



# Introduction to Database Systems: CS312

## Setting Up the Django Web Server

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- People use online data
  - Purchasing: [www.amazon.com](http://www.amazon.com)
  - Entertainment: [www.netflix.com](http://www.netflix.com)
  - Social media: [www.myspace.com](http://www.myspace.com)
    - just kidding: [www.facebook.com](http://www.facebook.com)
  - Research: [www.uniprot.org](http://www.uniprot.org)
  - Weather: [www.accuweather.com](http://www.accuweather.com)
  - And many other forms of information are online!

# Where is the Database?

Humans indirectly use them

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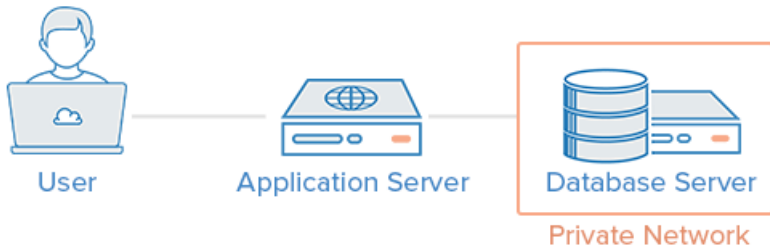
Django

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Use a  
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## Separate Database Server



# Where is the Database?

Computers use them

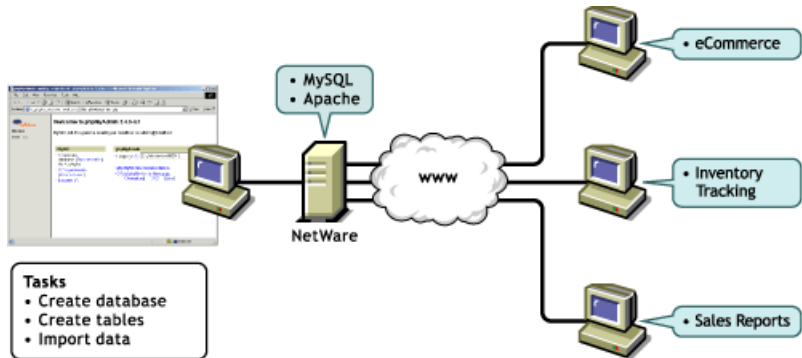
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# django

- <https://www.djangoproject.com/>

# Django: web server

Easy to build better Web apps more quickly and with less code.

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- Django is a high-level Python Web framework that encourages rapid development and clean, pragmatic design.
- Built by experienced developers, it takes care of much of the hassle of Web development, so you can focus on writing your app without needing to reinvent the wheel.
- It's free and open source.

# Django: a sophisticated web server

Easy to build better Web apps more quickly and with less code.

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- Designed for rapid development of applications with quick concept to completion.
- Includes dozens of extras:
  - common Web development tasks
  - user authentication
  - content administration
  - site maps
  - RSS feeds
  - DATABASE SUPPORT (more about that later)

# Who Uses Django?

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- Users

- Companies, organizations and governments
- Content management systems
- Social networks
- Scientific computing platforms ... *and more!*
  
- Specifically...
- `https://www.google.com/`
- `https://www.youtube.com/`
- `https://www.instagram.com/`
- `https://www.spotify.com/`
- `https://www.washingtonpost.com/` *and many others!*

Check out:

`https://www.shuup.com/en/blog/25-of-the-most-popular-python-and-django-websites/`





- We are going to install a virtual environment, from which to work
- Then install Django and setup an initial-state demo.

# Setting-up an environment for your work

Copy Python3 tools to a working place

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Get into a *working* directory

```
mkdir ~/djangoWorking/  
cd ~/djangoWorking/
```

Installing Pip: the Python package installer

```
sudo easy_install pip
```

Installing a virtual environment code

```
sudo pip install virtualenv
```

Create a new virtualenv (the virtual environment)

```
virtualenv myenv -p python3.6 # setting up virtualenv  
source myenv/bin/activate # activate virtualenv
```

# Setting-up Django

Your terminal should now say, (myenv)

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## Install Django in your virtualenv

```
pip install django  
python3 -m django --version # check version
```

## Create your first Django project!

```
django-admin startproject mysite
```

## Use manage.py to run the webserver to see your project!

```
cd mysite/  
# we are now in: djangoWorking/myenv/mysite  
python3 manage.py runserver
```

## Use your browser to check your work

```
http://127.0.0.1:8000/  
Control-c to exit
```

# The Files of Your Project

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```
find . -not -path '*/\.*'
```

```
-----  
./mysite  
./mysite/manage.py  
./mysite/mysite  
./mysite/mysite/__init__.py  
./mysite/mysite/settings.py  
./mysite/mysite/urls.py  
./mysite/mysite/wsgi.py
```

## Notable Files

- manage.py: used to run the server
- settings.py: configuration file
- urls.py: used to connect url addresses to pages
- wsgi.py: web server gateway interface utils

# The Output From Manage.py

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```
Performing system checks...
```

```
System check identified no issues (0 silenced).
```

```
You have 15 unapplied migration(s). Your project  
may not work properly until you apply the migrations  
for app(s): admin, auth, contenttypes, sessions.  
Run 'python manage.py migrate' to apply them.
```

```
February 23, 2019 - 09:00:00
```

```
Django version 2.1.7, using settings 'mysite.settings'  
Starting development server at http://127.0.0.1:8000/  
Quit the server with CONTROL-C.
```



## The install worked successfully! Congratulations!

You are seeing this page because `DEBUG=True` is in your settings file and you have not configured any URLs.

# Rats! It Did Not Work!

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## This site can't be reached

**127.0.0.1** refused to connect.

Try:

- Checking the connection
- [Checking the proxy and the firewall](#)

ERR\_CONNECTION\_REFUSED

See: <https://docs.djangoproject.com/en/2.1/> or  
<https://www.djangoproject.com/start/>