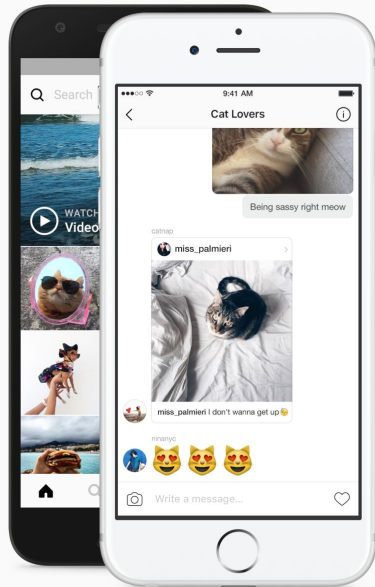# Django

The D is silent

Overview

- Web framework based in Python (2 or 3)
- Easy to set up and start coding
- Lots of built-in features without extra libraries

Who even uses Django?

Instagram

Pinterest

The Onion

Built-In Features

User Authentication

- Manages secure login
- Can add custom authentication to the pipeline (like whitelisting users, integrating with Facebook, etc.)
- Handles grouping and permissions

Admin Site

- Created on startup
- You can add new objects into your database using an autogenerated form
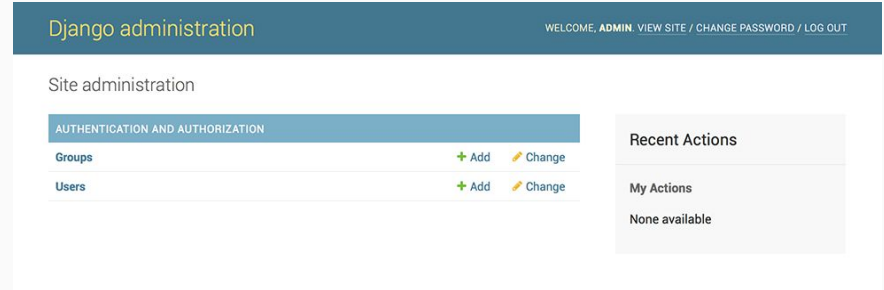
Syndication Feed

- You can make an RSS or Atom type feed easily
- Can be arbitrarily simple or complex - fully customizable

What does the code look like?

Object Models

```python
polls/models.py

from django.db import models


class Question(models.Model):
    question_text = models.CharField(max_length=200)
    pub_date = models.DateTimeField('date published')


class Choice(models.Model):
    question = models.ForeignKey(Question,
on_delete=models.CASCADE)
    choice_text = models.CharField(max_length=200)
    votes = models.IntegerField(default=0)
```

Router

```python
# polls/urls.py

from django.conf.urls import url

from . import views

urlpatterns = [
    # ex: /polls/
    url(r'^$', views.index, name='index'),
    # ex: /polls/5/
    url(r'^(?P<question_id>[0-9]+)/$', views.detail, name='detail'),
    # ex: /polls/5/results/
    url(r'^(?P<question_id>[0-9]+)/results/$', views.results, name='results'),
    # ex: /polls/5/vote/
    url(r'^(?P<question_id>[0-9]+)/vote/$', views.vote, name='vote'),
]
```

View Controllers

```
polls/views.py

from django.http import HttpResponse
from django.template import loader

from .models import Question


def index(request):
    latest_question_list = Question.objects.order_by('-pub_date')[:5]
    template = loader.get_template('polls/index.html')
    context = {
        'latest_question_list': latest_question_list,
    }
    return HttpResponse(template.render(context, request))
```

HTML Templates (Jinja)

```
polls/templates/polls/index.html

{% if latest_question_list %}
    <ul>
    {% for question in latest_question_list %}
        <li><a href="/polls/{{ question.id }}/">{{ question.question_text }}</a>
</li>
    {% endfor %}
    </ul>
{% else %}
    <p>No polls are available.</p>
{% endif %}
```