Django Registration

Summary: in this tutorial, you'll learn how to create a Django registration form that allows users to sign up.

Creating a Django registration form

First, define a registration URL in the `urls.py` of the `users` app:

```
from django.urls import path
from . import views

urlpatterns = [
    path('login/', views.sign_in, name='login'),
    path('logout/', views.sign_out, name='logout'),
    path('register/', views.sign_up, name='register'),
]
```

Second, define a `RegisterForm` class in the `forms.py` of the `users.py` file:

```
from django import forms
from django.contrib.auth.models import User
from django.contrib.auth.forms import UserCreationForm


class LoginForm(forms.Form):
    username = forms.CharField(max_length=65)
    password = forms.CharField(max_length=65, widget=forms.PasswordInput)
```

```
class RegisterForm(UserCreationForm):
    class Meta:
        model=User
        fields = ['username','email','password1','password2']
```

The `RegisterForm` uses the built-in `User` model and includes four fields including `username`, `email`, `password1`, and `password2`, which the user needs to fill in for registration.

Third, define the `sign_up()` view function in the `views.py` of the `users` app:

```
from django.shortcuts import render, redirect
from django.contrib import messages
from django.contrib.auth import login, authenticate, logout
from .forms import LoginForm, RegisterForm

def sign_up(request):
    if request.method == 'GET':
        form = RegisterForm()
        return render(request, 'users/register.html', { 'form': form})
```

The `sign_up()` view function creates the `RegisterForm` object and renders it in the `register.html` template.

Fourth, create a `register.html` template in the `templates/users` directory of the `users` application:

```
{% extends 'base.html' %}

{% block content %}

<form method="POST" novalidate>
        {% csrf_token %}
        <h2>Sign Up</h2>
        {{ form.as_p }}
        <input type="submit" value="Register" />
</form>
```

```
{% endblock content%}
```

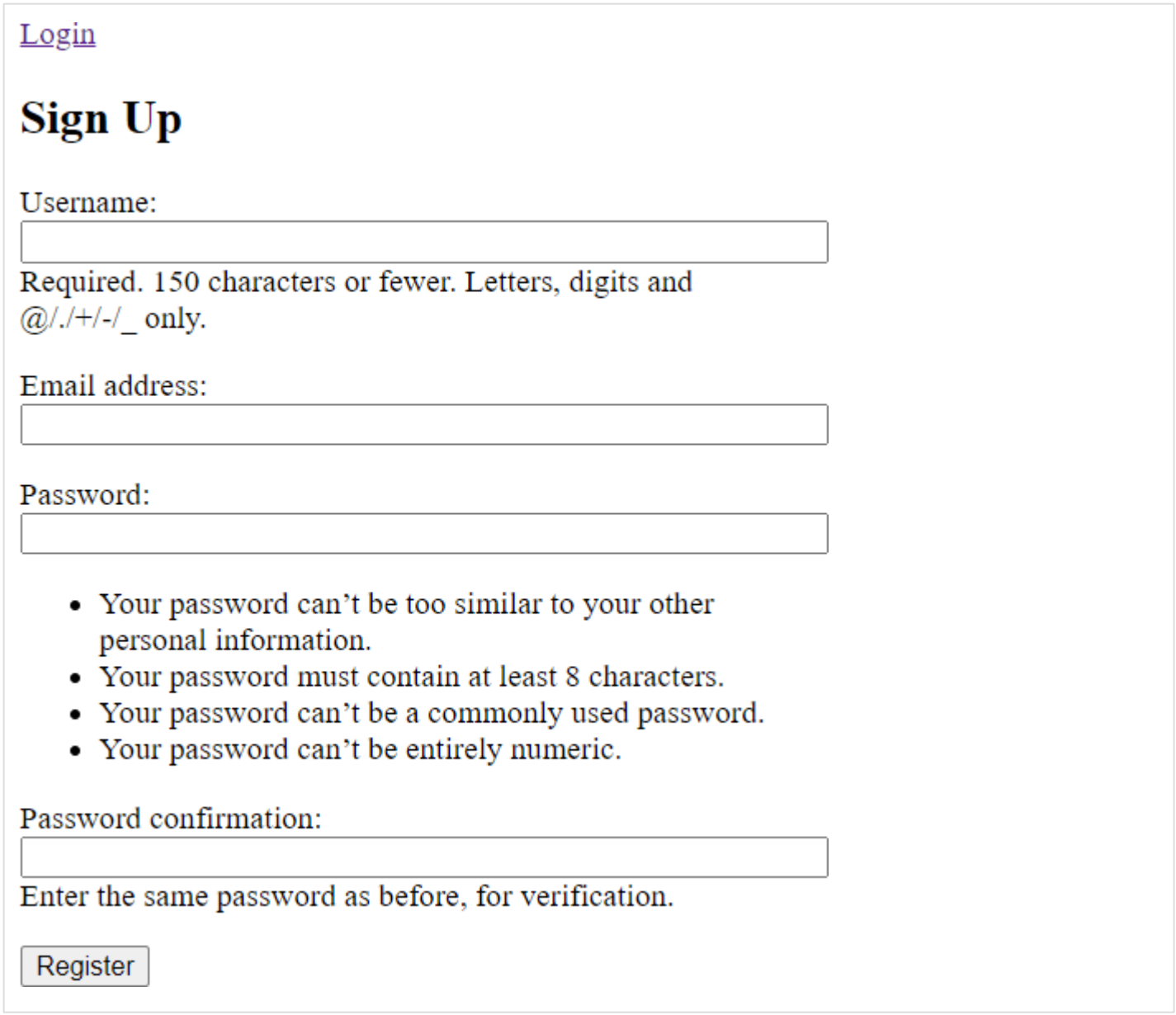
The `registerl.html` extends the `base.html` template of the project. It renders the `RegisterForm` (form).

Note that the `novalidate` property removes the HTML5 validation. Once completing the project, you can remove this property to enable HTML5 validation.

Finally, open the registration URL:

```
http://127.0.0.1:8000/register/
```

…you'll see the registration form as follows:



Customize the Django register form

The registration form has four fields with a lot of information. This information comes from the default `User` model.

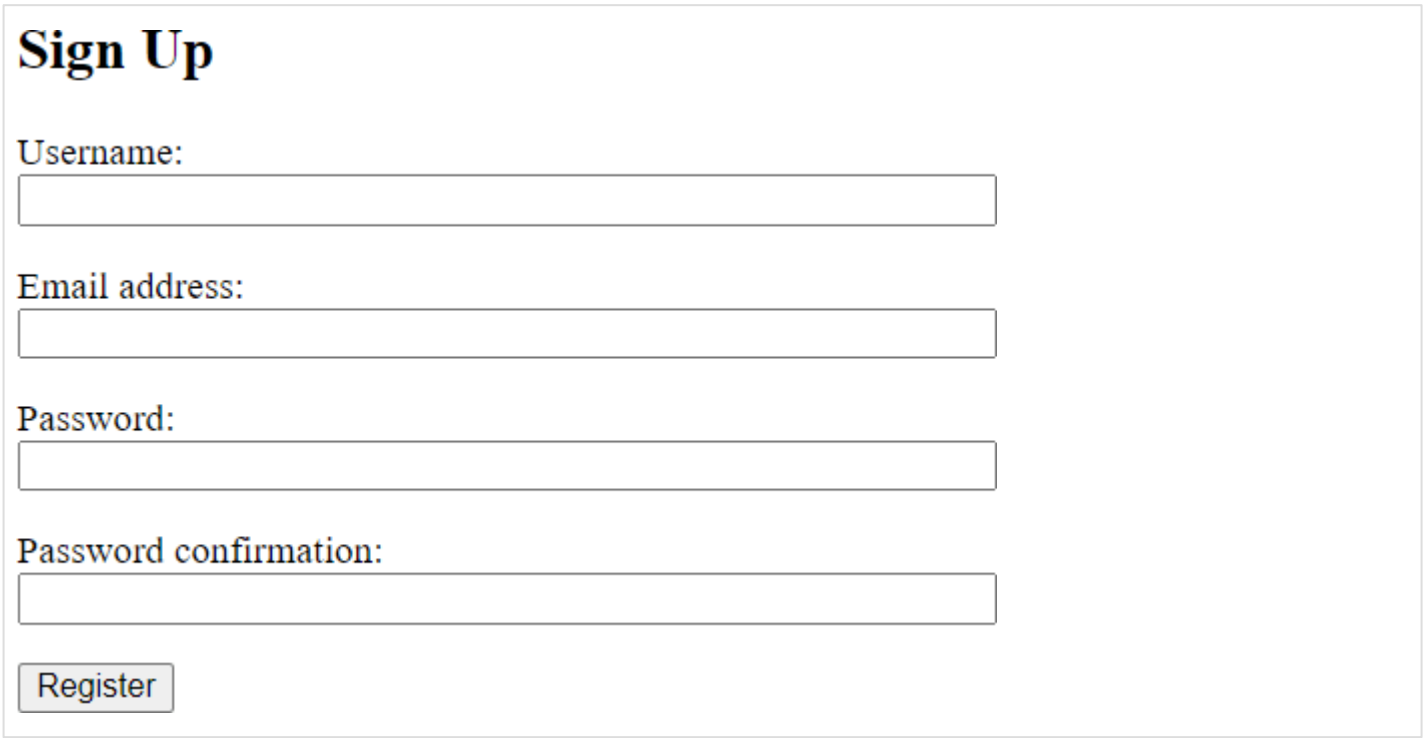
If you want to customize the information displayed on the form, you can modify the `register.html` template as follows:

```
{% extends 'base.html' %}

{% block content %}
<form method="POST" novalidate>
        {% csrf token %}
```

```
        <h2>Sign Up</h2>

        {% for field in form %}
        <p>
                {% if field.errors %}
                <ul class="errorlist">
                        {% for error in field.errors %}
                        <li>{{ error }}</li>
                        {% endfor %}
                </ul>
                {% endif %}
                {{ field.label_tag }} {{ field }}
        </p>
        {% endfor %}
        <input type="submit" value="Register" />
</form>
{% endblock content%}
```

The template iterates over fields of the form and outputs each field individually. For each field, it displays the error list if the validation fails.

The new form will look like this:



If you fill out the information and click register, you'll get an error because we haven't added the code that handles the HTTP POST request.

Handling Registration logic

To handle the HTTP POST request, you modify the `sign_up()` function in the `views.py` file of the `users` application:

```
def sign_up(request):
    if request.method == 'GET':
        form = RegisterForm()
        return render(request, 'users/register.html', {'form': form})

    if request.method == 'POST':
        form = RegisterForm(request.POST)
        if form.is_valid():
            user = form.save(commit=False)
            user.username = user.username.lower()
            user.save()
            messages.success(request, 'You have singed up successfully.')
            login(request, user)
            return redirect('posts')
        else:
            return render(request, 'users/register.html', {'form': form})
```

How it works.

First, create a new instance of the `RegisterForm` :

```
form = RegisterForm(request.POST)
```

If the form is valid, we save the form but do not immediately store it in the database. This is done by passing the argument `commit=False` to the `save()` method of the form object.

The reason is that we want to make the user name lowercase before saving it in the database:

```
user.username = user.username.lower()
user.save()
```

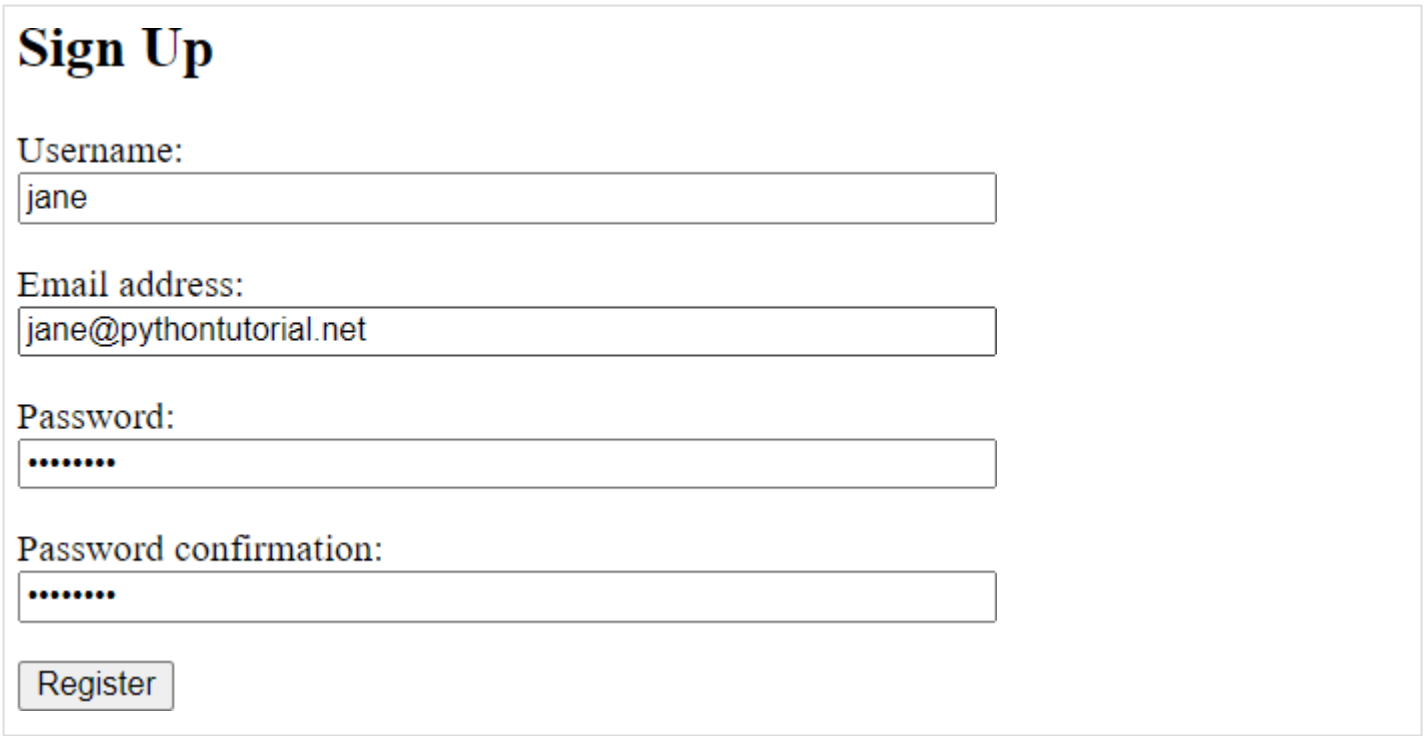
After saving the user, we create a flash message, log the user in and redirect the user to the post list page:

```
messages.success(request, 'You have singed up successfully.')
login(request, user)
return redirect('posts')
```

If the form is not valid, we rerender the form with the previously entered values by passing the form object to the `render()` function:

```
return render(request, 'users/register.html', {'form': form})
```

The following example illustrates how to sign up a user with the username `jane` :



Adding the links

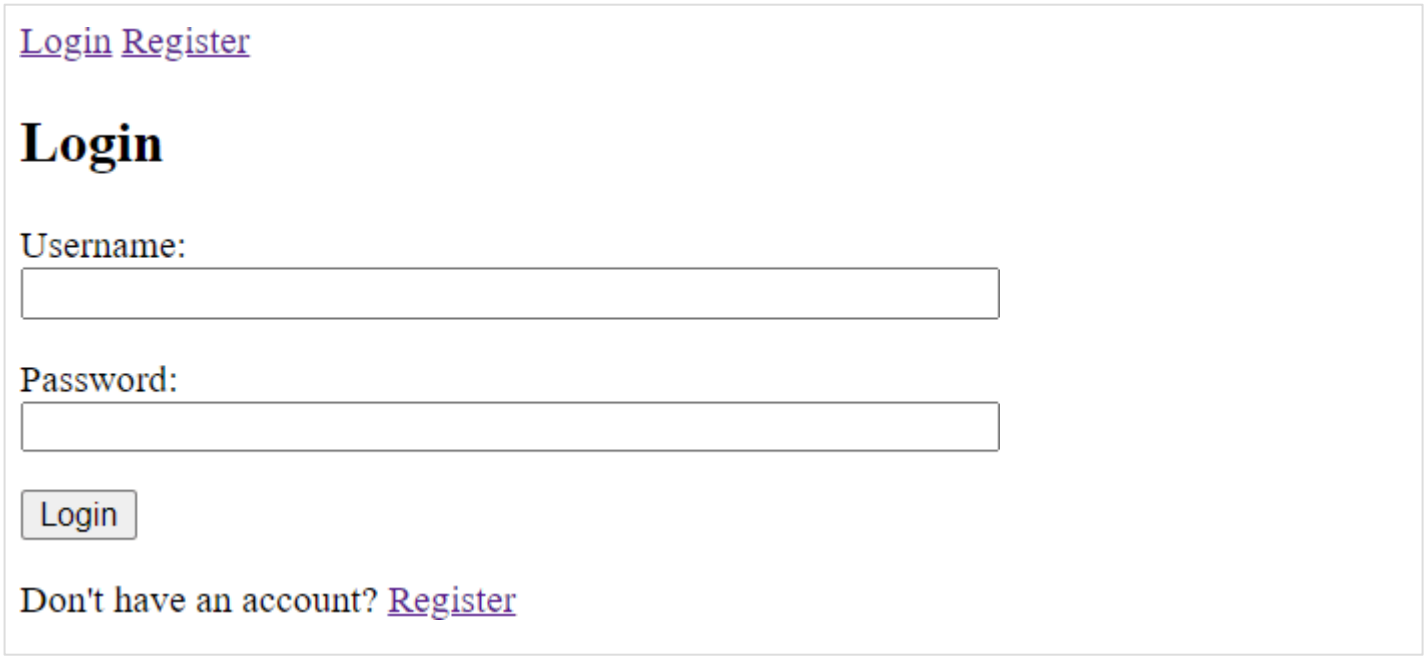
First, include the registration link by modifying the `base.html` template. Also, include the `My Posts` and `New Post` links if the user is logged in:

```
{%load static %}
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <link rel="stylesheet" href="{% static 'css/style.css' %}" />
    <script src="{% static 'js/app.js' %}" defer></script>
    <title>My Site</title>
  </head>
  <body>
```

```
        <header>
                {%if request.user.is_authenticated %}
                        <a href="{% url 'posts' %}">My Posts</a>
                        <a href="{% url 'post-create' %}">New Post</a>
                        <span>Hi {{ request.user.username | title }}</span>
                        <a href="{% url 'logout' %}">Logout</a>
                {%else%}
                        <a href="{% url 'login' %}">Login</a>
                        <a href="{% url 'register' %}">Register</a>
                {%endif%}
        </header>
        <main>
                {% if messages %}
                        <div class="messages">
                        {% for message in messages %}
                                <div class="alert {% if message.tags %}alert-{{ messa
                                        {{ message }}
                                </div>
                        {% endfor %}
                        </div>
                {% endif %}

            {%block content%}
            {%endblock content%}
        </main>

</body>
```

Second, include the registration link in the `login.html` template:

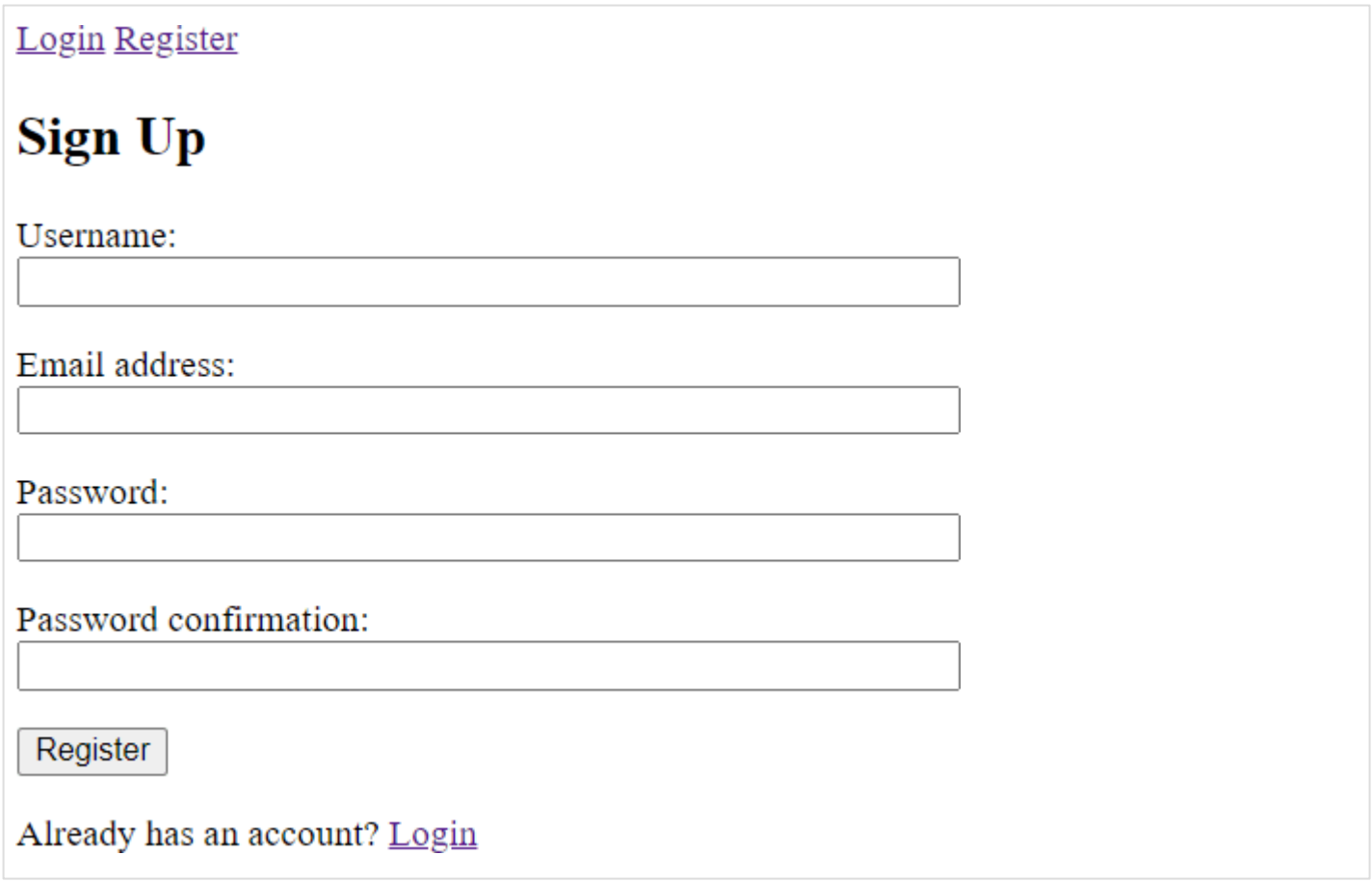
```
{% extends 'base.html' %}

{% block content %}
<form method="POST" novalidate>
        {% csrf_token %}
        <h2>Login</h2>
        {{form.as_p}}
        <input type="submit" value="Login" />
        <p>Don't have an account? <a href="{%url 'register' %}">Register</a></p>
</form>

{% endblock content%}
```



Third, add the login link to the `register.html` page:

```
{% extends 'base.html' %}

{% block content %}
<form method="POST" novalidate>
        {% csrf_token %}
        <h2>Sign Up</h2>

        {% for field in form %}
        <p>
                {% if field.errors %}
                <ul class="errorlist">
                        {% for error in field.errors %}
                        <li>{{ error }}</li>
                        {% endfor %}
                </ul>
                {% endif %}
                {{ field.label_tag }} {{ field }}
        </p>
        {% endfor %}
        <input type="submit" value="Register" />
        <p>Already has an account? <a href="{%url 'login' %}">Login</a></p>
</form>
```

```
{% endblock content%}
```



Preventing a user from editing / deleting posts of other users

Typically, a user should not be able to edit or delete a post of other users. However, the user can view the posts from other users.

To implement this function, we need to check if the author of the post is the same as the currently logged user. If yes, we render the edit/delete forms. Otherwise, we can redirect the users to a 404 page.

Also, we need to hide the edit and delete links of the post list page if the posts do not belong to the user.

First, modify the `views.py` of the `blog` application:

```
from django.shortcuts import render,redirect, get_object_or_404
from django.contrib import messages
from django.contrib.auth.decorators import  login_required
```

```
from .models import Post
from .forms import PostForm

@login_required
def delete_post(request, id):
    queryset = Post.objects.filter(author=request.user)
    post = get_object_or_404(queryset, pk=id)
    context = {'post': post}

    if request.method == 'GET':
        return render(request, 'blog/post_confirm_delete.html',context)
    elif request.method == 'POST':
        post.delete()
        messages.success(request,  'The post has been deleted successfully.')
        return redirect('posts')

@login_required
def edit_post(request, id):
    queryset = Post.objects.filter(author=request.user)
    post = get_object_or_404(queryset, pk=id)

    if request.method == 'GET':
        context = {'form': PostForm(instance=post), 'id': id}
        return render(request,'blog/post_form.html',context)

    elif request.method == 'POST':
        form = PostForm(request.POST, instance=post)
        if form.is_valid():
            form.save()
            messages.success(request, 'The post has been updated successfully.')
            return redirect('posts')
        else:
            messages.error(request, 'Please correct the following errors:')
            return render(request,'blog/post_form.html',{'form':form})

@login_required
def create_post(request):
    if request.method == 'GET':
        context = {'form': PostForm()}
        return render(request,'blog/post_form.html',context)
```

```
    elif request.method == 'POST':
        form = PostForm(request.POST)
        if form.is_valid():
            form.save()
            messages.success(request, 'The post has been created successfully.')
            return redirect('posts')
        else:
            messages.error(request, 'Please correct the following errors:')
            return render(request,'blog/post_form.html',{'form':form})


def home(request):
    posts = Post.objects.all()
    context = {'posts': posts  }
    return  render(request,'blog/home.html',  context)
```

In both delete and update, we filter the post by the current user before passing it to the `get_object_or_404()` function.

If you log in as Jane and attempt to edit a post that does not belong to Jane, you'll get a 404 error. For example:

The 404 page:

Second, modify the `home.html` template to hide the edit and delete links.

```
{% extends 'base.html' %}

{% block content %}
<h1>My Posts</h1>
        {% for post in posts %}
                <h2>{{ post.title }}</h2>
                <small>Published on {{ post.published_at | date:"M d, Y" }} by {{ pos
                <p>{{ post.content }}</p>

                {% if request.user.is_authenticated and request.user == post.author %
                <p>
                        <a href="{% url 'post-edit' post.id %}">Edit</a>
                        <a href="{% url 'post-delete' post.id%}">Delete</a>
                </p>
                {% endif %}

        {% endfor %}
{% endblock content %}
```

Removing the author from the create post form

First, remove the `author` field from the `fields` of the `PostForm` class:

```
from django.forms import ModelForm
from .models import Post

class PostForm(ModelForm):
    class Meta:
        model = Post
        fields = ['title','content']
```

The post-creation form will look like this:

Second, modify the `create_post()` function in the `views.py` of the `blog` application to update the author of the post to the currently logged user:

```
@login_required
def create_post(request):
    if request.method == 'GET':
        context = {'form': PostForm()}
        return render(request,'blog/post_form.html',context)
    elif request.method == 'POST':
        form = PostForm(request.POST)
        if form.is_valid():
            user = form.save(commit=False)
            user.author = request.user
            user.save()
            messages.success(request, 'The post has been created successfully.')
            return redirect('posts')
        else:
            messages.error(request, 'Please correct the following errors:')
            return render(request,'blog/post_form.html',{'form':form})
```

Summary

- Subclass the `UserCreationForm` to create a custom Django registration form.