

# Django Quickstart

For this class, many of the homework assignments will concern creating and editing Django applications. Django (<https://www.djangoproject.com/>) is a popular web framework written in Python.

## Installation

1. Install Python 3 if you haven't done so already. (Go to <https://python.org> for downloads.)
  - There's no need to uninstall Python 2.7, if you have it. (If running on an old Mac, do not uninstall Apple's Python 2.7. The OS depends on it.)
2. Create a virtual environment:
  - Choose a location in which to create the virtual environment. I call it "venv" and don't put it in my repo, but if you put it anywhere in your repo, be sure to put the name of the virtual environment directory into your .gitignore. (Our default .gitignore contains venv.)

```
cd <location for your virtual environment folder>
python3 -m venv venv
```

On Windows, you may need to use "py" instead of "python3"

Creating a virtual environment is optional but recommended because it simplifies package installation and reduces conflicts with other software you have on your laptop. See: <https://docs.python.org/3/library/venv.html>

3. Activate your virtual environment using the appropriate command for your shell:
  - MAC zsh: `source venv/bin/activate`
  - MS cmd.exe: `venv\Scripts\activate.bat`
  - Linux csh: `source venv/bin/activate.csh`
 (See <https://docs.python.org/3/library/venv.html> for other shells)

4. Install Django
  - Upgrade pip to the most current version:
 

```
python3 -m pip install --upgrade pip
```
  - Then install Django
 

```
python3 -m pip install django
```

5. Outside of your class repository, clone one of the class examples and try to run it:
 

```
git clone https://github.com/cmu-webapps/django-intro.git
cd django-intro
python3 manage.py migrate
python3 manage.py runserver
```

If using SSH authentication with GitHub clone with:  
`git@github.com:cmu-webapps/django-intro.git`

6. Visit `http://localhost:8000` and verify that the application is working.

Some systems require  
`http://127.0.0.1:8000`

If running on an Andrew Linux cluster or server computer, start server using  
`python3 manage.py runserver 0.0.0.0:8000`  
then visit <http://linux-xx.andrew.cmu.edu:8000> (replace xx with your number)

## Creating a Django Project

Create a new Django project for Homework #3:


1. Connect to the directory in your class repository for Homework #3:

```
cd hw3
```

2. Using the command prompt to create the project directory:

```
python3 -m django startproject webapps .
```

The “.” at the end of the line above causes the project to be created in the current directory.



Notice the dot

## Creating a Django Application

Create the Wordish application in your project:

1. Run the following Django command to create a new application:

```
python3 manage.py startapp wordish
```

2. Even though you're storing no data in the database, you'll need to create a database for some of Django's internal state with the following command:

```
python3 manage.py migrate
```

3. Configure the project using webapps/settings.py

- Add 'wordish' to the list of INSTALLED\_APPS

4. Configure URL routes using urls.py file(s)

5. Create your templated views in wordish/templates/wordish

6. Put your static files in wordish/static/wordish

7. Create your actions in wordish/views.py

8. Test your solution (and fix the bugs :-)

```
python3 manage.py runserver
```

## Deactivating your Virtual Environment

You may simply close your shell, but you can also run the “deactivate” command to leave the virtual environment.

## Additional resources

See the class examples and the <http://djangoproject.com> website.