## YOUR FIRST DJANGO PROJECT

06016322 - Web Programming

## Creating a project

■ From the command line, cd into a directory where you'd like to store your code, then run the following command:

\$ django-admin startproject mysite

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

## FOLDER STRUCTURE

Let's look at what startproject created:

### Let's start your development server

Let's verify your Django project works. Change into the outer mysite directory and run the following commands:
 \$ python manage.py runserver

Performing system checks...

System check identified no issues (0 silenced).

You have unapplied migrations; your app may not work properly until they are applied. Run 'python manage.py migrate' to apply them.

February 28, 2019 - 15:50:53

Django version 2.1, using settings 'mysite.settings'

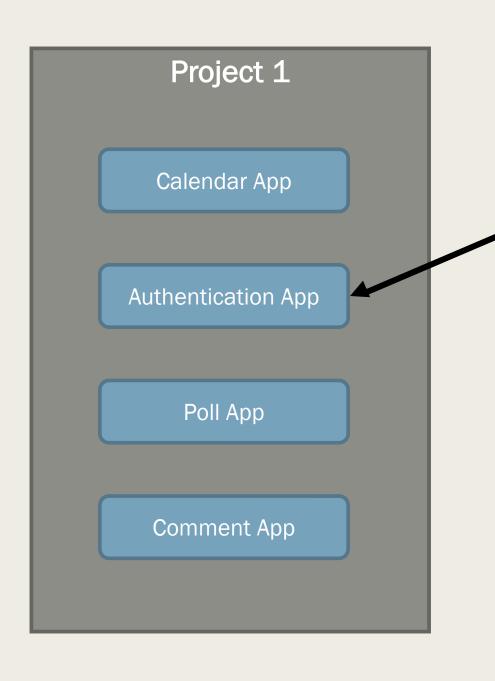
Starting development server at <a href="http://127.0.0.1:8000/">http://127.0.0.1:8000/</a>
Quit the server with CONTROL-C.

#### Creating the Polls app

■ Django comes with a utility that automatically generates the basic directory structure of an app, so you can focus on writing code rather than creating directories.

To create your app, make sure you're in the same directory as manage.py and type this command:

\$ python manage.py startapp polls



Project 2

Authentication App

```
polls/
     _init__.py
    admin.py
    apps.py
    migrations/
        init__.py
    models.py
    tests.py
    views.py
```

# IN YOUR POLLS APP

The startapp command will create a directory polls, which is laid out like this:

## Let's create your first view

- Open the file polls/views.py and start writing some code
- To call the view, we need to map it to a URL and for this we need a URLconf.
- To create a URLconf in the polls directory, create a file called urls.py.

```
polls/
    __init__.py
    admin.py
    apps.py
    migrations/
        __init__.py
    models.py
    tests.py
    urls.py
    views.py
```

#### Path() function

The <u>path()</u> function is passed four arguments, two required: route and view, and two optional: kwargs, and name.

#### Argument: route

route is a string that contains a URL pattern.

#### Argument: view

 When Django finds a matching pattern, it calls the specified view function with an <a href="httpRequest"><u>HttpRequest</u></a> object as the first argument and any "captured" values from the route as keyword arguments.

#### ■ Argument: kwargs

Arbitrary keyword arguments can be passed in a dictionary to the target view.

#### Argument: name

 Naming your URL lets you refer to it unambiguously from elsewhere in Django, especially from within templates.

# Let's create some more views that actually do something

- Create some views in views.py
  - Poll homepage displays the list of all polls.
  - Poll "detail" page
  - Poll "result" page
- Add path() in urls.py

#### Poll homepage - index

#### Welcome to my poll page

#### Popular polls

- เพื่อน ๆ ดิดว่าวิชาเวบโปรสอนรู้เรื่องใหม? <u>vote</u> <u>result</u>
- เพื่อน ๆ ดิดว่า อ. บัณฑิต อายุเท่าใหร่? <u>vote</u> <u>result</u>
- เพื่อน ๆ จะ drop วิชาเวบโปรทันใหม <u>vote</u> <u>result</u>

#### Frequently used templatetags

■ For

```
{% for athlete in athlete_list %}
      {{ athlete.name }}
{% endfor %}
```

■ If ... else

```
{% if athlete_list %}
   Number of athletes: {{ athlete_list|length }}
{% elif athlete_in_locker_room_list %}
   Athletes should be out of the locker room soon!
{% else %}
   No athletes.
{% endif %}
```

Include

```
{% include "foo/bar.html" %}
```

■ **now** - Displays the current date and/or time, using a format according to the given string.

```
It is {% now "jS F Y H:i" %}
```

url

```
{% url 'some-url-name' v1 v2 %}
```

https://docs.djangoproject.com/en/ 2.1/ref/templates/builtins/

#### Path converters

- The following path converters are available by default:
  - str Matches any non-empty string, excluding the path separator, '/'. This is the default if
    a converter isn't included in the expression.
  - int Matches zero or any positive integer. Returns an int.
  - slug Matches any slug string consisting of ASCII letters or numbers, plus the hyphen and underscore characters. For example, building-your-1st-django-site.

#### Path converter examples

```
urlpatterns = [
   path('articles/2003/', views.special_case_2003),
   path('articles/<int:year>/', views.year_archive),
   path('articles/<int:year>/<int:month>/', views.month_archive),
   path('articles/<int:year>/<int:month>/<slug:slug>/', views.article_detail),
]
```

- /articles/2003 -> no match
- /articles/2005/03/ -> views.month\_archive(request, year=2005, month=3)
- /articles/2003/03/building-a-django-site/ -> views.article\_detail(request, year=2003, month=3, slug="building-a-django-site")

#### Create some templates for those views

- Create 3 html files in templates/polls folder
  - index.html
  - detail.html
  - results.html

### Now! Let's style out polls website

- We've built a tested Web-poll application, and we'll now add a stylesheet and an image.
- Aside from the HTML generated by the server, web applications generally need to serve additional files such as images, JavaScript, or CSS necessary to render the complete web page. In Django, we refer to these files as "static files".

### Customize your app's look and feel

- First, create a directory called "static" in your polls directory. Django will look for static files there.
- Within the static directory you have just created, create another directory called **polls** and within that create a file called **style.css**.
- Next, add "{% load static %}" at the top of your html file:

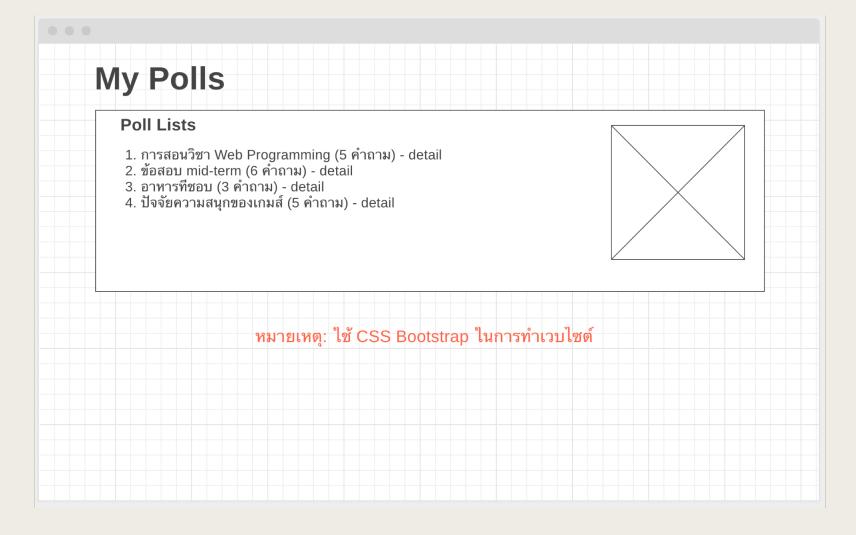
```
<link rel="stylesheet" type="text/css" href="{% static 'polls/style.css' %}">
```

## EXERCISES

## Index Page

#### คำสั่ง

- ปรับปรุงเพิ่มเติมหน้า polls/index.html โดยใช้ Bootstrap
- เพิ่มรูปอะไรก็ได้เข้าไปที่หน้าเวบ (ดังในรูป)
- เมื่อกดปุ่ม detail ให้แสดงหน้ารายละเอียด ของ poll นั้น ๆ
- ใช้ข้อมูลในไฟล์ data.txt



## Detail Page

#### คำสั่ง

- แสดงรายการคำถาม พร้อมคำตอบ
- คำตอบเป็น radio button
- ถ้ากด "กลับหน้าแรก" กลับไปหน้า poll index
- ถ้ากด "บันทึก" ให้ส่งค่า form ไปที่ view page detail และทำการ print ค่าที่ post ออกมาใน console
- ใช้ข้อมูลในไฟล์ data.txt

