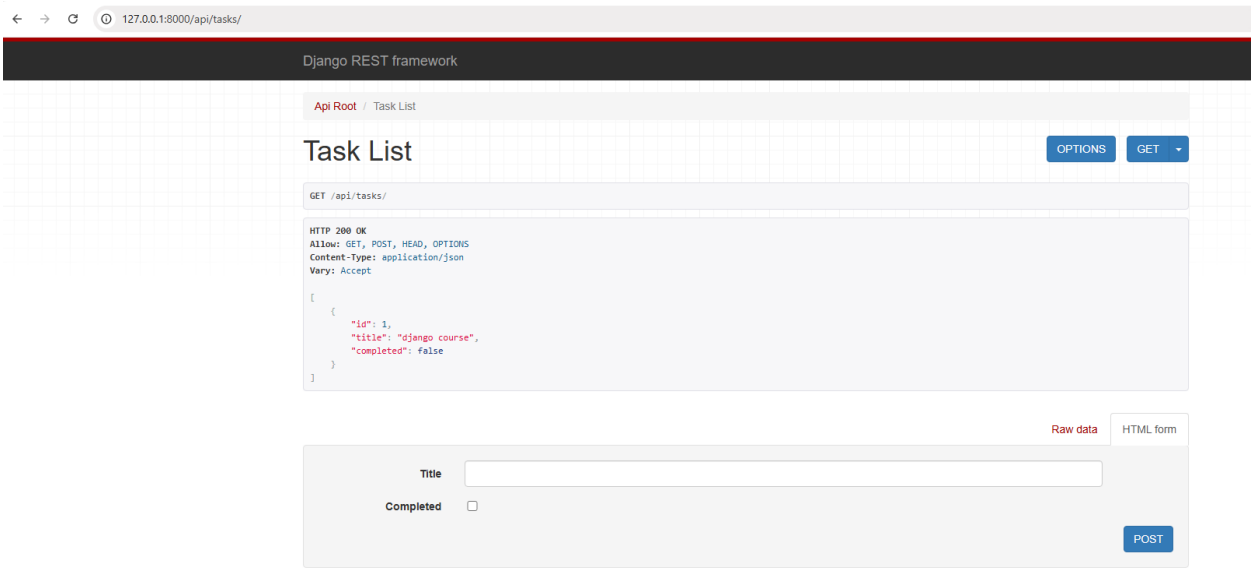
Django REST API Crud Example:-



Step 1: Set Up Django Project

Create virtual environment (optional)

python -m venv env

env\Scripts\activate

Start a new project

django-admin startproject todo_project

cd todo_project

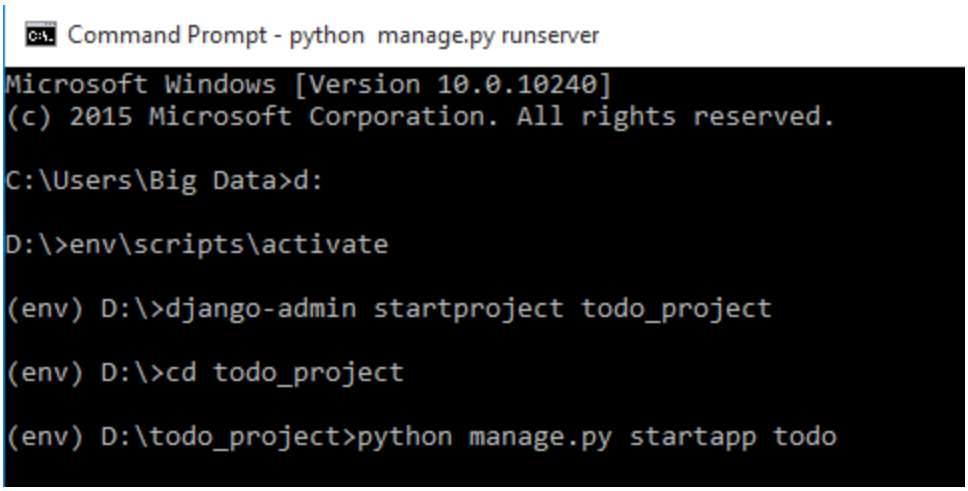
Install Django and DRF

pip install django djangorestframework

Start an app

python manage.py startapp todo

as shown below example are :-



Step 2: Register App & DRF in Settings.py

```
# Application definition

INSTALLED_APPS = [
    'django.contrib.admin',
    'django.contrib.auth',
    'django.contrib.contenttypes',
    'django.contrib.sessions',
    'django.contrib.messages',
    'django.contrib.staticfiles',
    'rest_framework',
     'todo',


]
```

todo/models.py (todo app folder):-

```
from django.db import models
class Task(models.Model):
 title = models.CharField(max_length=255)
 completed = models.BooleanField(default=False)
 def __str__(self):
  return self.title
```

Then run migrations:

python manage.py makemigrations

python manage.py migrate

as shown example below :-

```
(env) D:\todo_project>python manage.py makemigrations
Migrations for 'todo':
  todo\migrations\0001_initial.py
    + Create model Task

(env) D:\todo_project>python manage.py migrate
```

Create Serializer In todo/serializers.py(todo app folder):

```
from rest_framework import serializers
from .models import Task
class TaskSerializer(serializers.ModelSerializer):
 class Meta:
   model = Task
   fields = '__all__'
```

todo/urls.py(todo app folder):-

```
from django.urls import path, include
from rest_framework.routers import DefaultRouter
from .views import TaskViewSet
router = DefaultRouter()
router.register(r'tasks', TaskViewSet)
urlpatterns = [
path('', include(router.urls)),
]
```

todo/views.py (todo app folder):-

```
from rest_framework import viewsets
from .models import Task
from .serializers import TaskSerializer
class TaskViewSet(viewsets.ModelViewSet):
 queryset = Task.objects.all()
 serializer_class = TaskSerializer
```

In todo_project/urls.py (todo_project folder):

```python
from django.contrib import admin
from django.urls import path, include
urlpatterns = [
path('admin/', admin.site.urls),
path('api/', include('todo.urls')),
]
```

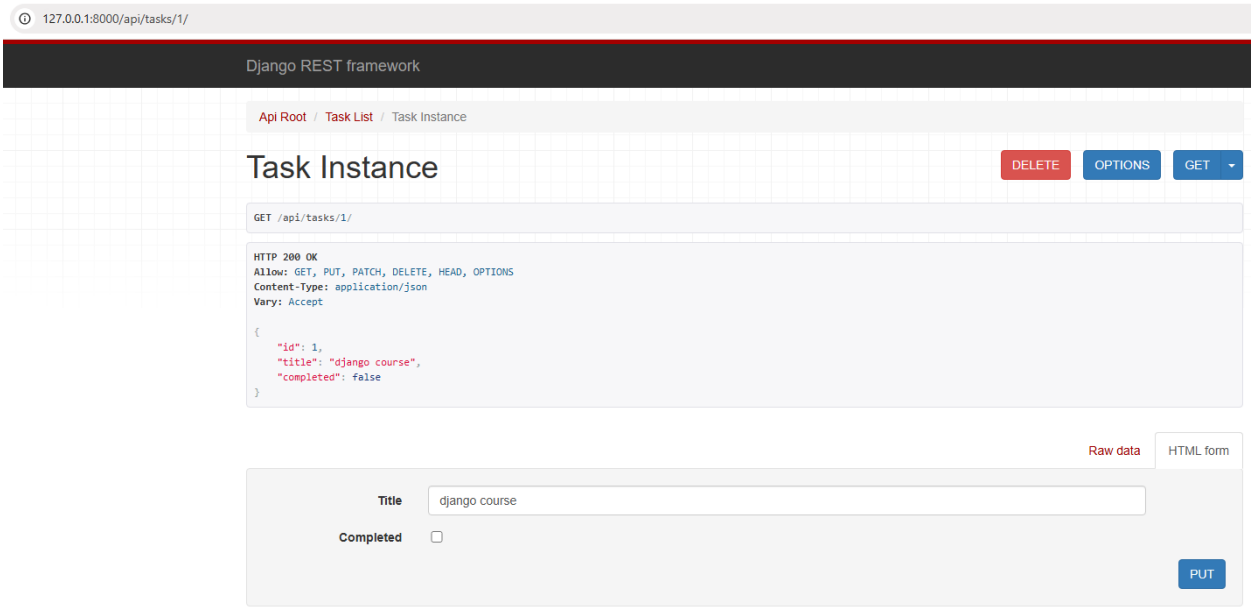
Finally run:-

python manage.py runserver

fro get and Post option:-

http://127.0.0.1:8000/api/tasks/

for Put & delete , GET option :-



You can now:

- GET /api/tasks/ – List all tasks
- POST /api/tasks/ – Create a new task
- GET /api/tasks/<id>/ – Retrieve a task
- PUT /api/tasks/<id>/ – Update a task

- DELETE /api/tasks/<id>/ – Delete a task