**DJANGO 101 NOTES**

pipenv shell

pip show django

django-admin startproject mysite . (**NOTE:** the dot tells it to put the project folder in the current folder)

python manage.py runserver 0.0.0.0:8000 (**NOTE:** run localhost://8000 in browser)

If server doesn’t run try migrating by using: python manage.py migrate

**CREATE USER**

Python manage.py createuser

* Name
* Email address
* Password

**CREATE APP**

Python manage.py startapp feed

* To activate:
  + mysite
    - settings.py
      * installed apps
        + add ‘feed’ to list

**FEED APP TEXT FEED**

python manage.py makemigrations

python manage.py migrate

**MAKE TABLE MANAGEABLE**

Go to **feed** > **admin.py**

**SETTING UP FIRST DJANGO VIEW**

* **mysite** > **urls.py**
  + **feed**
    - create **urls.py**

**TROUBLESHOOTING DATABASE ERROR MESSAGES**

TemplateDoesNotExisit at /

**mysite** > **settings.py**

* Templates
  + DIRS[] to DIRS[TEMPLATE\_DIR]
  + Above template list create variable TEMPLATE\_DIR = os.path.join(BASE\_DIR, “template”)
* Import os
* Create new folder called **templates**
* Create new file in templates called **home.html**

**MAKE PAGES DYNAMIC**

**feed** > **views.py**

Class HomePageView(TemplateView):

Def get\_context\_data(self, \*\*kwargs):

context = super().get\_context\_data(\*\*kwargs)

context [posts] = Post.objects.all()

return context

**home.html**

{{ posts }} # To output the post

**ADDING IMAGES**

Go to **github.com/jazzband/sorl-thumbnail**

**Get the Code**

pip install sorl-thumbnail

**Install in your project**

**mysite** > **settings.py**

Installed Apps

‘sorl.thumbnail’

**Model Usage**

From sorl.thumbnail import ImageField

**ADDING A MEDIA FOLDER**

**mysite** > **urls.py**

At top: from django.conf import settings

from django.conf.urls.static import static

At bottom: If settings DEBUG:

Urlpatterns += static(settings.MEDIA\_URL, document\_root = settings.MEDIA\_ROOT)

**ADDING IMAGES TO TEMPLATES**

**templates** > **home.html**

{% thumbnail item.image "100x100" crop="center" as im %}

<img src="{{ im.url }}" width="{{ im.width }}" height="{{ im.height }}">

{% endthumbnail %}

At top: {% load thumbnail %}

**ADDING A DETAIL VIEW**

**feed** > **views.py**

add “DetailView” to end of **from django.views.generic import TemplateView**

Create new class:

class PostDetailView(DetailView): # Inherit from Django’s generic detail view

template\_name = ‘detail.html’

model = Post

**feed** > **urls.py**

Add path to urlpatterns list

path(‘detail/<int:pk>’, PostDetailView.as\_view(), name=’detail’), (NOTE: ‘pk’ stands for primary key)

**Render the view**

Add “PostDetailView” to end of **from .views import HomePageView**

**Create detail.html**

{% extends “base.html %}

{% block title %} Detail View {% endblock %}

{% block body %}

This is where the image will go.

{% block title %}

**DETAIL VIEW TEMPLATE**

**detail.html**

{% block body %}

<img src=”{{ object.image.url }}” alt=”{{ object.text }}” style=”width: 100%; height: auto;” >

{% endblock %}

**TEMPLATE LINKS**

**templates** > **home.html**

<a href=”{% url ‘feed:detail’ post.id %}”>

… *Existing code here …*

</a>

**Templates** > **detail.html**

<a href=”{% url ‘feed:index’ %}”>&larr; Go Back</a>

**ADDING AN UPLOAD FORM**

In **feed** create a new file called **forms.py**

**forms.py**

from django import forms

class PostForm(forms.Form):

text = forms.CharField()

image = forms.FileField()

**urls.py**

In **urlpatterns = []**:

path(‘post/’, AddPostView.as\_view(), name=’post’),

In **from .views import HomePageView, PostDetailView**

Add **AddPostView**

**views.py**

In from django.views.generic import TemplateView, DetailView

Add **FormView**

class AddPostView(FormView): # Remember to read docs at ccbv.co.uk

template\_name = “new\_post.html”

form\_class = PostForm

success\_url = “/”

def form\_valid(self, form):

# print(form.cleaned\_data[‘text’]) # For testing form

# print(form.cleaned\_data[‘image’]) # For testing form

# Create a new post

new\_object = Post.objects.create(

text=form.cleaned\_data[‘text’],

image=form.cleaned\_data[‘image’]

)

return super().form\_valid(form)

At top above  **from .models import Post** add **from .forms import PostForm**

In **templates** create **new\_post.html**

In body write:

<form method=”POST” action=”” enctype=”multipart/form-data”>

{% csrf\_token %} # csrf = Cross Site Request Forgery

{{ form.as\_p}}

<div>

<button type=”submit”>Submit form</button>

</div>

</form>

**home.html**

Above {% for post in posts %} add:

<a href=”{% url ‘feed:post’ %}”>Add a new post &rarr;</a>

<hr>

**SORTING DEFAULT POSTS**

**feed** > **views.py**

Under class **HomePageView(TemplateView)**

At the end of **context[‘posts’] = Post.objects.all()** add **.order\_by(‘-id’)** # The ‘-‘ before ‘id’ means descending

**DJANGO MESSAGES FRAMEWORK**

**feed** > **views.py**

At top: from django.contrib import messages

Beneath **new\_object = Post.objects.create()** add:

messages.add\_message(request, messages.SUCCESS, ‘Your post was successful!’)

# Visit <https://docs.djangoproject.com/en/4.1/ref/contrib/messages/> for information.

Above **def form\_valid(self, form)** add:

**def dispatch(self, request, \*args, \*\*kwargs):**

**self.request = request**

**return super().dispatch(request, \*args, \*\*kwargs)**

Make edit:

messages.add\_message(**self.**request, messages.SUCCESS, ‘Your post was successful!’)

**mysite** > **settings.py**

Make sure that **django.contrib.messages** is in **INSTALLED\_APPS = [], MIDDLEWARE = [],** and **TEMPLATES = [OPTIONS {context\_processors}]**

**templates** > **base.html**

In <body> add:

{% if messages %}

<ul class="messages">

{% for message in messages %}

<li{% if message.tags %} class="{{ message.tags }}"{% endif %}>

{{ message }}

</li>

{% endfor %}

</ul>

{% endif %}

**ADDING BOOTSTRAP**

**base.html**

Paste Bootstrap CSS CDN in between <head></head>

Copy navbar from Bootstrap components and paste in between <body></body>

After removing navbar code, replace with **{% include “includes/navbar.html” %}**

**home.html**

Remove “Add a new post” link

**templates**

Create new folder called **includes**

Create new file called **navbar.html**

Cut navbar code from **base.html** and add here.

**detail.html**

Remove “Go Back” link

**new\_post.html**

Clean up

**base.html**

~~{% if messages %}~~

~~<ul class="messages">~~

~~{% for message in messages %}~~

~~<li{% if message.tags %} class="{{ message.tags }}"{% endif %}>~~

~~{{ message }}~~

~~</li>~~

~~{% endfor %}~~

~~</ul>~~

~~{% endif %}~~

Replace with:

{% if messages %}

{% for message in messages %}

<div class=”bg-{% if message.tags %}{{ message.tags }}{% else %}success{% endif %} bg-gradient text-center text-white py-2>

{{ message }}

</div>

{% endfor %}

**feed**

**forms.py**

reverse order of image and text variables

text = forms.CharField(**label=”Description”**)