory, in the same way your system does. So now rsa can be found in:

```
~/my-first-virtualenv/lib/python2.7/site-packages/rsa
```

(It’s possible that you’ll have a different version of Python listed in that path.)

Dependencies

Python-RSA doesn’t have any dependencies, but if it did, and if those dependencies had dependencies, pip would install them all.

So if all the package authors have done a good job of informing PyPI about their software’s requirements, you can install a Django application, for example, and pip will will install it, and Django, and possibly dozens of other pieces of software, all into your virtualenv, and without your having to make sure that everything required is in place.

2.2.5 Managing virtualenvs

Create a second virtualenv

```bash
cd ~/ # let's not create it inside the other...
virtualenv my-second-virtualenv
```

When you activate your new virtualenv, it will deactivate the first:

```bash
cd my-second-virtualenv
source bin/activate
```
Note: Windows users: don’t forget to use Scripts\activate rather than source bin/activate.

`pip freeze` will show you that you don’t have Python-RSA installed in this one - it’s a completely different Python environment from the other, and both are isolated from the system-wide Python setup.

### Deactivate a virtualenv manually

Activating a virtualenv automatically deactivates one that was previously active, but you can also do this manually:

```bash
deactivate
```

Now you’re no longer in any virtualenv.

### --system-site-packages

When you create a virtualenv, it doesn’t include any Python packages already installed on your system. But sometimes, that is what you want. In that case you’d do:

```bash
virtualenv --system-site-packages my-third-virtualenv
```

### remove a virtualenv

virtualenvs are disposable. You can get rid of these:

```bash
cd ~/
rm -r my-first-virtualenv my-second-virtualenv my-third-virtualenv
```

And that’s pretty much all you need to get started and to use pip and virtualenv effectively.

## 2.3 Git and GitHub

### 2.3.1 Git and GitHub

In this section you will:

- create a GitHub account
- create your own fork of a repository
- create a new Git branch
- edit and commit a file on GitHub
- make a pull request
- merge upstream changes into your fork

### What is it?

**Git** is a source code management system, designed to support collaboration.

**GitHub** is a web-based service that hosts Git projects, including Django itself: [https://github.com/django/django](https://github.com/django/django).
The key idea in Git is that it's distributed. If you’re not already familiar with version control systems, then explaining why this is important will only introduce distinctions and complications that you don’t need to worry about, so that’s the last thing I will say on the subject.

Set up a GitHub account

- sign up at GitHub if you don’t already have an account

It’s free.

Some basic editing on GitHub

Forking

- visit https://github.com/evildmp/afraid-to-commit/

You can do various things there, including browsing through all the code and files.

- hit the Fork button

A few moments later, you’ll have your own copy, on GitHub, of everything in that repository, and from now on you’ll do your work on your copy of it.

Your copy is at https://github.com/<your github account>/afraid-to-commit/.

Note: About angular brackets

Angular brackets, such as those in the line above, are used as placeholders; they do not need to be included in the command line terminal. Just write in your GitHub account name. The same applies for any angular brackets used throughout the tutorial.

You will typically do this for any Git project you want to contribute to. It’s good for you because it means you don’t have to sign up for access to a central repository to be permitted to work on it, and even better for the maintainers because they certainly don’t want to be managing a small army of volunteers on top of all their other jobs.

Note: Don’t worry about all the forks

You’ll notice that there might be a few forks of https://github.com/evildmp/afraid-to-commit; if you have a look at https://github.com/django/django you’ll see thousands. There’ll even be forks of the forks. Every single one is complete and independent. So, which one is the real one - which one is the Django repository?

In a technical sense, they all are, but the more useful answer is: the one that most people consider to be the canonical or official version.

In the case of Django, the version at https://github.com/django/django is the one that forms the basis of the package on PyPI, the one behind the https://djangoproject.com/ website, and above all, it’s the one that the community treats as cannonical and official, not because it’s the original one, but because it’s the most useful one to rally around.

The same goes for https://github.com/evildmp/afraid-to-commit and its more modest collection of forked copies. If I stop updating it, but someone else is making useful updates to their own fork, then in time theirs might start to become the one that people refer to and contribute to. This could even happen to Django itself, though it’s not likely to any time soon.

The proliferation of forks doesn’t somehow dilute the original. Don’t be afraid to create more. Forks are simply the way collaboration is made possible.
Create a new branch

Don’t edit the *master* (default) branch of the repository. It’s much better to edit the file in a new branch, leaving the *master* branch clean and untouched:

1. select the branch menu
2. in *Find or create a branch...* enter *add-my-name*
3. hit *Create branch: add-my-name*

**Note:** Don’t hesitate to branch

As you may have noticed on GitHub, a repository can have numerous branches within it. Branches are ways of organising work on a project: you can have a branch for a new feature, for trying out something new, for exploring an issue - anything at all.

Just as virtualenvs are disposable, so are branches in Git. You can have too many branches, but don’t hesitate to create new ones; it costs almost nothing.

It’s a good policy to create a new branch for every new bit of work you start doing, even if it’s a very small one.

It’s especially useful to create a new branch for every new feature you start work on.

**Branch early and branch often.** If you’re in any doubt, create a new branch.

Edit a file

GitHub allows you to edit files online. This isn’t the way you will normally use Git, and it’s certainly not something you’ll want to spend very much time doing, but it’s handy for very small changes, for example typos and spelling mistakes you spot.

1. go to [https://github.com/<your github account>/afraid-to-commit](https://github.com/<your github account>/afraid-to-commit)
2. find the *attendees_and_learners.rst* file
3. hit the *Edit* button
4. add your name (just your name, you will add other information later) to the appropriate place in the file. If you’re following the tutorial by yourself, add your details in the *I followed the tutorial online* section.

Commit your changes

- hit *Commit Changes*

Now your copy of the file, the one that belongs to *your* fork of the project, has been changed; it’s reflected right away on GitHub.

If you managed to mis-spell your name, or want to correct what you entered, you can simply edit it again.

What you have done now is make some changes, in a new branch, in your own fork of the repository. You can see them there in the file.

Make a Pull Request

When you’re ready to have your changes incorporated into my original/official/canonical repository, you do this by making a Pull Request.
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• go back to https://github.com/<your github account>/afraid-to-commit

You’ll see that GitHub has noted your recent changes, and now offers various buttons to allow you to compare them with the original or make a pull request.

• hit Compare & pull request

This will show you a compare view, from which you can make your pull request.

When preparing for a pull request, GitHub will show you what’s being compared:

evildmp:master ... <your github account>:add-my-name

On the left is the base for the comparison, my fork and branch. On the right is the head, your fork and branch, that you want to compare with it.

A pull request goes from the head to the base - from right to left.

You can change the bases of the comparison if you need to:

1. hit Edit
2. select the forks and branches as appropriate

You want your version, the head branch of the head fork - on the right - with some commits containing file changes, to be sent to my base repo - on the left.

1. hit the Pull Request button
2. add a comment if you like (e.g. “please add me to the attendees list”)
3. hit Send pull request

You have now made a pull request to an open-source community project - if it’s your first one, congratulations.

GitHub will notify me (by email and on the site, and will show me the changes you’re proposing to make). It’ll tell me whether they can be merged in automatically, and I can reject, or accept, or defer a decision on, or comment on, your pull request.

GitHub can automatically merge your contribution into my repository if mine hasn’t changed too much since you forked it. If I want to accept it but GitHub can’t do it automatically, I will have to merge the changes manually (we will cover this later).

Once they’re merged, your contributions will become a part of https://github.com/evildmp/afraid-to-commit. And this is the basic lifecycle of a contribution using git: fork > edit > commit > pull request > merge.

Incorporate upstream changes into your master

In the meantime, other people may have made their own forks, edits, commits, and pull requests, and I may have merged those too - other people’s names may now be in the list of attendees. Your own version of afraid-to-commit, downstream from mine, doesn’t yet know about those.

Since your work is based on mine, you can think of my repository as being upstream of yours. You need to merge any upstream changes into your version, and you can do this with a pull request on GitHub too.

This time though you will need to switch the bases of the comparison around, because the changes will be coming from my version to yours.

1. hit Pull Request once more
2. hit Edit, to switch the bases
3. change the head repo on the right to my version, evildmp/afraid-to-commit, branch master
4. change the base repo to yours, and the base branch to master, so the comparison bar looks like:

<your github account>:master ... evildmp:master

5. hit Click to create a pull request for this comparison

6. add a Title (e.g. “merging upstream master on Github) and hit Send pull request

You're sending a pull request to to yourself, based on updates in my repository. And in fact if you check in your Pull Requests on GitHub, you’ll see one there waiting for you, and you too can review, accept, reject or comment on it.

If you decide to Merge it, your fork will now contain any changes that other people sent to me and that I merged.

The story of your work is this: you forked away from my codebase, and then created a new branch in your fork.

Then you committed changes to your branch, and sent them upstream back to me (with a pull request).

I merged your changes, and perhaps those from other people, into my codebase, and you pulled all my recent changes back into your master branch (again with a pull request).

So now, your master and mine are once more in step.

2.3.2 Git on the commandline

In this section you will:

- install and configure Git locally
- create your own local clone of a repository
- create a new Git branch
- edit a file and stage your changes
- commit your changes
- push your changes to GitHub
- make a pull request
- merge upstream changes into your fork
- merge changes on GitHub into your local clone

So far we’ve done all our Git work using the GitHub website, but that’s usually not the most appropriate way to work.

You’ll find that most of your Git-related operations can and need to be done on the commandline.

Install/set up Git

```bash
sudo apt-get install git # for Debian/Ubuntu users
brew install git # for Mac OS X users with Homebrew installed
```

There are other ways of installing Git; you can even get a graphical Git application, that will include the commandline tools. These are described at:

Tell Git who you are

First, you need to tell Git who you are:

```bash
git config --global user.email "you@example.com"
git config --global user.name "Your Name"
```

Give GitHub your public keys

This is a great timesaver: if GitHub has your public keys, you can do all kinds of things from your commandline without needing to enter your GitHub password.

- https://github.com/settings/ssh

https://help.github.com/articles/generating-ssh-keys explains much better than I can how to generate a public key.

This tutorial assumes you have now added your public key to your GitHub account. If you haven’t, you’ll have to use `https` instead, and translate from the format of GitHub’s `ssh` URLs.

For example, when you see:

```text
git@github.com:evildmp/afraid-to-commit.git
```

you will instead need to use:

```text
https://github.com/evildmp/afraid-to-commit.git
```

See https://gist.github.com/grawity/4392747 for a discussion of the different protocols.

Some basic Git operations

When we worked on GitHub, the basic work cycle was `fork > edit > commit > pull request > merge`. The same cycle, with a few differences, is what we will work through on the commandline.

Clone a repository

When you made a copy of the `Don’t be afraid to commit` repository on GitHub, that was a `fork`. Getting a copy of a repository onto your local machine is called `cloning`. Copy the `ssh URL` from `https://github.com/<your github account>/afraid-to-commit`, then:

```bash
git clone git@github.com:<your github account>/afraid-to-commit.git
```

Change into the newly-created `afraid-to-commit` directory, where you’ll find all the source code of the `Don’t be afraid to commit` project.

Now you’re in the `working directory`, the set of files that you currently have in front of you, available to edit. We want to know its status:

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

Just as you did on GitHub, once again you’re going to create a new branch, based on *master*, for new work to go into:

```
$ git checkout -b amend-my-name
Switched to a new branch 'amend-my-name'
```

`git checkout` is a command you’ll use a lot, to switch between branches. The `-b` flag tells it to create a new branch at the same time. By default, the new branch is based upon whatever branch you were on.

You can also choose what to base the new branch on. A quite common thing to do is, just for example:

```
git checkout -b new-branch existing-branch
```

This creates a new branch `new-branch`, based on `existing-branch`.

Edit a file

1. find the `attendees_and_learners.rst` file in your working directory
2. after your name and email address, add your Github account name
3. save the file

`git status` is always useful:

```
$ git status
# On branch amend-my-name
# Changes not staged for commit:
# (use "git add <file>..." to update what will be committed)
# (use "git checkout -- <file>..." to discard changes in working directory)
#   modified:   attendees_and_learners.rst
# no changes added to commit (use "git add" and/or "git commit -a")
```

What this is telling us:

- we’re on the `amend-my-name` branch
- that we have one modified file
- that there’s nothing to commit

These changes will only be applied to this branch when they’re committed. You can `git add` changed files, but until you commit they won’t belong to any particular branch.

**Note:** When to branch

You didn’t actually need to create your new `amend-my-name` branch until you decided to commit. But creating your new branches before you start making changes makes it less likely that you will forget later, and commit things to the wrong branch.

Stage your changes

Git has a staging area, for files that you want to commit. On GitHub when you edit a file, you commit it as soon as you save it. On your machine, you can edit a number of files and commit them altogether.

Staging a file in Git’s terminology means adding it to the staging area, in preparation for a commit.
Add your amended file to the staging area:

```
git add attendees_and_learners.rst
```

and check the result:

```
$ git status
# On branch amend-my-name
# Changes to be committed:
#   (use "git reset HEAD <file>..." to unstage)
#   modified: attendees_and_learners.rst
#
# Changes not staged for commit:
#   (use "git add <file>..." to update what will be committed)
#   (use "git checkout -- <file>..." to discard changes in working directory)
#   modified: attendees_and_learners.rst
#
```

If there are other files you want to change, you can add them when you’re ready; until you commit, they’ll all be together in the staging area.

**What gets staged?** It’s not your files, but the changes to your files, that are staged. Make some further change to `attendees_and_learners.rst`, and run `git status`:

```
$ git status
# On branch amend-my-name
# Changes to be committed:
#   (use "git reset HEAD <file>..." to unstage)
#   modified: attendees_and_learners.rst
#
# Changes not staged for commit:
#   (use "git add <file>..." to update what will be committed)
#   (use "git checkout -- <file>..." to discard changes in working directory)
#   modified: attendees_and_learners.rst
#
```

Some of the changes in `attendees_and_learners.rst` will be committed, and the more recent ones will not.

- run `git add` on the file again to stage the newer changes

**Commit your changes**

When you’re happy with your files, and have added the changes you want to commit to the staging area:

```
git commit -m "added my github name"
```

The `-m` flag is for the message (“added my github name”) on the commit - every commit needs a commit message.

**Push your changes to GitHub**

When you made a change on GitHub, it not only saved the change and committed the file at the same time, it also showed up right away in your GitHub repository. Here there is an extra step: we need to push the files to GitHub.

If you were pushing changes from `master` locally to `master` on GitHub, you could just issue the command `git push` and let Git work out what needs to go where.

It’s always better to be explicit though. What’s more, you have multiple branches here, so you need to tell git *where* to push (i.e. back to the remote repository you cloned from, on GitHub) and *what* exactly to push (your new branch). The repository you cloned from - yours - can be referred to as **origin**. The new branch is called **amend-my-name**. So:
$ git push origin amend-my-name
Counting objects: 34, done.
Delta compression using up to 2 threads.
Compressing objects: 100% (21/21), done.
Writing objects: 100% (28/28), 6.87 KiB, done.
Total 28 (delta 13), reused 12 (delta 7)
To git@github.com:evildmp/afraid-to-commit.git
  * [new branch]       amend-my-name -> amend-my-name

Note: Be explicit!

Next time you want to push committed changes in amend-my-name, you won’t need to specify the branch - you can simply do git push, because now amend-my-name exists at both ends. However, it’s still a good idea to be explicit. That way you’ll be less likely to get a surprise you didn’t want, when the wrong thing gets pushed.

Check your GitHub repository

- go to https://github.com/<your GitHub name>/afraid-to-commit
- check that your new amend-my-name branch is there
- check that your latest change to attendees_and_learners.rst is in it

Send me a pull request

You can make more changes locally, and continue committing them, and pushing them to GitHub. When you’ve made all the changes that you’d like me to accept though, it’s time to send me a pull request.

Important: make sure that you send it from your new branch amend-my-name (not from your master) the way you did before.

And if I like your changes, I’ll merge them.

Note: Keeping master ‘clean’

You could of course have merged your new branch into your master branch, and sent me a pull request from that. But, once again, it’s a good policy to keep your master branch, on GitHub too, clean of changes you make, and only to pull things into it from upstream.

In fact the same thing goes for other branches on my upstream that you want to work with. Keeping them clean isn’t strictly necessary, but it’s nice to know that you’ll always be able to pull changes from upstream without having to tidy up merge conflicts.

Incorporate upstream changes

Once again, I may have merged other people’s pull requests too. Assuming that you want to keep up-to-date with my changes, you’re going to want to merge those into your GitHub fork as well as your local clone.

So:

- on GitHub, pull the upstream changes into your fork the way you did previously

Then switch back to your master branch in the usual way (git checkout master). Now, fetch updated information from your GitHub fork (origin), and merge the master:
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```
git fetch
git merge origin/master
```

So now we have replicated the full cycle of work we described in the previous module.

**Note:** `git pull`

Note that here instead of `git fetch` followed by `git merge`, you could have run `git pull`. The pull operation does two things: it fetches updates from your GitHub fork (`origin`), and merges them.

However, be warned that occasionally `git pull` won’t always work in the way you expect, and doing things the explicit way helps make what you are doing clearer.

`git fetch` followed by `git merge` is generally the safer option.

---

### Switching between branches locally

Show local branches:

```
git branch
```

You can switch between local branches using `git checkout`. To switch back to the `master` branch:

```
git checkout master
```

If you have a changed tracked file - a tracked file is one that Git is managing - it will warn you that you can’t switch branches without either committing, abandoning or ‘stashing’ the changes:

**Commit** You already know how to commit changes.

**Abandon** You can abandon changes in a couple of ways. The recommended one is:

```
git checkout <file>
```

This checks out the previously-committed version of the file.

The one that is not recommended is:

```
git checkout -f <branch>
```

The `-f` flag forces the branch to be checked out.

**Note:** Forcing operations with `-f`

Using the `-f` flag for Git operations is to be avoided. It offers plenty of scope for mishap. If Git tells you about a problem and you force your way past it, you’re inviting trouble. It’s almost always better to find a different way around the problem than forcing it.

`git push -f` in particular has ruined a nice day for many people.

**Stash** If you’re really interested, look up `git stash`, but it’s beyond the scope of this tutorial.
2.3.3 Working with remotes

In this section you will:

• add a remote repository to your local clone
• fetch remote information
• checkout a remote branch
• merge an upstream branch

Managing remotes

Your repository on GitHub is the remote for the clone on your local machine. By default, your clone refers to that remote as origin. At the moment, it’s the only remote you have:

$ git remote
origin

$ git remote show origin
* remote origin
  Fetch URL: git@github.com:evildmp/afraid-to-commit.git
  Push URL: git@github.com:evildmp/afraid-to-commit.git
  HEAD branch: master
  Remote branches:
  amend-my-name tracked
  master tracked
  Local branch configured for 'git pull':
  master merges with remote master
  Local refs configured for 'git push':
  amend-my-name pushes to amend-my-name (up to date)
  master pushes to master (up to date)

It’s very useful for Git to know about other remote repositories too. For example, at the end of the previous section, we considered a conflict between your GitHub fork and the upstream GitHub repository. The only way to fix that is locally, on the command line, and by being able to refer to both those remotes.

Now you can refer to a remote using its full address:

https://github.com/evildmp/afraid-to-commit

But just as your remote is called origin, you can give any remote a more memorable name. Your own origin has an upstream repository (mine); it’s a convention to name that upstream.

Add a remote

```bash
$ git remote add upstream git@github.com:evildmp/afraid-to-commit.git
```

Fetch remote data

The remote’s there, but you don’t yet have any information about it. You need to fetch that:

```bash
$ git fetch upstream
```

This means: get the latest information about the branches on upstream.
List remote branches

git branch shows your local branches.

To see a list of them all, including the remote branches:

git branch -a

Checkout a remote branch

You’ll have seen from git branch -a that there’s a branch called additional-branch on the upstream repository. You can check this out:

git checkout -b additional-branch upstream/additional-branch

This means: create and switch to a new local branch called additional-branch, based on branch additional-branch of the remote upstream.

Managing master on the commandline

Until now, you have only updated your master on GitHub using GitHub itself. Sometimes it will be much more convenient to do it from your commandline. There are various ways to do it, but here’s one:

```
git checkout master # switch back to the master branch
git fetch upstream # update information about the remote
git merge upstream/master # merge the changes referred to by upstream/master
```

`git status` will tell you that your local master is ahead of your master at origin.

Push your changes to master:

git push origin master

And now your master on GitHub contains everything my master does; it’s up-to-date and clean.

2.3.4 Resolving conflicts

In this section you will:

- encounter a merge conflict on GitHub
- encounter a merge conflict on the commandline
- resolve the conflict in a new temporary Git branch

Encountering a merge conflict on GitHub

Sometimes you’ll discover that your GitHub fork and the upstream repository have changes that GitHub can’t merge. There’s an unmergeable-branch at https://github.com/evildmp/afraid-to-commit. It’s unmergeable because it deliberately contains changes that conflict with other changes made in master.

Using the GitHub interface, try creating a pull request from unmergeable-branch to your master on GitHub. If you do, GitHub will tell you:
Don’t be afraid to commit Documentation, Release 0.3

We can’t automatically merge this pull request.

Use the command line to resolve conflicts before continuing.

GitHub will in fact tell you the steps you need to take to solve this, but to understand what’s actually happening, and to do it yourself when you need to, we need to cover some important concepts.

**Merging changes from a remote branch**

```bash
# make sure you have the latest data from upstream
$ git fetch upstream
# create and switch to a new branch based on master to explore the conflict
$ git checkout -b explore-conflict upstream/master
# now try merging the unmergeable-branch into it
$ git merge upstream/unmergeable-branch
Auto-merging attendees_and_learners.rst
CONFLICT (content): Merge conflict in attendees_and_learners.rst
Automatic merge failed; fix conflicts and then commit the result.
```

When there’s a conflict, Git marks them for you in the files. You’ll see sections like this:

```
<<<<<<< HEAD
* Daniel Pass <daniel.antony.pass@googlemail.com>
* Kieran Moore
=======
* Kermit the Frog
* Miss Piggy
>>>>>>> upstream/unmergeable-branch
```

The first section, `HEAD` is what you have in your version. The second section, `upstream/unmergeable-branch` is what Git found in the version you were trying to pull in.

You’ll have to decide what the file should contain, and you’ll need to edit it. If you decide you want the changes from both versions:

```
* Daniel Pass <daniel.antony.pass@googlemail.com>
* Kieran Moore
* Kermit the Frog
* Miss Piggy
```

```bash
$ git add attendees_and_learners.rst
$ git commit -m "fixed conflict"
```

**Note:** Create new branches when resolving conflicts

It’s very sensible *not* to do merging work in a branch you have done valuable work in. In the example above, your `explore-conflict` branch is based on master and doesn’t contain anything new, so it will be easy to re-create if it all goes wrong.

If you had a branch that contained many complex changes however, you certainly wouldn’t want to discover dozens of conflicts making a mess in the files containing all your hard work.

So remember, **branches are cheap and disposable**. Rather than risk messing up the branch you’ve been working on, create a new one specially for the purpose of discovering what sort of conflicts arise, and to give you a place to work on resolving them without disturbing your work so far.

You might have conflicts across dozens of files, if you were unlucky, so it’s very important to be able to backout gracefully and at the very least leave things as they were.
2.3.5 More key Git techniques

There are a few more key Git commands and techniques that you need to know about.

.gitignore

When you’re working with Git, there are lots of things you won’t want to push, including:

- hidden system files
- .pyc files
- rendered documentation files
- ... and many more

.gitignore, https://github.com/evildmp/afraid-to-commit/blob/master/.gitignore, is what controls this. You should have a .gitignore in your projects, and they should reflect your way of working. Mine include the things that my operating system and tools throw into the repository; you’ll find soon enough what yours are.

With a good .gitignore, you can do things like:

```bash
git add docs/
```

and add whole directories at a time without worrying about including unwanted files.

Starting a new Git project

You’ve been working so far with an existing Git project. It’s very easy to start a brand new project, or turn an existing one into a Git project. On GitHub, just hit the New repository button and follow the instructions.

Combining Git and pip

When you used pip to install a package inside a virtualenv, it put it on your Python path, that is, in the virtualenv’s site-packages directory. When you’re actually working on a package, that’s not so convenient - a Git project is the most handy thing to have.

On the other hand, cloning a Git repository doesn’t install it on your Python path (assuming that it’s a Python application), so though you can work on it, you can’t actually use it and test it as an installed package.

However, pip is Git-aware, and can install packages and put them in a convenient place for editing - so you can get both:

```bash
cd ~/
virtualenv git-pip-test
source git-pip-test/bin/activate
pip install -e git+git@github.com:python-parsley/parsley.git#egg=parsley
```

The -e flag means editable; git+ tells it to use the Git protocol; #egg=parsley tells it what to call it.

(Should you find that this causes an error, try using quotes around the target:

```bash
pip install -e "git+git@github.com:python-parsley/parsley.git#egg=parsley"
```
Don’t be afraid to commit Documentation, Release 0.3

You can also specify the branch:

```bash
pip install -e git+git@github.com:python-parsley/parsley.git@master#egg=parsley
```

And now you will find an editable Git repository installed at:

```
~/git-pip-test/src/parsley
```

which is where any other similarly-installed packages will be, and just to prove that it really is installed:

```bash
$ pip freeze
-e git+git@github.com:python-parsley/parsley.git@e58c0c6d67142bf3ceb6eceffd50cf0f8dae9dal#egg=Parsley-master
wsgiref==0.1.2
```

Git is a source code management system, designed to support collaboration.

GitHub is a web-based service that hosts Git projects, including Django itself: https://github.com/django/django.

Git is a quite remarkable tool. It’s fearsomely complex, but you can start using it effectively without needing to know very much about it. All you really need is to be familiar with some basic operations.

The key idea in Git is that it’s *distributed*. If you’re not already familiar with version control systems, then explaining why this is important will only introduce distinctions and complications that you don’t need to worry about, so that’s the last thing I will say on the subject.

## 2.4 Documentation using Sphinx and ReadTheDocs.org

Without documentation, however wonderful your software, other potential adopters and developers simply won’t be very interested in it.

The good news is that there are several tools that will make presenting and publishing it very easy, leaving you only to write the content and mark it up appropriately.

For documentation, we’ll use **Sphinx** to generate it, and **Read the Docs** to publish it. GitHub will be a helpful middleman.

If you have a package for which you’d like to create documentation, you might as well start producing that right away. If not, you can do it in a new dummy project.

### 2.4.1 Set up your working environment

**The virtualenv**

As usual, create and activate a new virtualenv:

```bash
virtualenv documentation-tutorial
[...]
cd documentation-tutorial/
source bin/activate
```

### 2.4. Documentation using Sphinx and ReadTheDocs.org 21
Don’t be afraid to commit Documentation, Release 0.3

The package or project

If you have an existing package to write documentation for

If your package is on GitHub already and you want to start writing documentation for, clone it now using Git. And of course, start a new branch:

```bash
git checkout -b first-docs
```

You can merge your docs into your master branch when they start to look respectable.

If you don’t have an existing package that needs docs

If you don’t have a suitable existing package on GitHub, create a repository on GitHub the way you did before. Call it `my-first-docs`. Then create a Git repository locally:

```bash
mkdir my-first-docs
cd my-first-docs/
# Converts the directory into a git repository
git init
# Point this repo at the GitHub repo you just created
git remote add origin git@github.com:<your git username>/my-first-docs.git
# Create a new branch in which to do your work
git checkout -b first-docs
```

Create a docs directory

And either way, create a `docs` directory for your docs to live in:

```bash
mkdir docs
```

2.4.2 Sphinx

Install Sphinx

```bash
pip install sphinx
```

It might take a minute or so, it has quite a few things to download and install.

`sphinx-quickstart`

`sphinx-quickstart` will set up the source directory for your documentation. It’ll ask you a number of questions. Mostly you can just accept the defaults it offers, and some are just obvious, but there are some you will want to set yourself as noted below:

```bash
sphinx-quickstart
```

Root path for the documentation `docs`

**Project name** `<your name>’s first docs, or the name of your application`

**Source file suffix** `.rst` is the default. (Django’s own documentation uses `.txt`. It doesn’t matter too much.)

You’ll find a number of files in your `docs` directory now, including `index.rst`. Open that up.
2.4.3 Using Sphinx & reStructuredText

reStructuredText elements

Sphinx uses reStructuredText. http://sphinx-doc.org/rest.html#rst-primer will tell you most of what you need to know to get started. Focus on the basics:

- paragraphs
- lists
- headings (‘sections’, as Sphinx calls them)
- quoted blocks
- code blocks
- emphasis, strong emphasis and literals

Edit a page

Create an Introduction section in the index.rst page, with a little text in it; save it.

Create a new page

You have no other pages yet. In the same directory as index.rst, create one called all-about-me.rst or something appropriate. Perhaps it might look like:

```
############
All about me
############

I'm Daniele Procida, a Django user and developer.

I've contributed to:

* django CMS
* Arkestra
* Django
```

Sphinx needs to know about it, so in index.rst, edit the .. toctree:: section to add the all-about-me page:

```
.. toctree::
   :maxdepth: 2
   all-about-me
```

Save both pages.

Render your documentation

In the docs directory:

```
make html
```
This tells Sphinx to render your source pages. *Pay attention to its warnings* - they’re helpful!

**Note:** Sphinx can be fussy, and sometimes about things you weren’t expecting. For example, you well encounter something like:

```
WARNING: toctree contains reference to nonexisting document u'all-about-me'
...
checking consistency...
<your repository>/my-first-docs/docs/all-about-me.rst:1
WARNING: document isn't included in any toctree
```

Quite likely, what has happened here is that you indented `all-about-me` in your `.. toctree::` with *four* spaces, when Sphinx is expecting *three*.

If you accepted the *sphinx-quickstart* defaults, you’ll find the rendered pages in `docs/_build/html`. Open the `index.html` it has created in your browser. You should find in it a link to your new `all-about-me` page too.

### 2.4.4 Publishing your documentation

**Exclude unwanted rendered directories**

Remember `.gitignore`? It’s really useful here, because you don’t want to commit your rendered files, just the source files.

In my `.gitignore`, I make sure that directories I don’t want committed are listed. Check that:

```bash
_build
.static
.templates
```

are listed in `.gitignore`.

**Add, commit and push**

`git add` the files you want to commit; commit them, and push to GitHub.

If this is your first ever push to GitHub for this project, use:

```
git push origin master
```

otherwise:

```
git push origin first-docs # or whatever you called this branch
```

Now have a look at the `.rst` documentation files on GitHub. GitHub does a good enough job of rendering the files for you to read them at a glance, though it doesn’t always get it right (and sometimes seems to truncate them).

**readthedocs.org**

However, we want to get them onto Read the Docs. So go to [https://readthedocs.org](https://readthedocs.org), and sign up for an account if you don’t have one.

You need to **Import** a project: [https://readthedocs.org/dashboard/import/](https://readthedocs.org/dashboard/import/).

Give it the details of your GitHub project in the `repo` field - `git@github.com:<your git username>/my-first-docs.git`, or whatever it is - and hit **Create**.
And now Read the Docs will actually watch your GitHub project, and build, render and host your documents for you automatically.

It will update every night, but you can do better still: on GitHub:

1. select settings for your project (not for your account) in the navigation panel on the right-hand side
2. choose Webhooks & Services
3. enable ReadTheDocs under Add Service dropdown

... and now, every time you push documents to GitHub, Read the Docs will be informed that you have new documents to be published. It’s not magic, but it’s pretty close.

### 2.5 Contributing

Having identified a contribution you think you can usefully make to a project, how are you actually going to make it?

For nearly every project, the best first step is:

#### 2.5.1 Talk to somebody about it

You may have been eating, sleeping, dreaming and otherwise living your idea for days, but until you discuss it, no-one else knows anything about it. To them, your patch will come flying out of the blue.

You need - usually - to introduce your idea, and - particularly if you’re new to the community - yourself.

In the case of Django, this will typically mean posting to the Django Developers email list, django-developers@googlegroups.com (sign up at http://groups.google.com/group/django-developers), or raising it on #django-dev on irc.freenode.net.

Quite apart from letting people know about what you have to offer, it’s an opportunity to get some feedback on your proposal.

Don’t automatically expect your proposal to be considered a great idea. Be prepared to explain the need it meets and why you think your solution is a good one. Be prepared to do some more work.

Above all, you will need to be **patient, polite and persistent**.

#### 2.5.2 File it

If one doesn’t exist already, lay down a formal public marker raising the issue your contribution addresses. In Django’s case, this will be a ticket on https://code.djangoproject.com/. For others, it’s likely to be an issue on GitHub or whatever system they use. Mention your earlier discussion!

#### 2.5.3 Do your homework

Every project has its standards for things like code and documentation, and its ways of working. They tend to follow a general pattern, but they often have their own little quirks or preferences - so learn them.

If you think that sounds tedious, it’s nothing compared to the potential pain of having to manage or use code and documentation written according to the individual preferences of all its different contributors.

- https://docs.djangoproject.com/en/1.7/internals/contributing/
Note that the Django Project’s Git guidelines ask contributors to use \texttt{rebase} - which is firstly a little unusual, and secondly explained in the documentation above better than I can here - so read that.

And be prepared to get it wrong the first few times, and even the subsequent ones. It happens to everyone.

### 2.5.4 Submit it

\textit{Now} you can make your pull request. Having prepared the way for it, and having provided the accompaniments - tests and documentation - that might be required, it has a good chance of enjoying a smooth passage into the project.

### 2.5.5 What to start with?

\textbf{Documentation!} It’s the easy way in.

Everyone loves documentation, and unlike code where incompleteness or vagueness can make it worse than useless, documentation has to be really quite bad to be worse than no documentation.

What’s more, writing documentation will help you better understand the things you’re writing about, and if you’re new to all this, that’s going to put you in a better position to understand and improve code.

\textbf{Some suitable Django Project tickets}

Have a look at one of the tickets specially selected for people doing this tutorial. They’re not all for documentation, though most are.

### 2.6 Cheatsheet

#### 2.6.1 virtualenv

- create virtualenv [name-of-virtualenv]
- include system’s Python packages virtualenv [name-of-virtualenv] --install-site-packages
- activate source bin/activate
- deactivate deactivate

#### 2.6.2 pip

- install pip install [name-of-package]
- install a particular version pip install [name-of-package]==[version-number]
- upgrade pip install --upgrade [name-of-package]
- uninstall pip uninstall [name-of-package]
- show what’s installed pip freeze
2.6.3 git

tell git who you are  git config --global user.email "you@example.com"
   
   git config --global user.name "Your Name"

clone a repository  git clone [repository URL]

checkout  git checkout [branch] switches to another branch
   
   git checkout -b [new-branch] creates and switches to a new branch
   
   git checkout -b [new-branch] [existing branch] creates and switches to a new branch based on an existing one
   
   git checkout -b [new-branch] [remote/branch] creates and switches to a new branch based on remote/branch
   
   git checkout [commit sha] checks out the state of the repository at a particular commit

current status of your local branches  git status

show the commit you're on in the current working directory  git show

commit  git commit -m "[your commit message]"

add  git add [filename] adds a file to the staging areas
   
   git add -u [filename] - the -u flag will also remove deleted files

remote  git remote add [name] [remote repository URL] sets up remote
   
   git remote show lists remotes
   
   git remote show -v lists remotes and their URLs

branch  git branch
   
   git branch -a to show remote branches too

fetch  git fetch gets the latest information about the branches on the default remote
   
   git fetch [remote] gets the latest information about the branches on the named remote

merge  git merge [branch] merges the named branch into the working directory
   
   git merge [remote/branch] -m "[message]" merges the branch referred to into the working directory - don't forget to fetch the remote before the merge

pull  fetch followed by merge is often safer than pull - don't assume that pull will do what you expect it to
   
   git pull fetches updates from the default remote and merges into the working directory

push  git push pushes committed changes to the default remote, in branches that exist at both ends
   
   git push [remote] [branch] pushes the current branch to the named branch on remote

log  git log will show you a list of commits

Notes

Throughout Git, anything in the form remote/branchname is a reference, not a branch.
2.6.4 Documentation

initialise Sphinx documentation  sphinx-quickstart
render documentation  make html

2.7 Attendees & learners

This is a record of people who attended a Don’t be afraid to commit workshop, or followed the tutorial in their own time.

2.7.1 Workshops

PyCon Ireland in Dublin, 26th October 2015

- Simon Parker https://github.com/simonparkerdublin  @SparkerDublin
- Anna Szewc, https://github.com/NannahA
- Iain Geddes iaingeddes@theiet.org https://github.com/iaingeddes
- Gearoid Ryan https://github.com/gearoid-ryan
- Jakub Pawlicki https://github.com/JakubPawlicki
- Ivin Polo Sony @ivinpolosony http://github.com/ivinpolosony/
- Lisa Cavern @anninireland https://github.com/anninireland
- Jeremie Jost https://github.com/jjst
- Richard Loy https://github.com/Richloy
- Art Knipe https://github.com/artkgithub
- Miao Li https://github.com/masonmiaoli
- Sarah Jackson
- Stefano Fedele https://github.com/stefanofedele/afraid-to-commit
- Barry Kennedy https://github.com/bazkennedy

PyCon UK in Coventry, 21st September 2015

Note:  Many thanks to Helen Sherwood-Taylor (helenst) for her invaluable assistance.

- Valerio Campanella @ValerioCamp https://github.com/VCAMP/
- Laura Dreyer https://github.com/lbdreyer
- Aisha Bello https://github.com/shante66
- Paivi Suomela, https://github.com/peconia
- Charles G Barnwell https://github.com/cgbarnwell
- Jo Williams https://github.com/crocodile2485  fh07jw
• Sylvain Gubian
• Adam Johns https://github.com/ninjaExploder/
• Glen Davies https://github.com/glen442 @GlenDaviesDev

DjangoGirls in Portland, 27th August 2015

• Lacey Williams Henschel @laceynwilliams
• Megan Norton http://walkermacy.com
• Sara “the” Jensen https://github.com/thejensen
• TB
• Stephanie Marson

DjangoCon Europe in Cardiff, 4th June 2015

• David Bannon https://github.com/sp1ky
• Amy Lai
• Sven Groot <sven@mediamoose.nl>
• Rick de Leeuw <rick@mediamoose.nl>
• Zoe Ballard
• Jeff Doyle
• Stewart Houten
• Lukasz Wojcik
• Tom Bakx
• Marissa Zhou <https://github.com/marissazhou>
• Niels Lensink <nielslensink@gmail.nl>
• Bryan Spence
• Andraz Tori <andraz@zemanta.com>
• Gwilym Jones
• Adrienne Lowe http://codingwithkniv.es, @adriennefriend
• Zoe Ballard <https://github.com/zoe-ann-b>

Dutch Django Association Sprint in Amsterdam, 7th March 2015

• Remco Kranenburg <remco@burgsoft.nl>
• Floris den Hengst
• C.T. Matsumoto <todd@l1nda.nl>
• Loek van Gent <https://github.com/gannetson>
• Nathan Schagen
• Hanna Kollo https://github.com/sztrovacsek

2.7. Attendees & learners
Don’t be afraid to commit Documentation, Release 0.3

- Stephen Albert https://github.com/psiloLR

PyCon Ireland in Dublin, 13th October 2014

- Randal McGuckin <randal.mcguckin@gmail.com>
- Laura Duggan https://github.com/labhra
- Jenny McGee
- Conor McGee <mcgeeeco@tcd.ie> https://github.com/mcgeeeco
- Nadja Deininger https://github.com/machinelady
- Andrew McCarthy
- Brian McDonnell <https://github.com/brianmcdonnell/>
- Brendan Cahill (https://github.com/brencahill/)
- Adam Dickey
- Paul O’Grady (Twitter: @paul_ogrady; GitHub: paulogrady)
- Jenny DiMiceli - https://github.com/jdimiceli
- Stephen Kerr
- Wayne Tong
- Vinicius Mayer (viniciumayer@gmail.com) https://github.com/viniciumayer
- Dori Czapari https://github.com/doriczapari (@doriczapari)
- Karl Griffin (karl_griffin@hotmail.com) https://github.com/karlgriffin
- Vadims Briksins (https://github.com/Briksins)

PyCon UK in Coventry, 20th September 2014

- Matthew Power https://github.com/mthpower
- Brendan Oates <brenoates@gmail.com>
- Waldek Herka (https://github.com/wherka)
- Stephen Newey (@stevenewey) - https://github.com/stevenewey
- Walter Kummer (work.walter at gmail.com)
- Craig Barnes
- Justin Wing Chung Hui
- Davide Ceretti
- Paul van der Linden https://github.com/pvanderlinden
- Gary Martin https://github.com/garym
- Cedric Da Costa Faro https://github.com/cdf
- Sebastien Charret <sebastien.charret@gmail.com> https://github.com/moerin
- Nick Smith
- Jonathan Lake-Thomas https://github.com/jonathlt
2.7. Attendees & learners

- Ben Mansbridge
- Glen Davies (@GlenDaviesDev) - https://github.com/glen442
- Mike S Collins (MikeyBoy1969)

DjangoCon US in Portland, 5th September 2014

- Joseph Metzinger (joseph.metzinger@gmail.com) https://github.com/joetheone
- Abdulaziz Alsaffar (alsaff1987@gmail.com) https://github.com/Octowl
- Patrick Beeson (@patrickbeeson) https://github.com/patrickbeeson
- Vishal Shah - https://github.com/shahv
- Kevin Daum (@kevindaum, kevin.daum@gmail.com) https://github.com/kevindaum
- Nasser AlSnayen (nasser.le9@gmail.com) https://github.com/LC9
- Nicholas Colbert (@45cali) 45cali@gmail.com
- Chris Cauley https://github.com/chriscauley
- Joe Larson (@joelarson)
- Jeff Kile
- Orlando Romero
- Chad Hansen (chadgh@gmail.com) https://github.com/chadgh

DjangoVillage in Orvieto, 14th June 2014

- Gioele
- Christian Barra (@christianbarra) https://github.com/barrachri
- Luca Ippoliti https://github.com/lucaippo
- @joke2k (https://github.com/joke2k)
- Domenico Testa (@domtes)
- Alessio
- Diego Magrini (http://github.com/magринidiего)
- Matteo (@loacker) https://github.com/loacker
- Simone (@simodalla) https://github.com/simodalla

DjangoCon Europe on The Île des Embiez, 16th May 2014

- Niclas Åhdén (niclas@brightweb.se) https://github.com/niclas-ahden
- Sabine Maennel (sabine.maennel@gmail.com) http://github.com/sabinem
- JB (Juliano Binder)
- Laurent Paoletti
- Alex Semenyuk (https://github.com/gtvblame)
- Moritz Windelen
• Marie-Cécile Gohier
• Isabella Pezzini
• Pavel Meshkoy (@rasstreli)

Dutch Django Association Sprint in Amsterdam, 22nd February 2014

• Stomme poes (@stommepoes)
• Rigel Di Scala (zedr) <zedr@zedr.com> http://github.com/zedr
• Nikalajus Krauklis (@dzhibas) http://github.com/dzhibas
• Ivo Flipse (@ivoflipse5) https://github.com/ivoflipse
• Martin Matusiak
• Jochem Oosterveen https://github.com/jochem
• Pieter Marres
• Nicolaas Heyning (LINDA)
• Henk Vos h.vos@rapasso.nl https://github.com/henkvos
• Adam Kaliński @ https://github.com/adamkal
• Marco B
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2.7. Attendees & learners
Don’t be afraid to commit Documentation, Release 0.3

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DjangoCon US in Chicago, 2nd September 2013

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2.7.2 I followed the tutorial online

• Daniel Quinn - 18th May 2013
• Paul C. Anagnostopoulos - 19 August 2013
• Ben Rowett - 27 August 2013
• Chris Miller, <chris@chrismiller.org> - 5th September 2013
• David Lewis - 7th September 2013
• Josh Chandler - 11th September 2013
• Richie Arnold - <richard@ambercouch.co.uk> - 22nd September 2013
• Padraic Stack - https://github.com/padraic7a
• Patrick Nsukami - <patrick@soon.pro> - lemeteore
• Can Ibanoglu - http://github.com/canibanoglu
• Ken Tam - 4th Jan 2014
• Óscar M. Lage - http://github.com/oscarmlage
• Bob Aalsma - https://github.com/BobAalsma/
• Andy Venet - https://github.com/avenet/
• Vathsala Achar - 22nd September, 2014
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• Andrew Morales - October 19, 2014
• Suraj Deshmukh <surajssd009005@gmail.com> http://github.com/surajssd
• Suresh - https://github.com/umulingu/
• Chandra Bandi - 20-December 2014
• Drew A. - https://github.com/daldin - 12th December 2014
2.8 Running a workshop

If you’d like to run a workshop based on this material, please do, and please let me know about it.

2.8.1 Notes on running a workshop

To cover all the workshop material seems to take about four and a half hours.

Any of the following will make it take longer:

- attendees who aren’t already a little familiar with the terminal and using a text editor to edit source files
- attendees whose machines aren’t already suitably-configured for the workshop and need software installed
- attendees using operating systems you’re not familiar with

If you’re lucky, you’ll find that the majority of attendees have the same expertise and the same gaps in expertise. This makes it much easier to decide which parts to dwell upon and which ones you can skim over. If you’re not lucky, they will each have a completely different skillset.

You’ll do a lot of running around to look at people’s screens, so it helps to be able to get around the room easily.

The Git on the command line section is the one where you will be in most demand - it helps great if at this stage you have one or two helpers who are familiar with Git.

Watch out for wireless network limitations - at one session the promised network turned out to block both github.com and ssh, and we had to rely on an access point created by someone’s mobile telephone.

2.8.2 Things that might look odd

If you’re experienced with things virtualenv and Git, some of the way things are done here might strike you as odd. For example:

Virtualenvs and code

The workshop has users put all the code they’re working with into their virtualenv directories. This is done to help associate a particular project and set of packages with each virtualenv, and saves excessive moving around between directories.
**Editing and committing on GitHub**

That’s certainly not what we’d normally do, but we do it here for three main reasons:

- GitHub’s interface is a friendly, low-barrier introduction to Git operations
- it’s easy for people to see the effects of their actions straight away
- they get to make commits, pull requests and merges as soon as possible after being introduced to the concepts

The last of these is the most significant.

**Other oddities**

There may be others, which might be for a good reason or just because I don’t know better. If you think that something could be done better, please let me know.
“Don’t be afraid to commit” was created by Daniele Procida. Other contributors include:

- Daniel Quinn
- Brian Crain (@crainbf)
- Paul Grau
- Nimesh Ghelani https://github.com/nims11
- Robert Dragan https://github.com/rmdragan
- David Garcia https://github.com/davideire
- Jason Blum https://github.com/jasonblum
- Kevin Daum https://github.com/kevindaum

Many thanks are also due to the members of #django, #python, #git and #github on irc.freenode.net for their endless online help.

... and if I have neglected to mention someone, please let me know.

Please feel free to use and adapt the tutorial.