1. Create project and application
    a. Django>django-admin startproject orm_and_frontend
    b. Django>cd orm_and_frontend
    c. Django\orm_and_frontend>python manage.py startapp product
2. Open project in vs code
3. Register application in settings.py
4. Create database in workbench
   create database orm_and_frontend;
   use orm_and_frontend;
5. Register database in settings.py

settings.py

```
orm_and_frontend > settings.py > ...
76
77  DATABASES = {
78      'default': {
79          'ENGINE': 'django.db.backends.mysql',
80          'NAME': 'orm_and_frontend',
81          'USER':'root',
82          'PASSWORD':'root',
83          'HOST':'localhost',
84          'PORT':'3306'
85      }
86  }
```

6. Create model class for Products, so in models.py

models.py

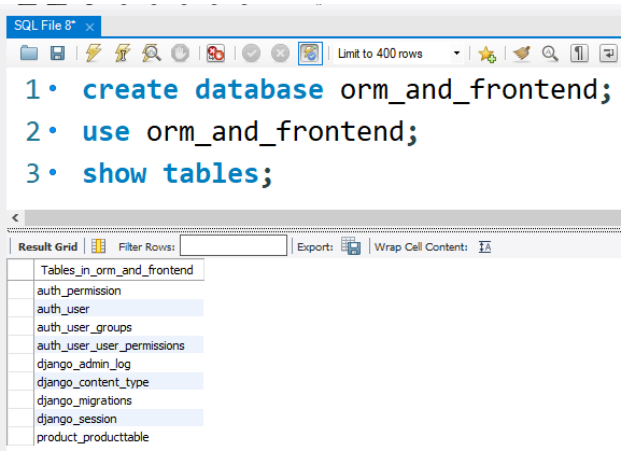
```
product > models.py > ProductTable
1   from django.db import models
2
3   # Create your models here.
4   class ProductTable(models.Model):
5       name = models.CharField(max_length=50)
6       price = models.FloatField()
7       details=models.CharField(max_length=150)
8       category = models.IntegerField()
9       is_active= models.BooleanField()
10      rating = models.FloatField()
11
12      def __str__(self) :
13          return self.name + " added to table"
```

7. Register model class in admin.py

admin.py

```
product > admin.py > ...
1   from django.contrib import admin
2   from product.models import ProductTable
3
4   # Register your models here.
5   class ProductAdmin(admin.ModelAdmin):
6       list_display = ['id','name','price','details','category','is_active','rating']
7
8   admin.site.register(ProductTable,ProductAdmin)
9
```

8. Makemigrations
    a. Django\orm_and_frontend>python manage.py makemigrations
9. Migrate
    a. Django\orm_and_frontend>python manage.py migrate
10. Check tables in orm_and_frontend database (in workbench)



11. Providing categories and drop down option
    a. Make change in ProductTable model

```python
# models.py
# product > models.py > ProductTable > __str__
from django.db import models

# Create your models here.
class ProductTable(models.Model):
    CATEGORIES = ((1,'Mobile'),(2,'Clothes'),(3,'Shoes'))
    name = models.CharField(max_length=50)
    price = models.FloatField()
    details=models.CharField(max_length=150)
    category = models.IntegerField(choices=CATEGORIES)
    is_active= models.BooleanField()
    rating = models.FloatField()

    def __str__(self) :
        return self.name + " added to table"
```

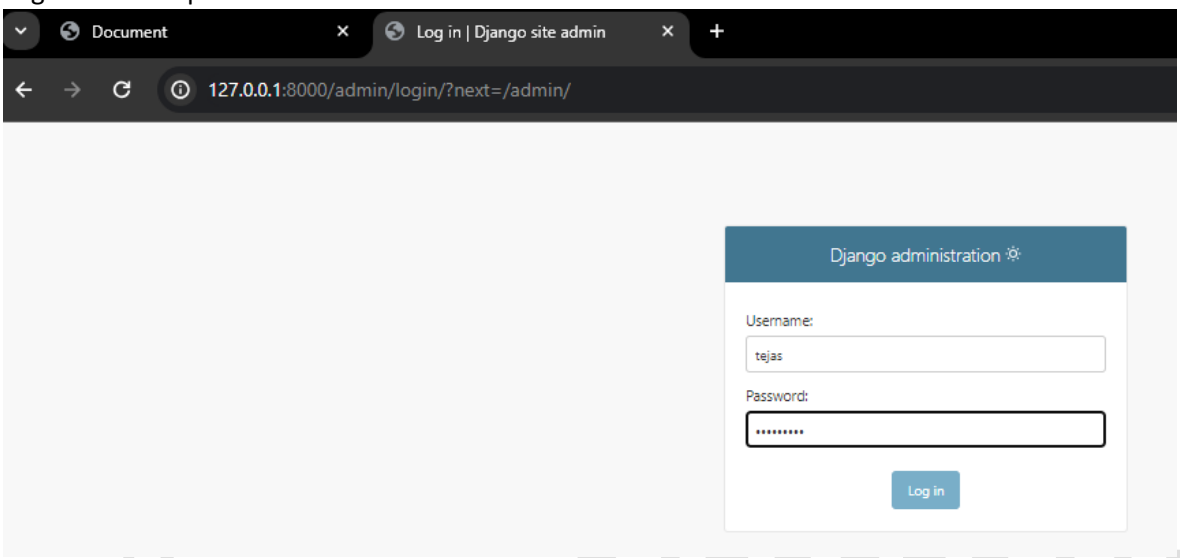
    b. Since we have made changes in model, we have to do makemigrations and migrate

```
C:\TEJAS KASARE (Very imp folder)\my notes\Django\orm_and_frontend>python manage.py makemigrations
Migrations for 'product':
  product\migrations\0002_alter_producttable_category.py
    - Alter field category on producttable

C:\TEJAS KASARE (Very imp folder)\my notes\Django\orm_and_frontend>python manage.py migrate
Operations to perform:
  Apply all migrations: admin, auth, contenttypes, product, sessions
Running migrations:
  Applying product.0002_alter_producttable_category... OK
```

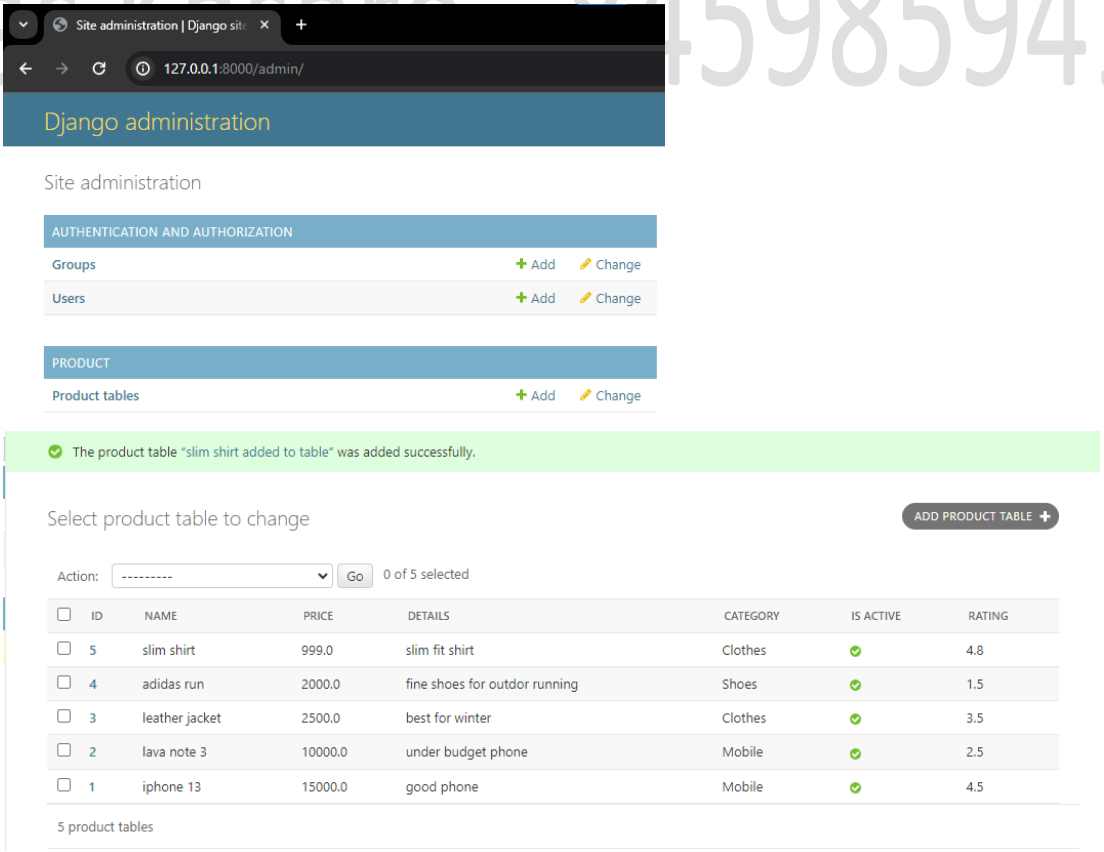
12. Adding some products into product table from admin panel
    a. Create superuser

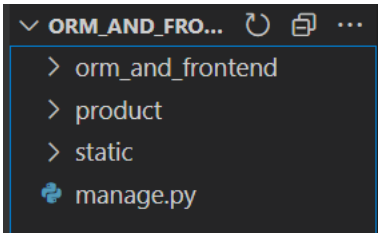
```
C:\TEJAS KASARE (Very imp folder)\my notes\Django\orm_and_frontend>python manage.py createsuperuser
Username (leave blank to use 'admin'): tejas
Email address: tejas@gmail.com
Password:
Password (again):
Superuser created successfully.
```

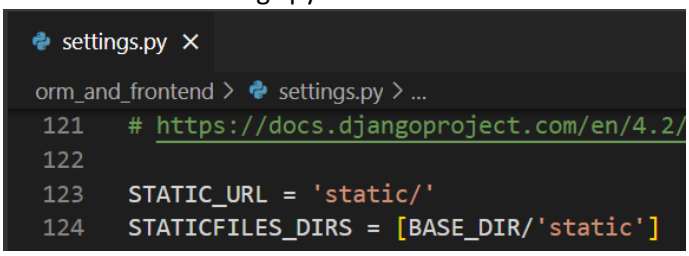
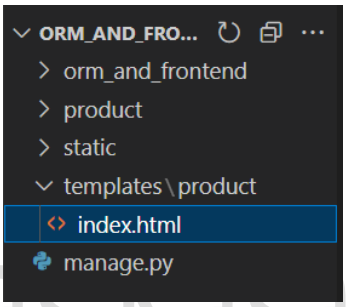
    b. runserver
    c. Login to admin panel

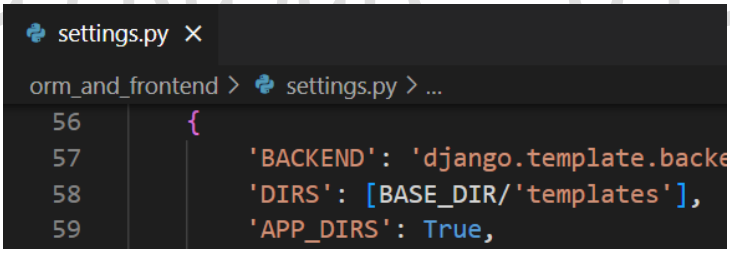


    d. Add 4-5 procducts (min 1 of each catergory)



13. Creating static folder to store css file
    a. 

14. Register static folder in settings.py
    a. 
```
settings.py
orm_and_frontend > settings.py > ...
121  # https://docs.djangoproject.com/en/4.2/
122
123  STATIC_URL = 'static/'
124  STATICFILES_DIRS = [BASE_DIR/'static']
```
15. Create templates folder, inside templates folder create product folder, create index.html in product folder
    a. 

16. Register templates folder
    a. 
```
settings.py
orm_and_frontend > settings.py > ...
56      {
57          'BACKEND': 'django.template.backe
58          'DIRS': [BASE_DIR/'templates'],
59          'APP_DIRS': True,
```
17. In static folder do following :
    a. Create css folder > create product_style.css
    b. Create images folder > add one shirt image in it (200x200 size)
    c. add following code in it

```css
.container
{
   width: 100%;
   display: flex;
   flex-direction: row;
}

.filter_area
{
   width: 20%;
   display: flex;
   /* background-color: aqua; */
   border: 1px dashed black;
   flex-direction: column;
   padding: 10px;

}
```

```css
.product_area
{
   width: 80%;
   display: flex;
   margin-left: 2px;
   /* border: 1px dashed black; */
   flex-wrap: wrap;

}


.card
{
   display: flex;
   flex-direction: column;
   width: 25%;

}

.card .card-items
{
   border: 1px solid black;
   padding: 10px;
   border-radius: 10px;
   display: flex;
   flex-direction: column;
   margin: 10px;
   align-items: center;
   justify-content: center;
   box-shadow: 3px 5px 5px grey;
}

.card .card-items  img
{
   border-radius: 5%;
   height: 150px;
   width: 150px;
   padding: 5px;
}

.card .card-items button
{
   border-radius: 20px;
   padding: 12px;
   border: none;
}
.card .card-items #add_to_cart_btn
{
   background-color: #F7CA00;
}

.card .card-items #buy_now_btn
{
   background-color: #FFA41C;
}

.card .card-items  button a
{
   text-decoration: none;
   color: black;
}

.card .card-items .card-text
{
   margin-left: 10px;
}
```

18. in templates folder do following
    a. create product folder > create index.html
    b. add following code in it

```
<!DOCTYPE html>
<html lang="en">
   {% load static %}
<head>
   <meta charset="UTF-8">
   <meta name="viewport" content="width=device-width, initial-scale=1.0">
   <title>Document</title>
   <link rel="stylesheet" href="{% static 'css/product_style.css' %}">
</head>
<body>
   <div class="navbar"></div>
   <div class="container">
      <div class="filter_area">
         <div class="by_category">
            <h2>Filter By Categoty</h2>
            <ul>
               <li><a href="">All</a></li>
               <li><a href="">By Mobile</a></li>
               <li><a href="">By Clothes</a></li>
               <li><a href="">By Shoes</a></li>
            </ul>
         </div>
<div>-------------------------------------------------</div>
         <div class="by_price">
            <h2>Filter By Price</h2>
            <form action="">
               <label for="">Min:</label>
               <input type="number"> <br><br>
               <label for="">Max:</label>
               <input type="number"> <br><br>
               <input type="submit">
            </form>
         </div>
<div>-------------------------------------------------</div>
         <div class="sort_by_price">
            <h2>Sort By Price</h2>
            <ul>
               <li><a href="">High to Low</a></li>
               <li><a href="">Low to High</a></li>
            </ul>
         </div>
<div>-------------------------------------------------</div>
         <div class="by_rating">
            <h2>Sort By Rating</h2>
            <ul>
               <li><a href="">3 and above</a></li>
               <li><a href="">4 and above</a></li>
            </ul>
         </div>
<div>-------------------------------------------------</div>
      </div>
      <div class="product_area">
         <div class="card">
            <div class="card-items">
               <img src="{% static 'images/shirt.webp' %}" alt="">
               <div class="card-text">
                  <p>Cotton King</p>
                  <p>499</p>
                  <button id="add_to_cart_btn"><a href="">Add to Cart</a></button>
                  <button id="buy_now_btn"><a href="">Buy Now</a></button>
               </div>
            </div>
         </div>
      </div>
   </div>
</body>
</html>
```

19. create view to display index.html file

views.py

```
product > views.py > ...
1   from django.shortcuts import render
2
3   # Create your views here.
4   def index(request):
5       return render(request,'product/index.html')
6
```

20. create product_urls.py in product folder

product_urls.py

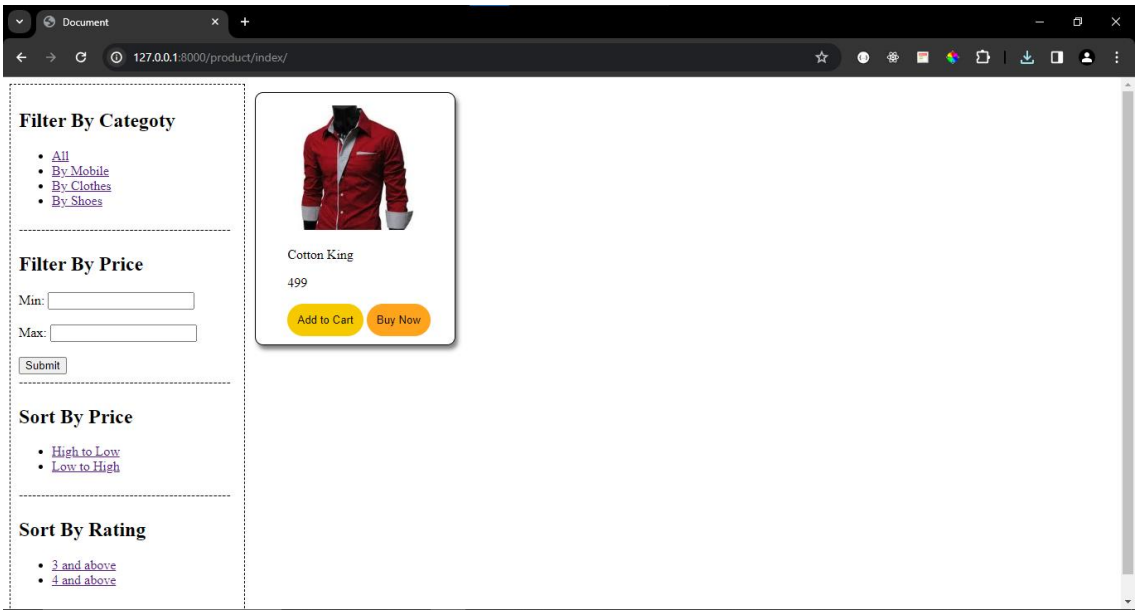
```
product > product_urls.py > ...
1   from django.urls import path
2   from product import views
3
4   urlpatterns = [
5       path('index/', views.index),
6   ]
```

21. create url for above application level url in project level url (urls.py)

urls.py

```
orm_and_frontend > urls.py > ...
16  """
17  from django.contrib import admin
18  from django.urls import path,include
19
20  urlpatterns = [
21      path('admin/', admin.site.urls),
22      path('product/', include('product.product_urls')),
23  ]
```

22. runserver and check for product/index url



OPERATIONS

1. get all products and display in index.html
    a. add logic to fetch data in index() view

views.py

```python
from django.shortcuts import render
from product.models import ProductTable

# Create your views here.
def index(request):
    data={}
    #ProductTable.objects.all() this will fetch non active product also. so it is better to use filter
    fetched_products=ProductTable.objects.filter(is_active=True)
    data['products']=fetched_products
    return render(request,'product/index.html',context=data)

```

    b. pass fetched data to index.html and display using loop

index.html

```html
<div>-------------------------------------------------</div>
        </div>
        <div class="product_area">
            {% for product in products %}
            <div class="card">
                <div class="card-items">
                    <img src="{% static 'images/shirt.webp' %}" alt="">
                    <div class="card-text">
                        <p>{{product.name|upper}}</p>
                        <p>{{product.price}}</p>
                        <button id="add_to_cart_btn"><a href="">Add to Cart</a></button>
                        <button id="buy_now_btn"><a href="">View More</a></button>
                    </div>
                </div>
            </div>
            {% endfor %}
        </div>
    </div>
</body>
</html>
```

IMPORTANT : in above code I have changed Buy Now button to View More
We will add buy now option when we show each product indivisibly (product details)

2. Implementing Filter by category logic
    a. Create view

views.py

```python
def filter_by_category(request,category_value):
    #select * from product where is_active=True and category=category_value;
    #ProductTable.objects.filter(is_active=True , category=category_value)
    #from django.db.models import Q
    data={}
    q1 = Q(is_active=True)
    q2 = Q(category=category_value)
    filterd_products=ProductTable.objects.filter(q1 & q2)
    data['products']=filterd_products
    return render(request,'product/index.html',context=data)
```

    b. Create url for view

product_urls.py

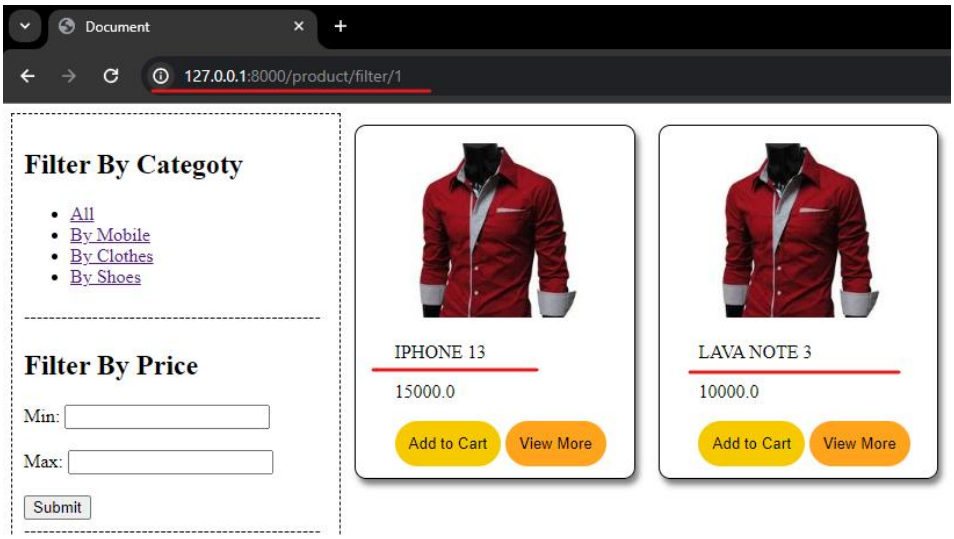
```python
from django.urls import path
from product import views

urlpatterns = [
    path('index/', views.index),
    path('filter/<category_value>', views.filter_by_category),
]
```


    c. Use url in index.html

index.html

```html
<div class="by_category">
    <h2>Filter By Categoty</h2>
    <ul>
        <li><a href="/product/index">All</a></li>
        <li><a href="/product/filter/1">By Mobile</a></li>
        <li><a href="/product/filter/2">By Clothes</a></li>
        <li><a href="/product/filter/3">By Shoes</a></li>
    </ul>
</div>
```

Result :



3. Implementing sorting logic (high to low and low to high)
    a. Create view

views.py

```
product > views.py > ...
23
24  def sort_by_price(request,sort_value):
25      #select * from product order by salary desc;
26      data={}
27      if sort_value=='asc':
28          price = 'price'
29      else:
30          price = '-price'
31      sorted_products=ProductTable.objects.filter(is_active=True).order_by(price)
32      data['products']=sorted_products
33      return render(request,'product/index.html',context=data)
34
```

    b. Create url for view

product_urls.py

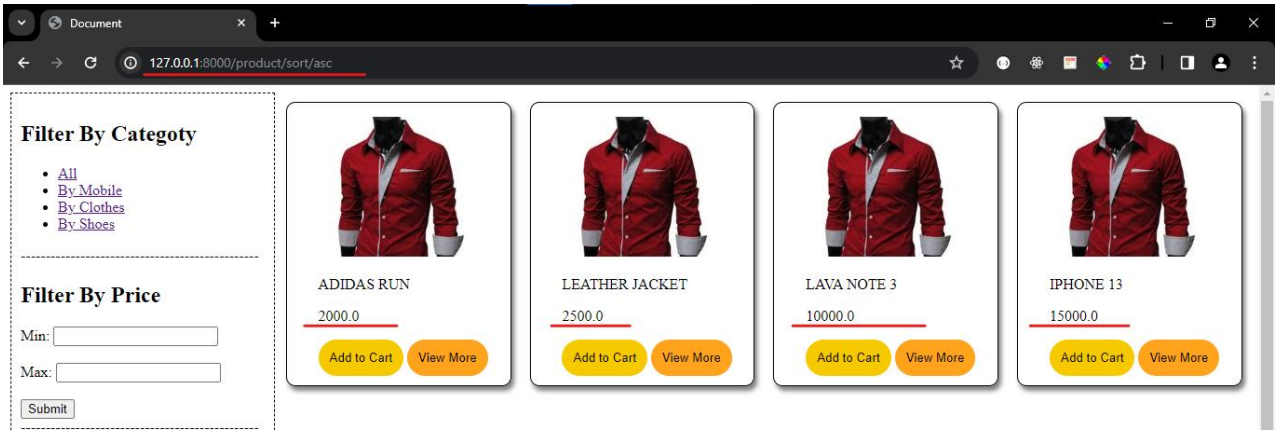
```
product > product_urls.py > ...
1  from django.urls import path
2  from product import views
3
4  urlpatterns = [
5      path('index/', views.index),
6      path('filter/<category_value>', views.filter_by_category),
7      path('sort/<sort_value>', views.sort_by_price),
8  ]
```

    c. Use url in index.html

index.html

```
templates > product > index.html
34  <div>--------------------------------------------------</div>
35          <div class="sort_by_price">
36              <h2>Sort By Price</h2>
37              <ul>
38                  <li><a href="/product/sort/desc">High to Low</a></li>
39                  <li><a href="/product/sort/asc">Low to High</a></li>
40              </ul>
41          </div>
42  <div>--------------------------------------------------</div>
```

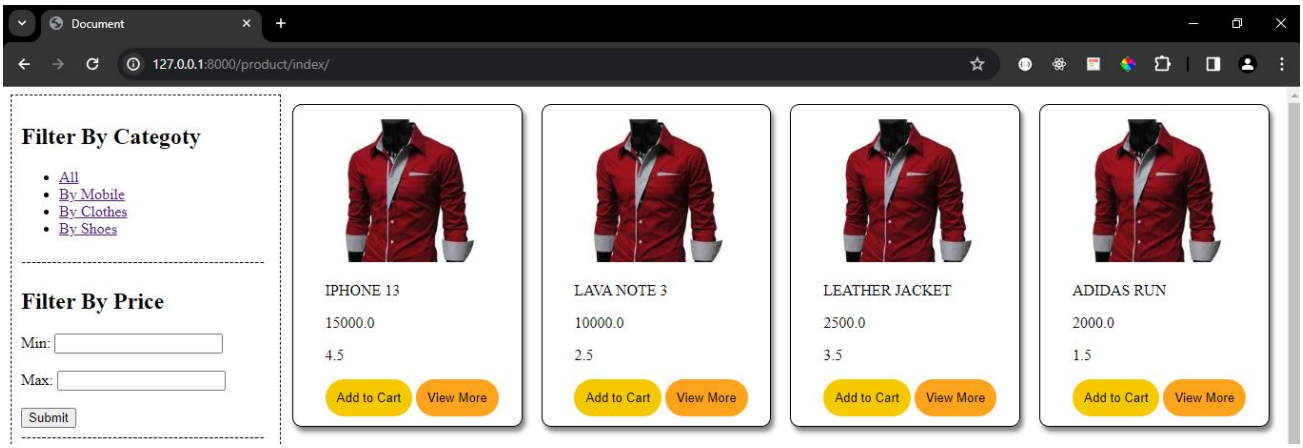
    d. Result



4. Implementing filter by rating logic
    a. Since we are not displaying ratings in index.html, lets display first

```
iv class="card-items">
 <img src="{% static 'images/shirt.webp' %}" alt="">
 <div class="card-text">
    <p>{{product.name|upper}}</p>
    <p>{{product.price}}</p>
    <p>{{product.rating}}</p>
    <button id="add_to_cart_btn"><a href="">Add to Cart</a></button>
    <button id="buy_now_btn"><a href="">View More</a></button>
 </div>
```

    b. Result



    c. Create view

views.py

product > views.py > filter_by_price_range

```
35
36  def filter_by_rating(request,rating_value):
37      #select * from product where is_active=True and category=category_value;
38      #ProductTable.objects.filter(is_active=True , category=category_value)
39      #from django.db.models import Q
40      data={}
41      q1 = Q(is_active=True)
42      q2 = Q(rating__gt=rating_value)
43      filterd_products=ProductTable.objects.filter(q1 & q2)
44      data['products']=filterd_products
45      return render(request,'product/index.html',context=data)
46
```

    d. Create url for view

product_urls.py

product > product_urls.py > ...

```
1  from django.urls import path
2  from product import views
3
4  urlpatterns = [
5      path('index/', views.index),
6      path('filter/<category_value>', views.filter_by_category),
7      path('sort/<sort_value>', views.sort_by_price),
8      path('rating/<rating_value>', views.filter_by_rating),
9  ]
```

e. Use url in index.html

index.html

templates > product > index.html

```
42  <div>----------------------------------------------------</div>
43          <div class="by_rating">
44              <h2>Sort By Rating</h2>
45              <ul>
46                  <li><a href="/product/rating/3">3 and above</a></li>
47                  <li><a href="/product/rating/4">4 and above</a></li>
48              </ul>
49          </div>
50  <div>----------------------------------------------------</div>
```

5. Filter by price range
   a. Create view

views.py

product > views.py > filter_by_price_range

```
47
48  def filter_by_price_range(request):
49      data={}
50      min = request.GET['min']
51      max = request.GET['max']
52      q1 = Q(price__gte=min)
53      q2 = Q(price__lte=max)
54      q3 = Q(is_active=True)
55      filterd_products=ProductTable.objects.filter(q1 & q2 & q3)
56      data['products']=filterd_products
57      return render(request,'product/index.html',context=data)
```


   b. Create url for view

product_urls.py

product > product_urls.py > ...

```
1   from django.urls import path
2   from product import views
3
4   urlpatterns = [
5       path('index/', views.index),
6       path('filter/<category_value>', views.filter_by_category),
7       path('sort/<sort_value>', views.sort_by_price),
8       path('rating/<rating_value>', views.filter_by_rating),
9       path('price', views.filter_by_price_range),
10  ]
```

IMPORTANT : there is no / after price

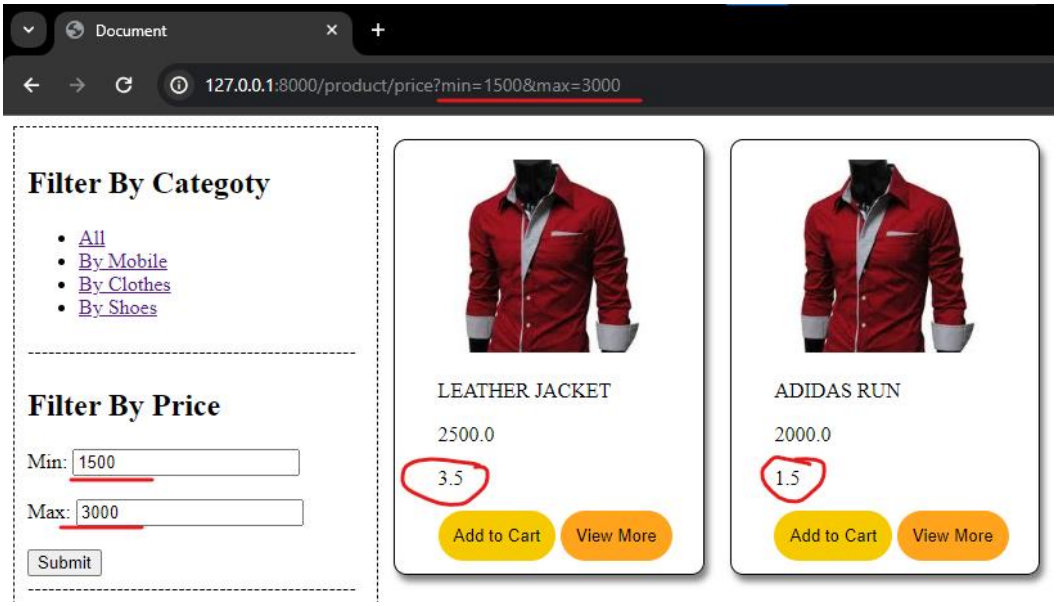
   c. User url in index.html

index.html

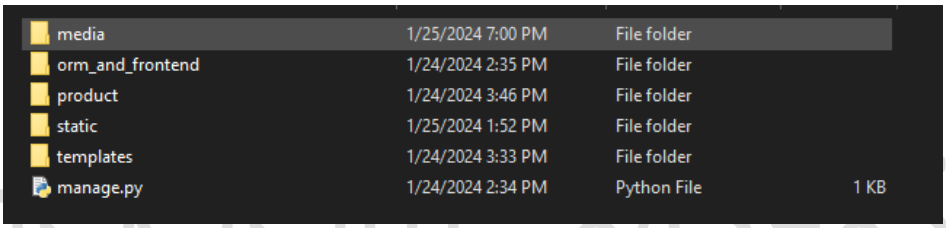
templates > product > index.html

```
23  <div>----------------------------------------------------</div>
24          <div class="by_price">
25              <h2>Filter By Price</h2>
26              <form action="/product/price">
27                  <label for="">Min:</label>
28                  <input type="number" name="min"> <br><br>
29                  <label for="">Max:</label>
30                  <input type="number" name="max"> <br><br>
31                  <input type="submit">
32              </form>
33          </div>
34  <div>----------------------------------------------------</div>
```

Result :

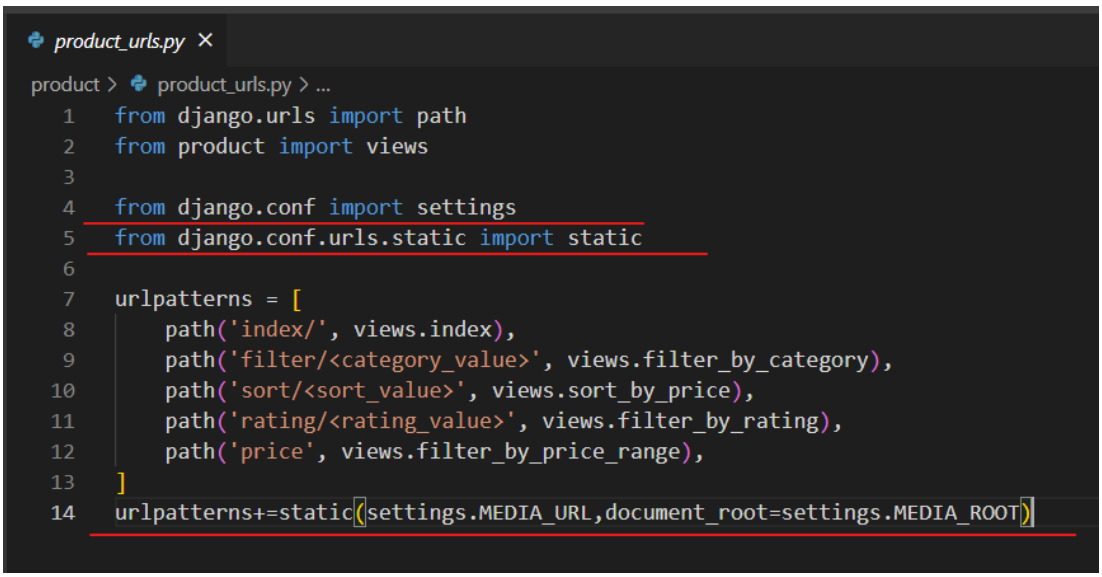


6. Uploading Image
   a. Create media project in project like we create templates folder



   b. Register media folder in settings.py

   c. Create media url in product_urls.py (application level)



d. Since we are not having image field in our Product model, so lets add image field in it

models.py

```
product > models.py > ProductTable > __str__
1   from django.db import models
2
3   # Create your models here.
4   class ProductTable(models.Model):
5       CATEGORIES = ((1,'Mobile'),(2,'Clothes'),(3,'Shoes'))
6       name = models.CharField(max_length=50)
7       price = models.FloatField()
8       details=models.CharField(max_length=150)
9       category = models.IntegerField(choices=CATEGORIES)
10      is_active= models.BooleanField()
11      rating = models.FloatField()
12      image=models.ImageField(upload_to='image')
13
14      def __str__(self) :
15          return self.name + " added to table"
```

e. Makemigrations

```
C:\TEJAS KASARE (Very imp folder)\my notes\Django\orm_and_frontend>python manage.py makemigrations
It is impossible to add a non-nullable field 'image' to producttable without specifying a default. This
 is because the database needs something to populate existing rows.
Please select a fix:
 1) Provide a one-off default now (will be set on all existing rows with a null value for this column)
 2) Quit and manually define a default value in models.py.
Select an option: 1
Please enter the default value as valid Python.
The datetime and django.utils.timezone modules are available, so it is possible to provide e.g. timezon
e.now as a value.
Type 'exit' to exit this prompt
>>> 0
Migrations for 'product':
  product\migrations\0003_producttable_image.py
    - Add field image to producttable

C:\TEJAS KASARE (Very imp folder)\my notes\Django\orm_and_frontend>
```

After running makemigrations, you will get this error because

f. Migrate

g. Add “image” in list_display in admin.py

admin.py

```
product > admin.py > ...
1   from django.contrib import admin
2   from product.models import ProductTable
3
4   # Register your models here.
5   class ProductAdmin(admin.ModelAdmin):
6       list_display = ['id','name','price','details','category','is_active','rating','image']
7
8   admin.site.register(ProductTable,ProductAdmin)
```

h. Runserver

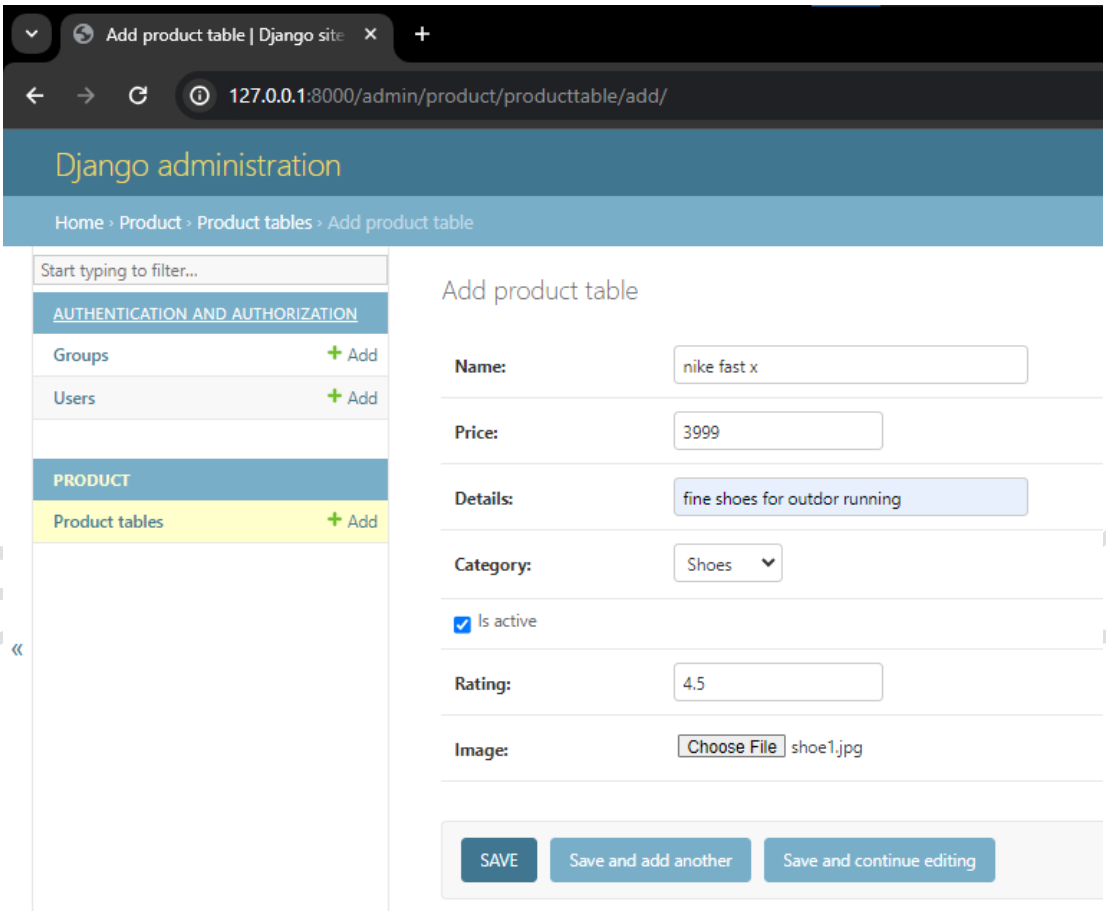
i. Check table in workbench, you will get image filed with default value 0

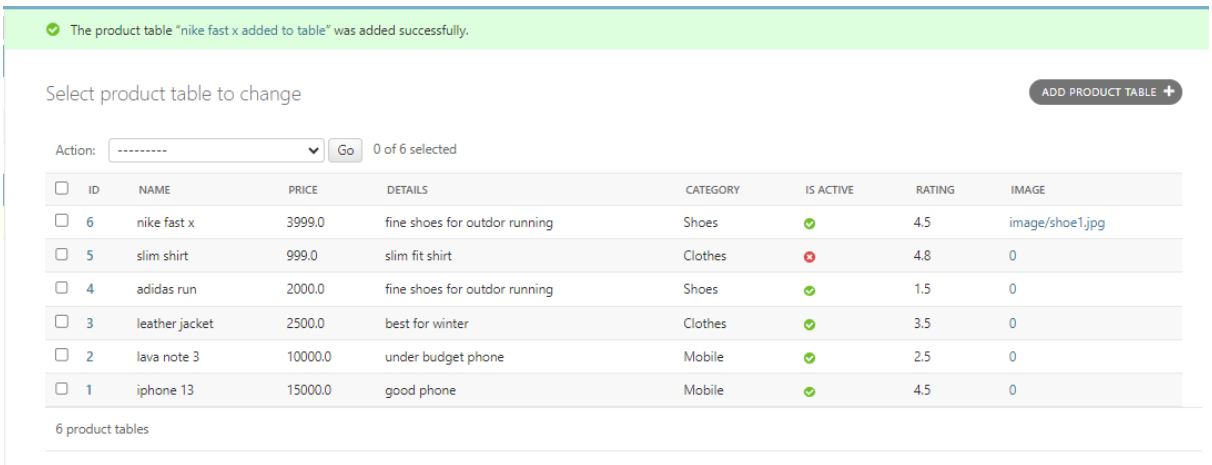
```
5 •  select * from product_producttable;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap

id	name	price	details	category	is_active	rating	image
1	iphone 13	15000	good phone	1	1	4.5	0
2	lava note 3	10000	under budget phone	1	1	2.5	0
3	leather jacket	2500	best for winter	2	1	3.5	0
4	adidas run	2000	fine shoes for outdor running	3	1	1.5	0
5	slim shirt	999	slim fit shirt	2	0	4.8	0
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

j. Download one shoe image (200x200) and add one shoe product with image

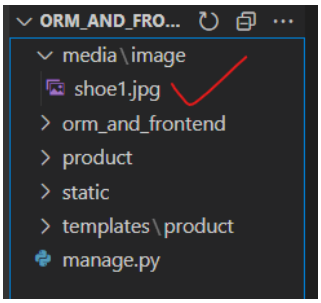




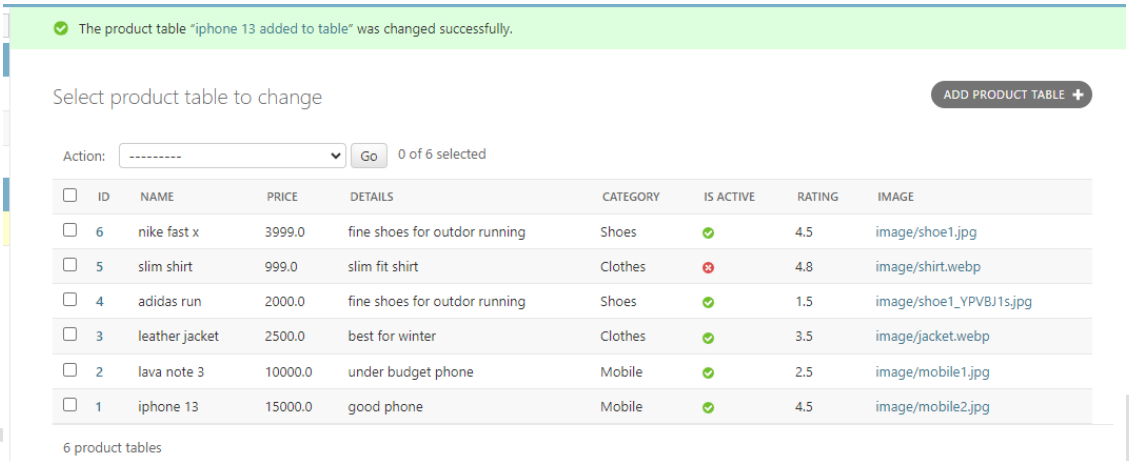
k. Check in media folder –

i. You will get image folder

ii. In image folder you will get your uploaded image



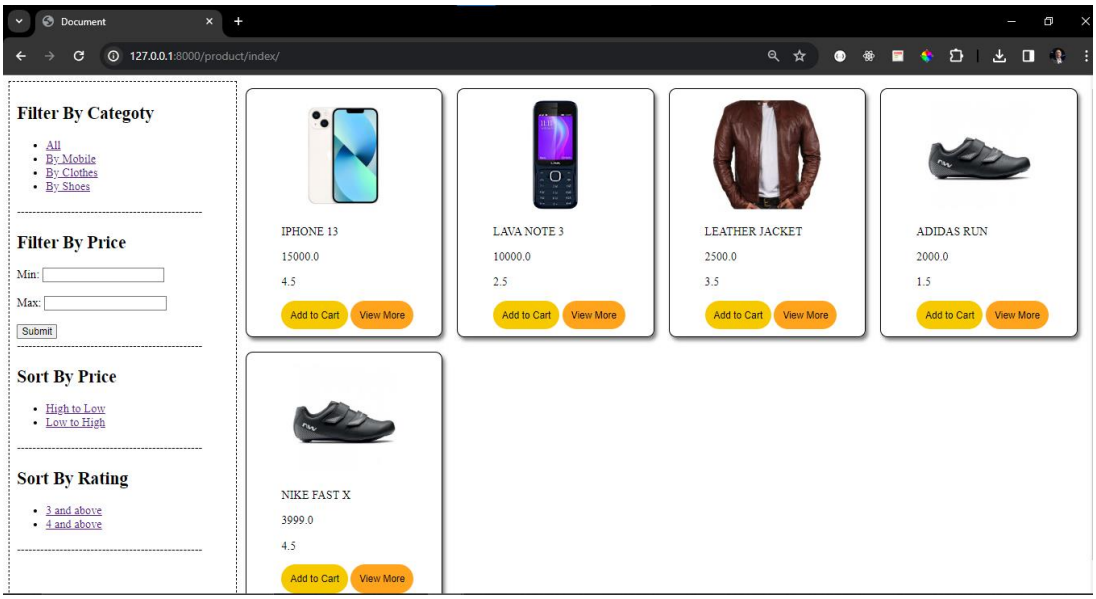
l. Add image for other products



m. Show images dynamically in index.html for each product

```
index.html
templates > product > index.html > html > body > div.container > div.product_area > div.card > div.card-items >
54          <div class="card">
55              <div class="card-items">
56                  <!-- <img src="{% static 'images/shirt.webp' %}" alt=""> -->
57                  <img src="http://127.0.0.1:8000/product/media/{{product.image}}" alt="">
58                  <div class="card-text">
59                      <p>{{product.name|upper}}</p>
60                      <p>{{product.price}}</p>
```

OUTPUT :



7. View More Functionality (View individual product details)
    a. Create view to fetch product based on id

views.py

product > views.py > product_detail

```python
def product_detail(request,pid):
    product=ProductTable.objects.get(id=pid)
    return render(request,'product/product_detail.html',{'product':product})
```

    b. Create html file : product_detail.html in templates>product> product_detail.html

product_detail.html

templates > product > product_detail.html

```html
<html lang="en">
    {% load static %}
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
    <link rel="stylesheet" href="{% static 'css/product_style.css' %}">
</head>
<body>
    <div class="card">
        <div class="card-items">
            <!-- <img src="{% static 'images/shirt.webp' %}" alt=""> -->
            <img src="http://127.0.0.1:8000/product/media/{{product.image}}" alt="">
            <div class="card-text">
                <p>{{product.name|upper}}</p>
                <p>{{product.details}}</p>
                <p>{{product.price}}</p>
                <p>{{product.rating}}</p>
                {% if product.category == 1 %}
                <p>Mobile</p>
                {% elif product.category == 2 %}
                <p>Clothes</p>
                {% else %}
                <p>Shoes</p>
                {% endif %}
                <button id="add_to_cart_btn"><a href="">Add to Cart</a></button>
                <button id="buy_now_btn"><a href="">Buy Now</a></button>
            </div>
        </div>
    </div>
</body></html>
```

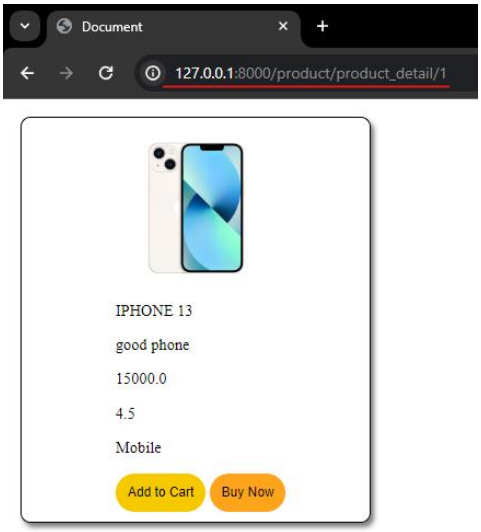
    c. Create url for above view

```python
urlpatterns = [
    path('index/', views.index),
    path('filter/<category_value>', views.filter_by_category),
    path('sort/<sort_value>', views.sort_by_price),
    path('rating/<rating_value>', views.filter_by_rating),
    path('price', views.filter_by_price_range),
    path('product_detail/<pid>', views.product_detail),
]
```

    d. Use url in index.html on view more button :

```html
<div class="card-text">
    <p>{{product.name|upper}}</p>
    <p>{{product.price}}</p>
    <p>{{product.rating}}</p>
    <button id="add_to_cart_btn"><a href="">Add to Cart</a></button>
    <button id="buy_now_btn"><a href="/product/product_detail/{{product.id}}">View More</a></button>
</div>
```

e. Check output :

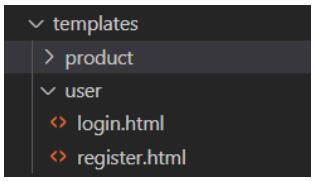


8. Add to cart functionality :

To add product in the cart, we need user id. Since we havnt implemented user login function in this project ,so let's add that functionality

a. Register User

i. Create user folder in templates folder and create register.html and login.html file in it



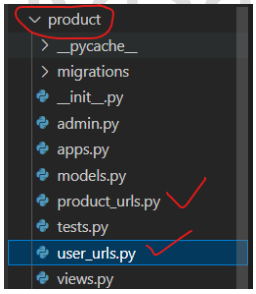
ii. code for register.html (not image. You can copy paste)

```
<!DOCTYPE html>
<html lang="en">
<head>
   <meta charset="UTF-8">
   <meta name="viewport" content="width=device-width, initial-scale=1.0">
   <title>Document</title>
</head>
<body>
   <table align="center" border="1" cellpadding="5" cellspacing="5">
      <form method="POST">
         {% csrf_token %}
      <thead>
         <tr>
            <th colspan="2">
               Registration Form
               {% if error_msg %}
               <p style="color: red; font-weight: lighter;">{{error_msg}}</p>
               {% endif %}
            </th>

         </tr>
      </thead>
      <tbody>
         <tr>
            <td><label for="username">UserName</label></td>
            <td><input type="text" id="username" name="username" value=""></td>
         </tr>
         <tr>
            <td><label for="password">Password</label></td>
            <td><input type="password" id="password" name="password" value=""></td>
         </tr>
         <tr>
            <td><label for="password2">Confirm Password</label></td>
            <td><input type="password" id="password2" name="password2" value=""></td>
         </tr>
         <tr>
            <td><input type="reset"></td>
            <td><input type="submit"></td>
         </tr>
         <tr>
            <td colspan="2">
               <p align="center">Alredy User? Click <a href="/user/login">here</a> to Login</p>
            </td>
         </tr>
      </tbody>
   </form>
   </table>
</body>
</html>
```

iii. create view to show registration form and logic to register(I have used entire same logic same as we gave done in previous project number 8 : user login registration and session)

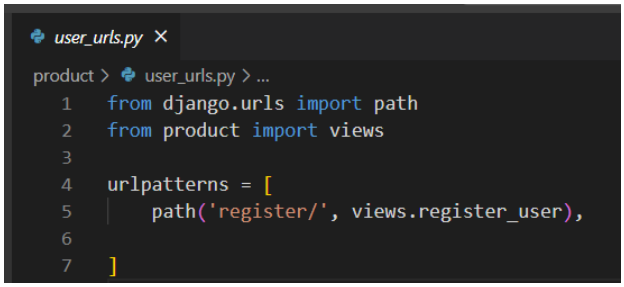
```
def register_user(request):
   data={}
   if request.method=="POST":
      uname=request.POST['username']
      upass=request.POST['password']
      uconf_pass=request.POST['password2']
      #implementing validation
      if (uname=='' or upass =='' or uconf_pass ==''):
         data['error_msg']='Fileds cant be empty'
         return render(request,'user/register.html',context=data)
      elif(upass!=uconf_pass):
         data['error_msg']='Password and confirm password does not matched'
         return render(request,'user/register.html',context=data)
      elif(User.objects.filter(username=uname).exists()):
         data['error_msg']=uname + ' alredy exist'
         return render(request,'user/register.html',context=data)
      else:
         user=User.objects.create(username=uname)
         #here username and password aee column names present inside auth_user table
         user.set_password(upass) #encrypting passowrd
         user.save() #saving data into table
         # return HttpResponse("Registraion done")
         return redirect('/user/login')
   return render(request,'user/register.html')
```


iv. create url pattern for above view at application level
I have created user_urls.py (like product_urls.py) to manage user level urls

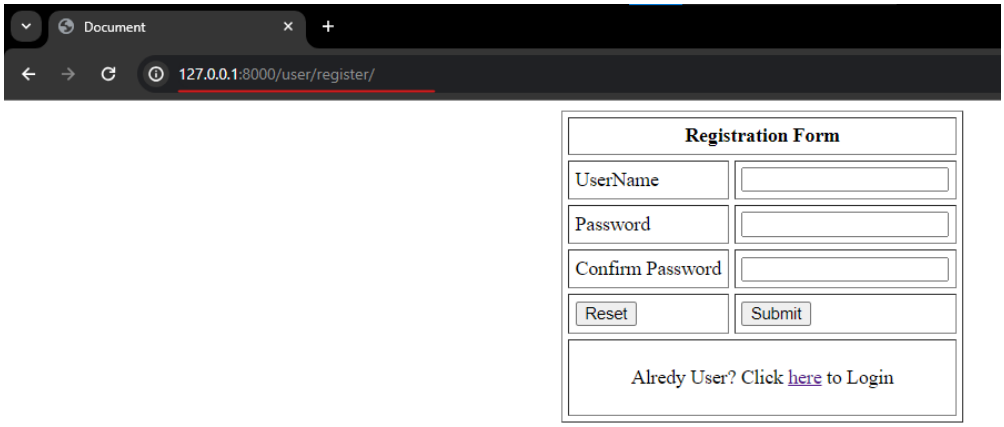


Register this user_urls.py in urls.py (project level)

Finally, url to display above resgistration form



Output



b. login user:

i. Code for login.html (not image. You can copy paste)

```
<!DOCTYPE html>

<html lang="en">
<head>
   <meta charset="UTF-8">
   <meta name="viewport" content="width=device-width, initial-scale=1.0">
   <title>Document</title>
</head>
<body>
   <table align="center" border="1" cellpadding="5" cellspacing="5">
      <form method="POST">
         {% csrf_token %}
      <thead>
         <tr>
            <th colspan="2">
               Login Form
               {% if error_msg %}
               <p style="color: red; font-weight: lighter;">{{error_msg}}</p>
               {% endif %}
            </th>
         </tr>
      </thead>
      <tbody>
         <tr>
            <td><label for="username">UserName</label></td>
            <td><input type="text" id="username" name="username" value=""></td>
         </tr>
         <tr>
            <td><label for="password">Password</label></td>
            <td><input type="password" id="password" name="password" value=""></td>
         </tr>
         <tr>
            <td><input type="reset"></td>
            <td><input type="submit"></td>
         </tr>
         <tr>
            <td colspan="2">
               <p align="center">New User? Click <a href="/user/register">here</a> to
Register</p>
            </td>
         </tr>
      </tbody>
   </form>
   </table>
</body>
</html>
```

ii. create view to show login form and logic to login(I have used entire same logic same as we gave done in previous project number 8 : user login registration and session)

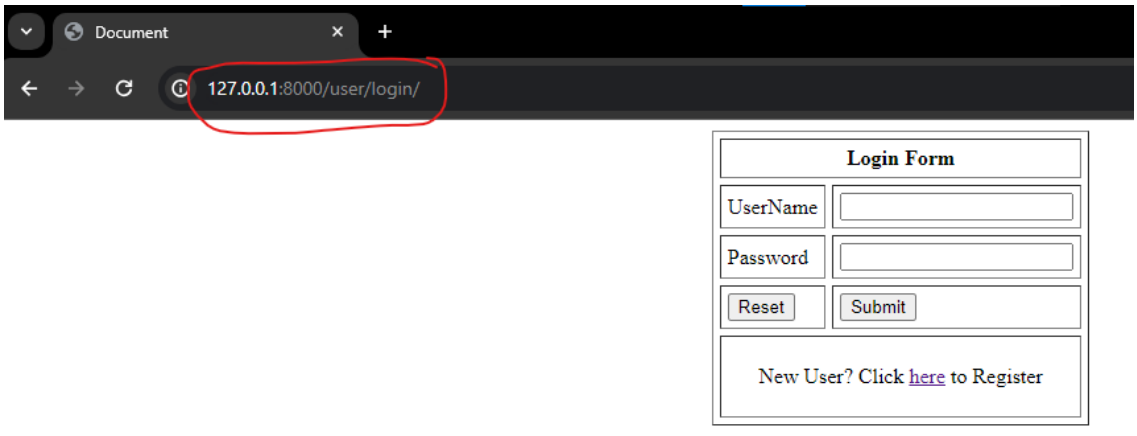
```
def login_user(request):

 data={}
 if request.method=="POST":
    uname=request.POST['username']
    upass=request.POST['password']
    #implementing validation
    if (uname=='' or upass ==''):
       data['error_msg']='Fileds cant be empty'
       return render(request,'user/login.html',context=data)
    elif(not User.objects.filter(username=uname).exists()):
       data['error_msg']=uname + ' user is not registered'
       return render(request,'user/login.html',context=data)
    else:
       #from django.contrib.auth import authenticate
       user=authenticate(username=uname,password=upass)
       print(user)
       if user is not None:
          login(request,user)
          return redirect('/product/index')
       else:
          data['error_msg']='Wrong Password'
          return render(request,'user/login.html',context=data)
 return render(request,'user/login.html')
```

iii. create url pattern for above view in user_urls.py

user_urls.py

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

urlpatterns = [
    path('register/', views.register_user),
    path('login/', views.login_user),
]
```


Output



c. Logout

i. Create view for logout

views.py

product > views.py > login_user

```
114
115  def user_logout(request):
116      logout(request)
117      return redirect('/product/index')
```

ii. Create url for above view

user_urls.py

product > user_urls.py > ...

```
1  from django.urls import path
2  from product import views
3
4  urlpatterns = [
5      path('register/', views.register_user),
6      path('login/', views.login_user),
7      path('logout/', views.user_logout),
8  ]
```

d. Create navbar to provide link for login, register and logout.

i. In our index.html, add following code

Inline css for navbar

index.html

templates > product > index.html

```
6   <meta name="viewport" content="width=device-width
7   <title>Document</title>
8   <link rel="stylesheet" href="{% static 'css/prod
9   <style>
10      header {
11          width: 100%;
12          height: 50px;
13          background-color: orange;
14          display: flex;
15          align-items: center;
16          justify-content: space-around;
17          }
18          header * {
19          display: inline;
20          }
21          header li {
22          margin: 20px;
23          }
24          header li a {
25          color: blue;
26          text-decoration: none;
27          }
28  </style>
29 </head>
```

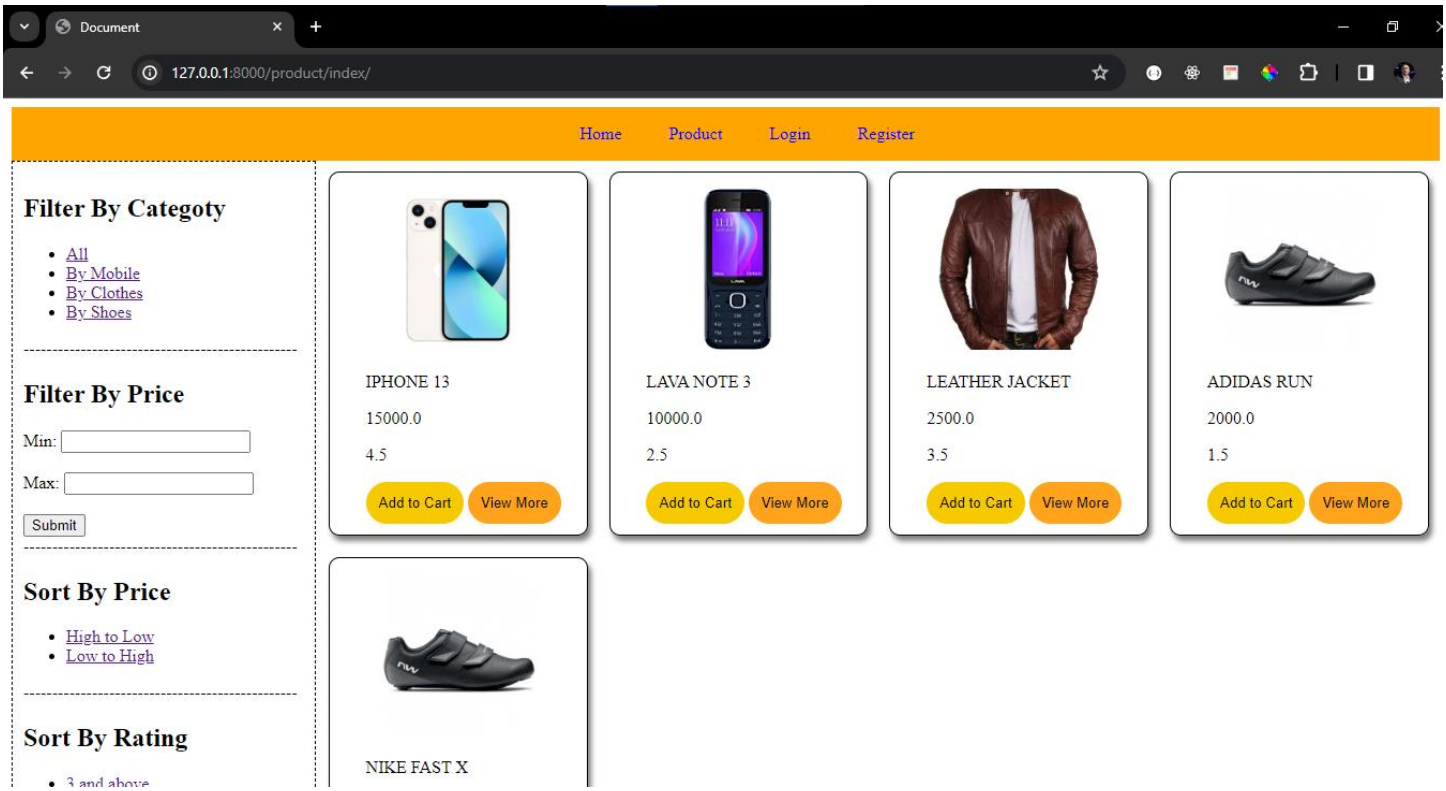
Navbar code

index.html

templates > product > index.html

```
28    </style>
29  </head>
30  <body>
31    <div class="navbar">
32      <header>
33        <nav>
34          <ul>
35            <li>  <a href="/product/index">Home</a>     </li>
36            <li>  <a href="/product/index">Product</a>  </li>
37
38            {% if user.is_authenticated %}
39              <li>  <a href="/user/logout">Logout</a>   </li>
40            {% else %}
41              <li>  <a href="/user/login">Login</a>     </li>
42              <li>  <a href="/user/register">Register</a> </li>
43            {% endif %}
44
45          </ul>
46        </nav>
47        </header>
48    </div>
49    <div class="container">
50      <div class="filter_area">
```

e. Final output



f. Finally, add to cart functionality :
    i. Create model for cart
    ii. View