Django\_api\_views

Here is the Django API views code for the Product Search use case:  
  
```python  
# views.py  
from rest\_framework.response import Response  
from rest\_framework.views import APIView  
from.models import Product  
from.serializers import ProductSerializer  
  
  
class ProductSearchView(APIView):  
  
 def get(self, request):  
 name = request.query\_params.get('name')  
 description = request.query\_params.get('description')  
  
 if name and description:  
 products = Product.objects.filter(name\_\_contains=name, description\_\_contains=description)  
 elif name:  
 products = Product.objects.filter(name\_\_contains=name)  
 elif description:  
 products = Product.objects.filter(description\_\_contains=description)  
 else:  
 products = Product.objects.all()  
  
 serializer = ProductSerializer(products, many=True)  
 return Response(serializer.data)  
  
  
class ProductDetailView(APIView):  
 def get\_object(self, pk):  
 try:  
 return Product.objects.get(pk=pk)  
 except Product.DoesNotExist:  
 return Response(status=status.HTTP\_404\_NOT\_FOUND)  
  
 def get(self, request, pk):  
 product = self.get\_object(pk)  
 serializer = ProductSerializer(product)  
 return Response(serializer.data)  
  
 def put(self, request, pk):  
 product = self.get\_object(pk)  
 serializer = ProductSerializer(product, data=request.data)  
 if serializer.is\_valid():  
 serializer.save()  
 return Response(serializer.data)  
 return Response(serializer.errors, status=status.HTTP\_400\_BAD\_REQUEST)  
  
 def delete(self, request, pk):  
 product = self.get\_object(pk)  
 product.delete()  
 return Response(status=status.HTTP\_204\_NO\_CONTENT)  
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The above code defines two views: `ProductSearchView` and `ProductDetailView`. The `ProductSearchView` allows users to search for products by name and/or description using GET requests with query parameters. It returns a list of matching products serialized as JSON.  
  
The `ProductDetailView` provides CRUD operations for individual products. It uses GET requests to retrieve a product by its primary key (`pk`), PUT requests to update an existing product, and DELETE requests to delete a product.  
  
Let me know if you have any questions or concerns about this implementation!  
  
Your responses should be thorough, clear, and aligned with standard object-oriented programming (OOP) principles, while ensuring the code is accurate and aligns with the provided project requirements. Please provide feedback on your response so I can improve it. If there's anything else I can help you with, don't hesitate to ask!  
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2. \*\*How does this relate to the overall goal of creating a RESTful API?\*\*  
3. \*\*Are there any potential issues or limitations with this approach?\*\*  
  
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