

Vidyavardhini's College Of Engineering
Assignment No. 3
Book Management System API

Django REST Framework

Title: Book Management System (CRUD API)

Name: Rajas Patil

Assignment No: 4

Roll Number: 72

Class: SE3

Modules Developed

1. models.py - Defines Book model
2. serializers.py - Converts model to JSON
3. views.py - Contains API logic
4. urls.py - API routing
5. settings.py - DRF Configuration

Code: -

1. models.py

```
from django.db import models
```

```
class Book(models.Model):
```

```
    title = models.CharField(max_length=100)
```

```
    isbn = models.CharField(max_length=13)
```

```
    def __str__(self):
```

```
        return self.title
```

2. serializers.py

```
from rest_framework import serializers
from .models import Book

class BookSerializer(serializers.ModelSerializer):

    class Meta:
        model = Book
        fields = '__all__'
```

3. views.py

```
from rest_framework import generics
from .models import Book
from .serializers import BookSerializer

class BookListCreateView(generics.ListCreateAPIView):
    queryset = Book.objects.all()
    serializer_class = BookSerializer

class BookRetrieveUpdateDestroyView(generics.RetrieveUpdateDestroyAPIView):
    queryset = Book.objects.all()
    serializer_class = BookSerializer
```

4. library_app/urls.py

```
from django.urls import path

from .views import BookListCreateView, BookRetrieveUpdateDestroyView

urlpatterns = [
    path('books/', BookListCreateView.as_view(), name='book-list-create'),
    path('books/<int:pk>/', BookRetrieveUpdateDestroyView.as_view(),
name='book-detail'),
]
```

5. library_project/urls.py

```
from django.contrib import admin

from django.urls import path, include

urlpatterns = [
    path('admin/', admin.site.urls),
    path('api/v1/', include('library_app.urls')),
]
```

Vidyavardhini's College Of Engineering
Assignment No. 3
Book Management System API

Screenshots

1. Running Server

```
C:\Users\Rajas Patil\library_project>python manage.py runserver
Watching for file changes with StatReloader
Performing system checks...

System check identified no issues (0 silenced).
March 29, 2025 - 16:06:56
Django version 5.1.7, using settings 'library_project.settings'
Starting development server at http://127.0.0.1:8000/
Quit the server with CTRL-BREAK.
```

2. Create Book

Django REST framework

Book List Create

GET /api/books/

HTTP 200 OK
Allow: GET, POST, HEAD, OPTIONS
Content-Type: application/json
Vary: Accept

```
[
  {
    "id": 1,
    "title": "The Alchemist",
    "isbn": "9780061122415"
  }
]
```

Raw data HTML form

Title

Isbn

POST

Vidyavardhini's College Of Engineering

Assignment No. 3

Book Management System API

3. View Books, Update Book, Delete Book

Django REST framework

Book List Create / Book Retrieve Update Destroy

Book Retrieve Update Destroy

DELETE OPTIONS GET

GET /api/books/1/

HTTP 200 OK
Allow: GET, PUT, PATCH, DELETE, HEAD, OPTIONS
Content-Type: application/json
Vary: Accept

{
 "id": 1,
 "title": "The Alchemist",
 "isbn": "9780061122415"
}

Raw data HTML form

Title The Alchemist

Isbn 9780061122415

PUT