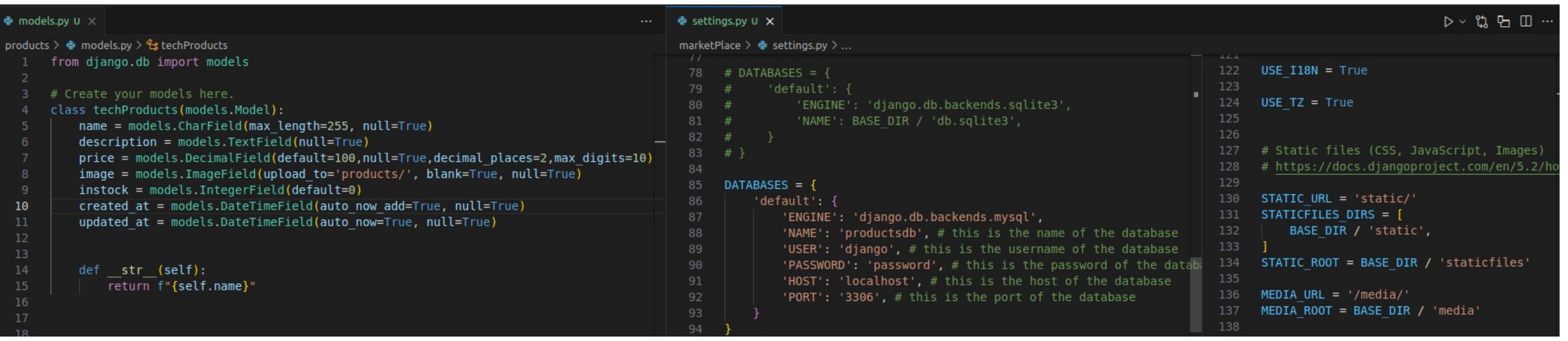
Django Web Framework: Lab 2

Name: Omar Khaled Gamaleldin

1- connect the appliction to database
2- create model Product (name, price, image ? any like, instock items, created_at, updated_at, code unique, description)

3- connect application to db


models.py U
products > models.py > techProducts
settings.py U
marketPlace > settings.py > ...

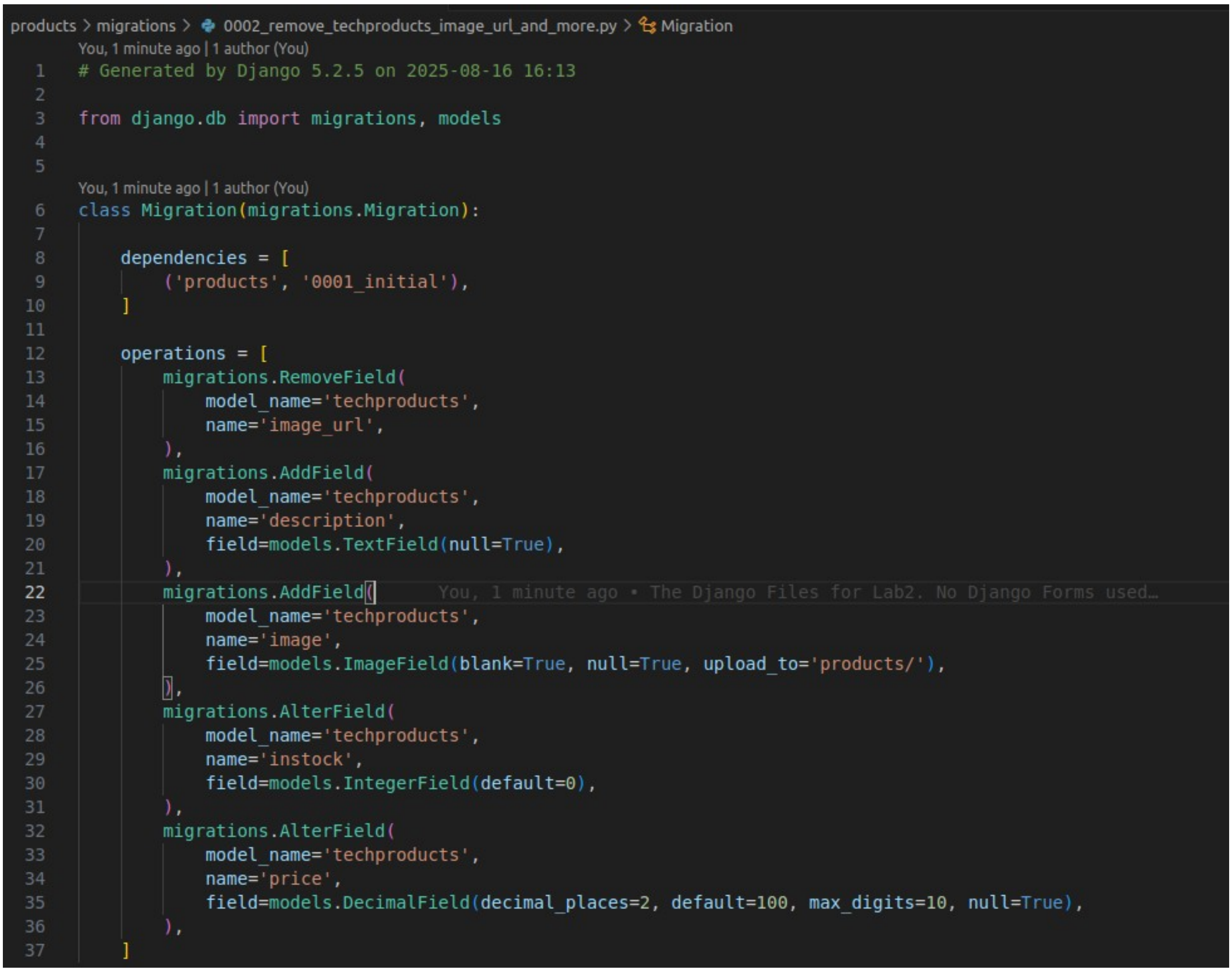
```python
from django.db import models

# Create your models here.
class techProducts(models.Model):
    name = models.CharField(max_length=255, null=True)
    description = models.TextField(null=True)
    price = models.DecimalField(default=100,null=True,decimal_places=2,max_digits=10)
    image = models.ImageField(upload_to='products/', blank=True, null=True)
    instock = models.IntegerField(default=0)
    created_at = models.DateTimeField(auto_now_add=True, null=True)
    updated_at = models.DateTimeField(auto_now=True, null=True)


    def __str__(self):
        return f"{self.name}"
```

```python
# DATABASES = {
#     'default': {
#         'ENGINE': 'django.db.backends.sqlite3',
#         'NAME': BASE_DIR / 'db.sqlite3',
#     }
# }

DATABASES = {
    'default': {
        'ENGINE': 'django.db.backends.mysql',
        'NAME': 'productsdb', # this is the name of the database
        'USER': 'django', # this is the username of the database
        'PASSWORD': 'password', # this is the password of the datab
        'HOST': 'localhost', # this is the host of the database
        'PORT': '3306', # this is the port of the database
    }
}
```

```python
USE_I18N = True

USE_TZ = True


# Static files (CSS, JavaScript, Images)
# https://docs.djangoproject.com/en/5.2/ho

STATIC_URL = 'static/'
STATICFILES_DIRS = [
    BASE_DIR / 'static',
]
STATIC_ROOT = BASE_DIR / 'staticfiles'

MEDIA_URL = '/media/'
MEDIA_ROOT = BASE_DIR / 'media'
```

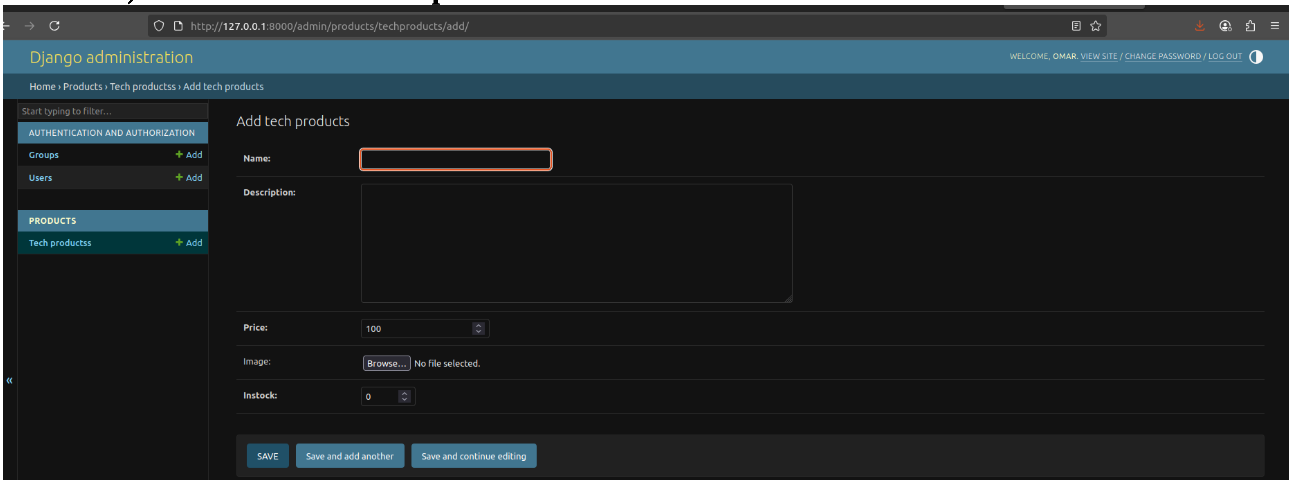
- The Model, database setting, MEDIA variables in settings.py that serves the images

4) Make Migrations


products > migrations > 0002_remove_techproducts_image_url_and_more.py > Migration
You, 1 minute ago | 1 author (You)
You, 1 minute ago | 1 author (You)
You, 1 minute ago • The Django Files for Lab2. No Django Forms used…

```python
# Generated by Django 5.2.5 on 2025-08-16 16:13

from django.db import migrations, models


class Migration(migrations.Migration):

    dependencies = [
        ('products', '0001_initial'),
    ]

    operations = [
        migrations.RemoveField(
            model_name='techproducts',
            name='image_url',
        ),
        migrations.AddField(
            model_name='techproducts',
            name='description',
            field=models.TextField(null=True),
        ),
        migrations.AddField(
            model_name='techproducts',
            name='image',
            field=models.ImageField(blank=True, null=True, upload_to='products/'),
        ),
        migrations.AlterField(
            model_name='techproducts',
            name='instock',
            field=models.IntegerField(default=0),
        ),
        migrations.AlterField(
            model_name='techproducts',
            name='price',
            field=models.DecimalField(decimal_places=2, default=100, max_digits=10, null=True),
        ),
    ]
```

5) Add model in admin panel


http://127.0.0.1:8000/admin/products/techproducts/add/
Django administration
WELCOME, OMAR. VIEW SITE / CHANGE PASSWORD / LOG OUT
Home › Products › Tech productss › Add tech products
Start typing to filter...
AUTHENTICATION AND AUTHORIZATION
Groups + Add
Users + Add
PRODUCTS
Tech productss + Add
SAVE
Save and add another
Save and continue editing

Add tech products

Name:

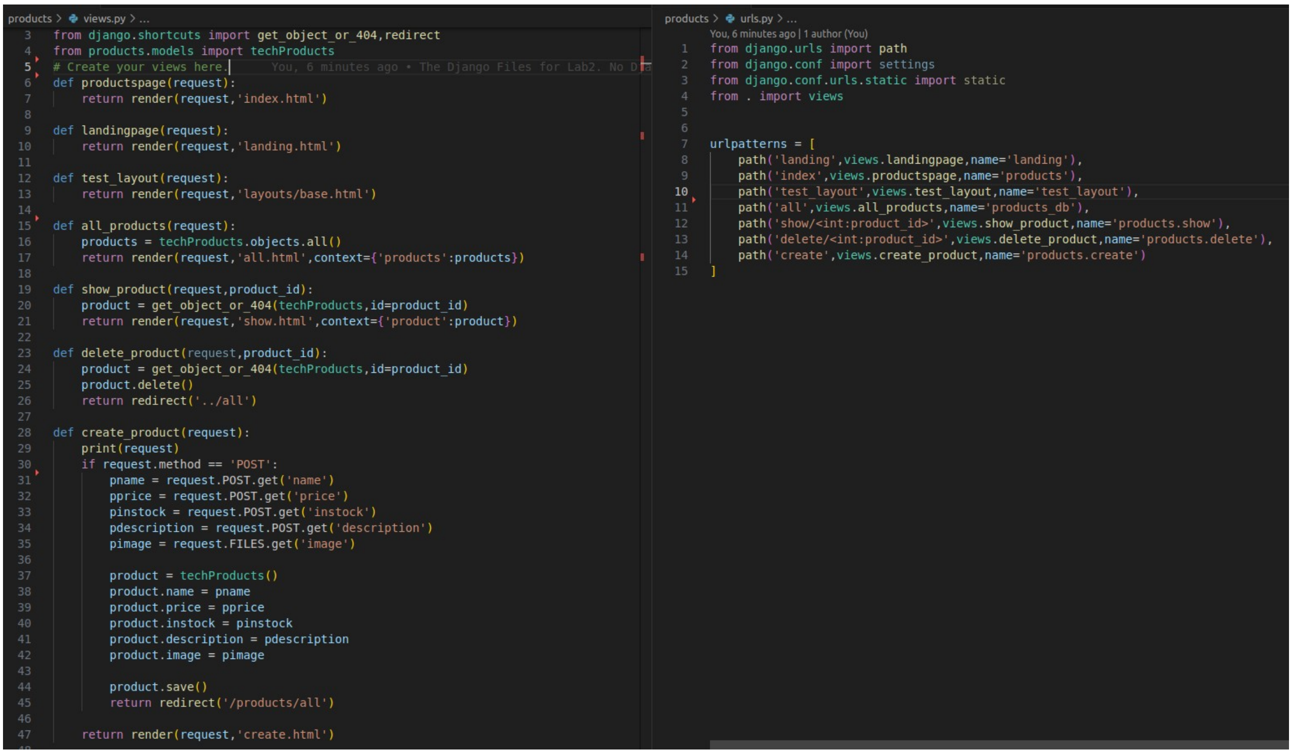
Description:

Price: 100

Image: Browse... No file selected.

Instock: 0

6) Implement Functionalities



products > views.py > ...

```python
from django.shortcuts import get_object_or_404,redirect
from products.models import techProducts
# Create your views here.       You, 6 minutes ago • The Django Files for Lab2. No D
def productspage(request):
    return render(request,'index.html')

def landingpage(request):
    return render(request,'landing.html')

def test_layout(request):
    return render(request,'layouts/base.html')

def all_products(request):
    products = techProducts.objects.all()
    return render(request,'all.html',context={'products':products})

def show_product(request,product_id):
    product = get_object_or_404(techProducts,id=product_id)
    return render(request,'show.html',context={'product':product})

def delete_product(request,product_id):
    product = get_object_or_404(techProducts,id=product_id)
    product.delete()
    return redirect('../all')

def create_product(request):
    print(request)
    if request.method == 'POST':
        pname = request.POST.get('name')
        pprice = request.POST.get('price')
        pinstock = request.POST.get('instock')
        pdescription = request.POST.get('description')
        pimage = request.FILES.get('image')

        product = techProducts()
        product.name = pname
        product.price = pprice
        product.instock = pinstock
        product.description = pdescription
        product.image = pimage

        product.save()
        return redirect('/products/all')

    return render(request,'create.html')
```

products > urls.py > ...

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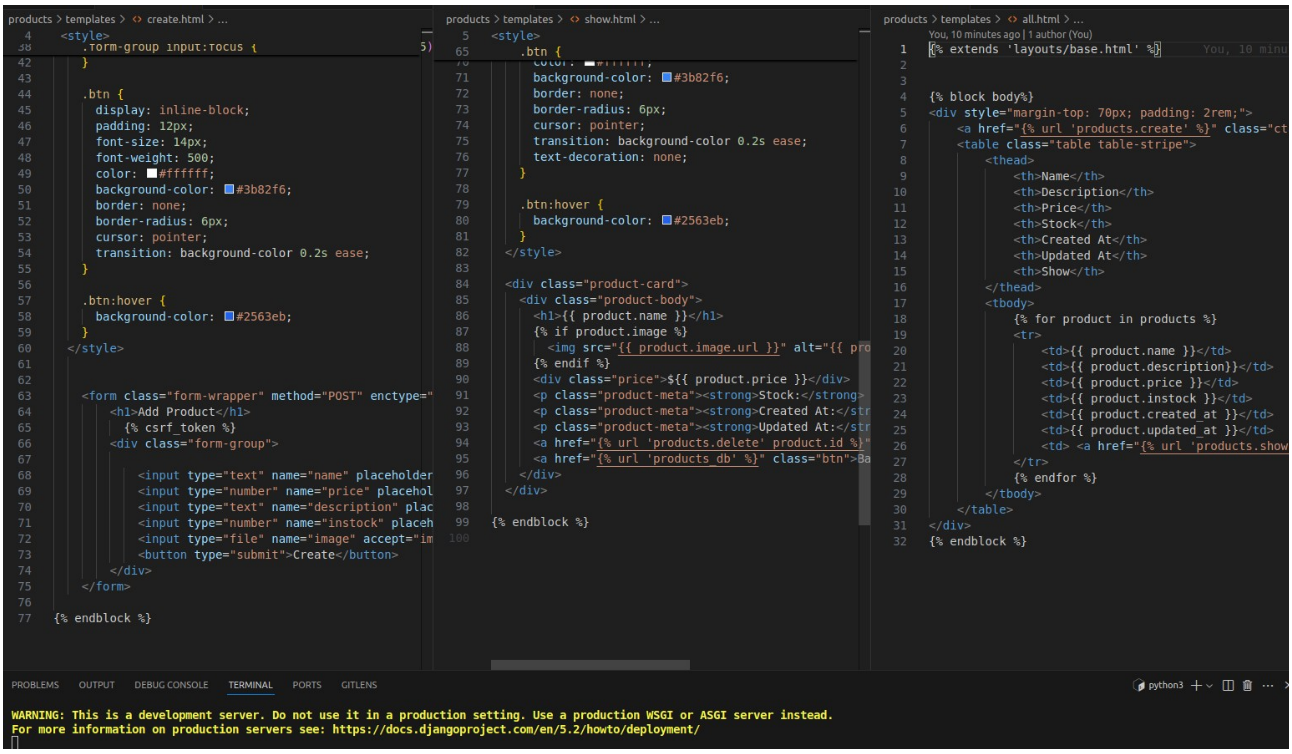
```python
from django.urls import path
from django.conf import settings
from django.conf.urls.static import static
from . import views


urlpatterns = [
    path('landing',views.landingpage,name='landing'),
    path('index',views.productspage,name='products'),
    path('test_layout',views.test_layout,name='test_layout'),
    path('all',views.all_products,name='products_db'),
    path('show/<int:product_id>',views.show_product,name='products.show'),
    path('delete/<int:product_id>',views.delete_product,name='products.delete'),
    path('create',views.create_product,name='products.create')
]
```

7) HTML FILES



products > templates > create.html > ...

```
<style>
  .form-group input:focus {
  }

  .btn {
    display: inline-block;
    padding: 12px;
    font-size: 14px;
    font-weight: 500;
    color: #ffffff;
    background-color: #3b82f6;
    border: none;
    border-radius: 6px;
    cursor: pointer;
    transition: background-color 0.2s ease;
  }

  .btn:hover {
    background-color: #2563eb;
  }
</style>


  <form class="form-wrapper" method="POST" enctype="
      <h1>Add Product</h1>
        {% csrf_token %}
      <div class="form-group">

          <input type="text" name="name" placeholder
          <input type="number" name="price" placehol
          <input type="text" name="description" plac
          <input type="number" name="instock" placeh
          <input type="file" name="image" accept="im
          <button type="submit">Create</button>
      </div>
  </form>

{% endblock %}
```

products > templates > show.html > ...

```
<style>
    .btn {
      color: #ffffff;
      background-color: #3b82f6;
      border: none;
      border-radius: 6px;
      cursor: pointer;
      transition: background-color 0.2s ease;
      text-decoration: none;
    }

    .btn:hover {
      background-color: #2563eb;
    }
  </style>

  <div class="product-card">
    <div class="product-body">
      <h1>{{ product.name }}</h1>
      {% if product.image %}
        <img src="{{ product.image.url }}" alt="{{ pro
      {% endif %}
      <div class="price">${{ product.price }}</div>
      <p class="product-meta"><strong>Stock:</strong>
      <p class="product-meta"><strong>Created At:</str
      <p class="product-meta"><strong>Updated At:</str
      <a href="{% url 'products.delete' product.id %}"
      <a href="{% url 'products_db' %}" class="btn">Ba
    </div>
  </div>

{% endblock %}
```

products > templates > all.html > ...

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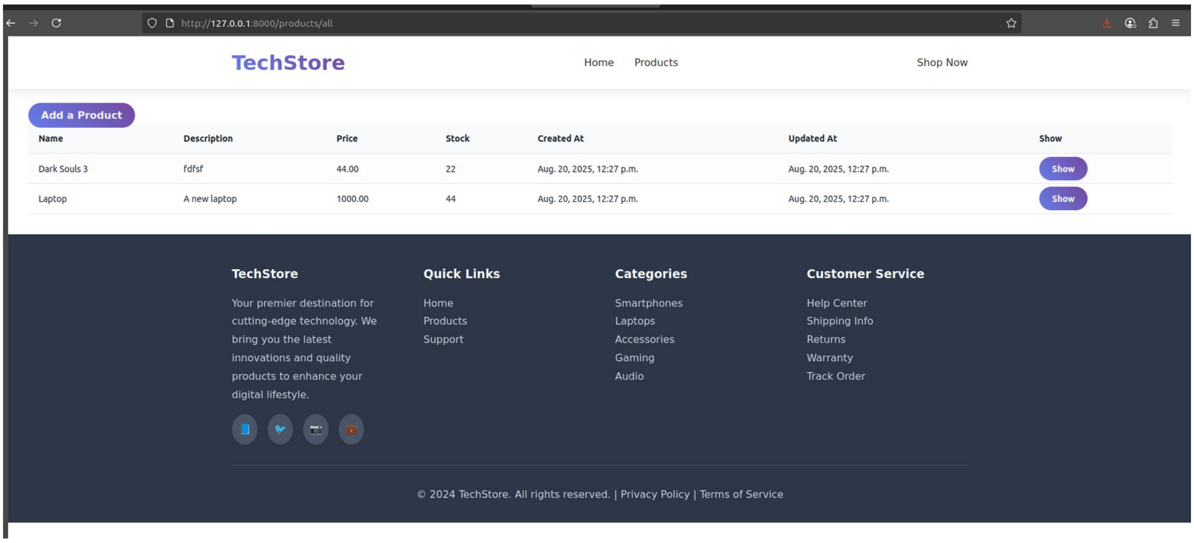
```
{% extends 'layouts/base.html' %}        You, 10 minu


{% block body%}
<div style="margin-top: 70px; padding: 2rem;">
    <a href="{% url 'products.create' %}" class="ct
    <table class="table table-stripe">
        <thead>
            <th>Name</th>
            <th>Description</th>
            <th>Price</th>
            <th>Stock</th>
            <th>Created At</th>
            <th>Updated At</th>
            <th>Show</th>
        </thead>
        <tbody>
            {% for product in products %}
            <tr>
                <td>{{ product.name }}</td>
                <td>{{ product.description}}</td>
                <td>{{ product.price }}</td>
                <td>{{ product.instock }}</td>
                <td>{{ product.created_at }}</td>
                <td>{{ product.updated_at }}</td>
                <td> <a href="{% url 'products.show
            </tr>
            {% endfor %}
        </tbody>
    </table>
</div>
{% endblock %}
```

```
WARNING: This is a development server. Do not use it in a production setting. Use a production WSGI or ASGI server instead.
For more information on production servers see: https://docs.djangoproject.com/en/5.2/howto/deployment/
```



http://127.0.0.1:8000/products/all

Name	Description	Price	Stock	Created At	Updated At	Show
Dark Souls 3	fdfsf	44.00	22	Aug. 20, 2025, 12:27 p.m.	Aug. 20, 2025, 12:27 p.m.	Show
Laptop	A new laptop	1000.00	44	Aug. 20, 2025, 12:27 p.m.	Aug. 20, 2025, 12:27 p.m.	Show

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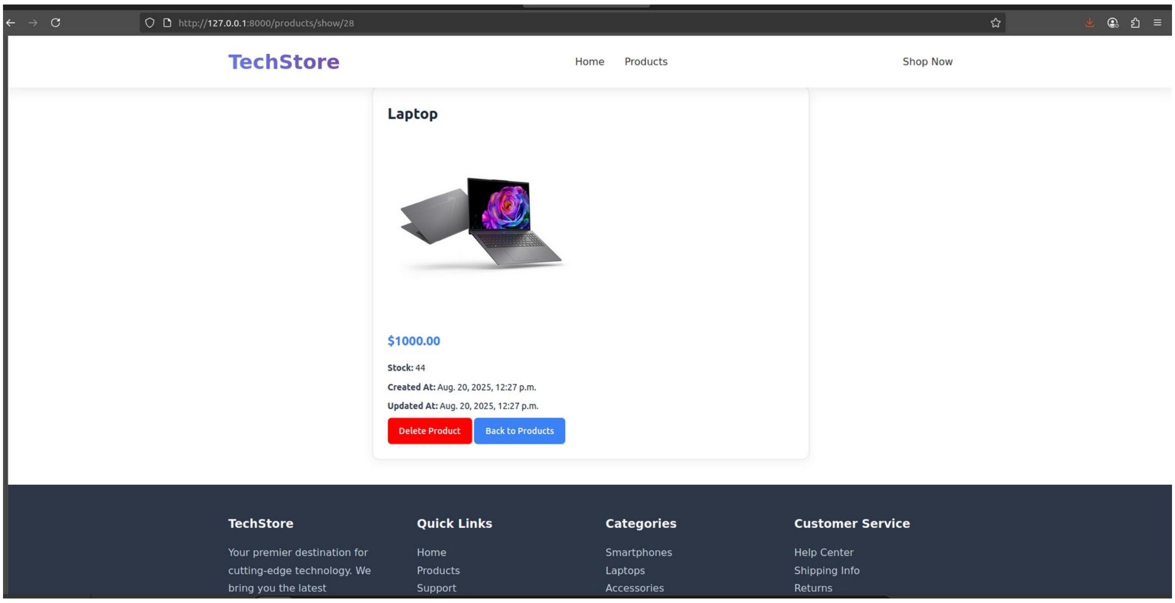

Laptop

$1000.00

Stock: 44

Created At: Aug. 20, 2025, 12:27 p.m.

Updated At: Aug. 20, 2025, 12:27 p.m.

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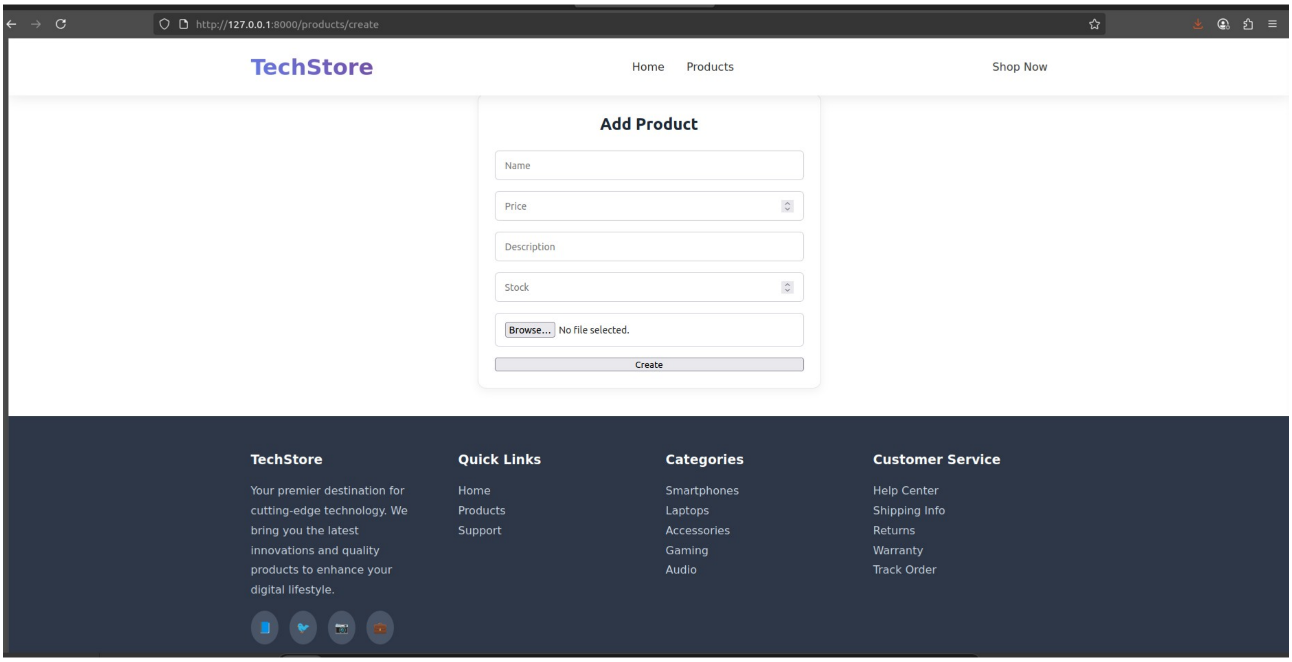

Add Product

Name

Price

Description

Stock

Browse... No file selected.

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