

Django Lab 3: Added the Category apps:

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Categories Model and Forms:

```
forms.py x  urls.py  categories > forms.py > CategoryForm
1  You, 14 minutes ago | 1 author (You)
2  from django import forms
3  from categories.models import techCategories
4
5  # class CategoryForm(forms.Form):
6  #     name = forms.CharField(max_length=255, required=True)
7  #     description = forms.CharField(widget=forms.Textarea, required=False)
8  #     image = forms.ImageField(widget=forms.ClearableFileInput, required=False)
9
10 You, 14 minutes ago | 1 author (You)
11 class CategoryForm(forms.ModelForm):
12     class Meta:
13         model = techCategories
14         fields = ["name", "description", "image"] # choose fields you want
15
16     def clean_name(self):
17         name = self.cleaned_data.get('name')
18
19         if techCategories.objects.filter(name=name).exists():
20             raise forms.ValidationError("Category with this name already exists")
21         return name

models.py x  categories > models.py > techCategories
1  You, 14 minutes ago | 1 author (You)
2  from django.db import models
3  from django.shortcuts import reverse
4  # Create your models here.
5  You, 14 minutes ago | 1 author (You)
6  class techCategories(models.Model):
7      name = models.CharField(max_length=255, null=True)
8      description = models.TextField(null=True)
9      image = models.ImageField(upload_to='categories/', blank=True, null=True)
10     created_at = models.DateTimeField(auto_now_add=True, null=True)
11     updated_at = models.DateTimeField(auto_now=True, null=True)
12
13     def __str__(self):
14         return f"{self.name}"
15
16     @property
17     def show_url(self):
18         return reverse('departments.show', args=[self.id])
19
20     # get all objects from model ??
21     @classmethod
22     def get_all(cls):
23         # order data, exclude some fields , do any operation.
24         return cls.objects.all()
```

Categories View Functionalities:

```
views.py M x  categories > views.py > delete_category
1  You, 16 minutes ago | 1 author (You)
2  from django.shortcuts import render
3  from django.http import HttpResponseRedirect
4  from django.shortcuts import get_object_or_404, redirect
5  from categories.models import techCategories
6  from categories.forms import CategoryForm
7
8  def create_category(request):
9      #form = CategoryForm()
10     if request.method == "POST":
11         form = CategoryForm(request.POST, request.FILES)
12         if form.is_valid():
13             form.save()
14             # category = techCategories.objects.create(**form.cleaned_data)
15             return redirect('/categories/all')
16     else:
17         form = CategoryForm()
18         return render(request, 'create_category.html', context={'form': form})
19
20 def list_all_categories(request):
21     categories = techCategories.get_all()
22     return render(request, 'category_index.html', context={'categories': categories})
23
24 def show(request, id):
25     category = get_object_or_404(techCategories, id=id)
26     return render(request, 'category_show.html', context={'category': category})
27
28 def delete_category(request, category_id):
29     (parameter) category_id: Any
30     category = get_object_or_404(techCategories, id=category_id)
31     category.delete()
32     return redirect("../all")
33
34 def edit_category(request, category_id):
35     category = get_object_or_404(techCategories, pk=category_id)
36     if request.method == "POST":
37         form = CategoryForm(request.POST, request.FILES, instance=category)
38         if form.is_valid():
39             form.save()
40             return redirect("/categories/all")
41     else:
42         form = CategoryForm(instance=category) # pre-fill form with existing data
43         return render(request, "category_edit.html", {"form": form, "category": category})
```

URLS.py

```
category_index.html | urls.py |
categories > urls.py > ...
...
1  from django.urls import path
2  from . import views
3
4  urlpatterns = [
5      path('create', views.create_category, name='category.create'),
6      path('all', views.list_all_categories, name='category.all'),
7      path('delete/<int:category_id>', views.delete_category, name='category.delete'),
8      path('edit/<int:category_id>', views.edit_category, name='category.edit'),
9      path('<int:id>', views.show, name='category.show')
10 ]
11
```

HTML FILES

Create and show category html functions

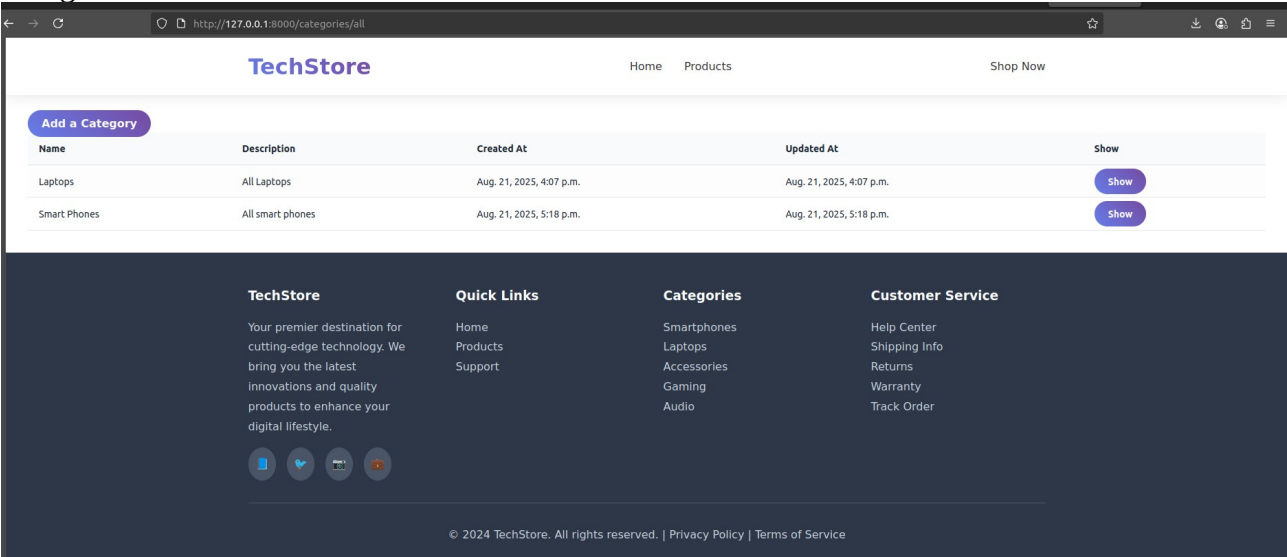
```
category_show.html | create_category.html |
categories > templates > category_show.html > ...
142 <div class="category-card">
143     <div class="category-body">
144         <h1>{{ category.name }}</h1>
145         {% if category.image %}
146             
147         {% endif %}
148         <p class="category-meta"><strong>Created At:</strong> {{ category.created_at }}</p>
149         <p class="category-meta"><strong>Updated At:</strong> {{ category.updated_at }}</p>
150         <a href="{% url 'category.edit' category.id %}" class="btn">Edit Category</a>
151         <a href="{% url 'category.delete' category.id %}" class="btn delete">Delete Category</a>
152         <a href="{% url 'category.all' %}" class="btn">Back to categories</a>
153     </div>
154 </div>
155
156 {% if category.products.all %}
157     <div class="content-section">
158         <h3 class="section-title">Products in {{ category.name }}</h3>
159
160         <div class="products-preview">
161             <div class="product-count">
162                 <span class="count-number">
163                     {{ category.products.all|length }} product{{ category.products.all|length|pluralize }}
164                 </span>
165             </div>
166
167             <ul class="products-list">
168                 {% for product in category.products.all %}
169                     <li class="product-item">
170                         <a href="{% product.show_url %}" class="product-link">
171                             {{ product.name }}
172                         </a>
173                     </li>
174                 {% empty %}
175                     <li>No products in this category yet.</li>
176                 </li>
177             </ul>
178         </div>
179     </div>
180 {% endif %}
181
182 </div>
183
184 {% endblock %}
185
create_category.html |
categories > templates > create_category.html > ...
4 <style>
5     .btn-primary {
6         border-radius: 6px;
7         cursor: pointer;
8         transition: background-color 0.2s ease;
9         margin-top: 8px;
10    }
11
12    .btn-primary:hover {
13        background-color: #2563eb;
14    }
15 </style>
16
17 <div class="form-wrapper">
18     <h2>Create New Department</h2>
19     <form method="post" enctype="multipart/form-data">
20         {% csrf_token %}
21         <div class="form-group">
22             {{ form.as_p }}
23         </div>
24         <button type="submit" class="btn-primary">Create Category</button>
25     </form>
26 </div>
27
28 {% endblock %}
```

Edit and list category

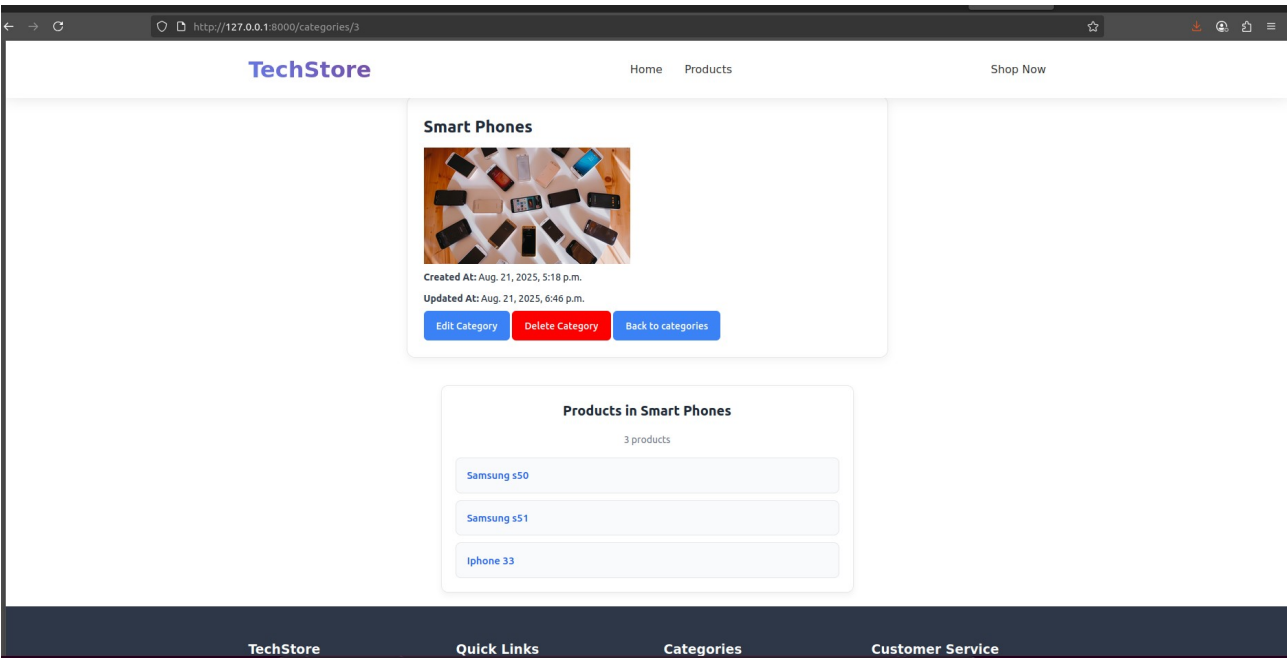
```
category_edit.html | category_index.html |
categories > templates > category_edit.html > ...
4 <style>
5     .btn-cancel {
6         border-radius: 6px;
7         cursor: pointer;
8         transition: background-color 0.2s ease;
9         margin-top: 8px;
10    }
11
12    .btn-cancel:hover {
13        background-color: #4b5563;
14    }
15 </style>
16
17 <div class="form-wrapper">
18     <h1>Edit Category</h1>
19     <form method="post" enctype="multipart/form-data">
20         {% csrf_token %}
21         {{ form.as_p }}
22
23         <div style="margin-top: 20px; text-align: center;">
24             <button type="submit" class="btn">Save Changes</button>
25             <a href="{% url 'category.show' category.id %}" class="btn btn-cancel">Cancel</a>
26         </div>
27     </form>
28 </div>
29
30 {% endblock %}
31
category_index.html |
categories > templates > category_index.html > ...
1 You, 19 minutes ago | author (you)
2 You, 19 minutes ago - The whole project after adding categories
3
4 {% block body %}
5     <div style="margin-top: 78px; padding: 2rem;">
6         <a href="{% url 'category.create' %}" class="cta-button">Add a Category</a>
7         <table class="table table-stripe">
8             <thead>
9                 <tr>
10                     <th>Name</th>
11                     <th>Description</th>
12                     <th>Created At</th>
13                     <th>Updated At</th>
14                     <th>Show</th>
15                 </tr>
16             </thead>
17             <tbody>
18                 {% for category in categories %}
19                     <tr>
20                         <td>{{ category.name }}</td>
21                         <td>{{ category.description }}</td>
22                         <td>{{ category.created_at }}</td>
23                         <td>{{ category.updated_at }}</td>
24                         <td><a href="{% url 'category.show' category.id %}" class="cta-button">Show</a>
25                     </tr>
26                 </tbody>
27             </table>
28         </div>
29     {% endblock %}
```

Webpages

Categories List:



View/Show category and its associated products



Create a Category

TechStore

HomeProductsShop Now

Create New Category

Name:

Smart Watches

Description:

The smart watches of 2025

Image:

Browse...

No file selected.

Create Category

TechStore

Your premier destination for cutting-edge technology. We bring you the latest innovations and quality

Quick Links

Home

Products

Support

Categories

Smartphones

Laptops

Accessories

Gaming

Customer Service

Help Center

Shipping Info

Returns

Warranty

Category section in “Adding a new Product functionality”

HomeProductsShop N

Add Product

Name

Price

Description

Stock

Video Games

Browse...

No file selected.

Create

Quick Links

Categories

Customer Service

Edit Category

Name:

New Videos

Description:

Image: Currently: [categories/smphone.jpg](#) ☐ Clear

Change: No file selected.

Save Changes

Cancel

