

Topic: 8. Updating the Models using Class-Based Views

Speaker: / Notebook: API Development using Django Framework



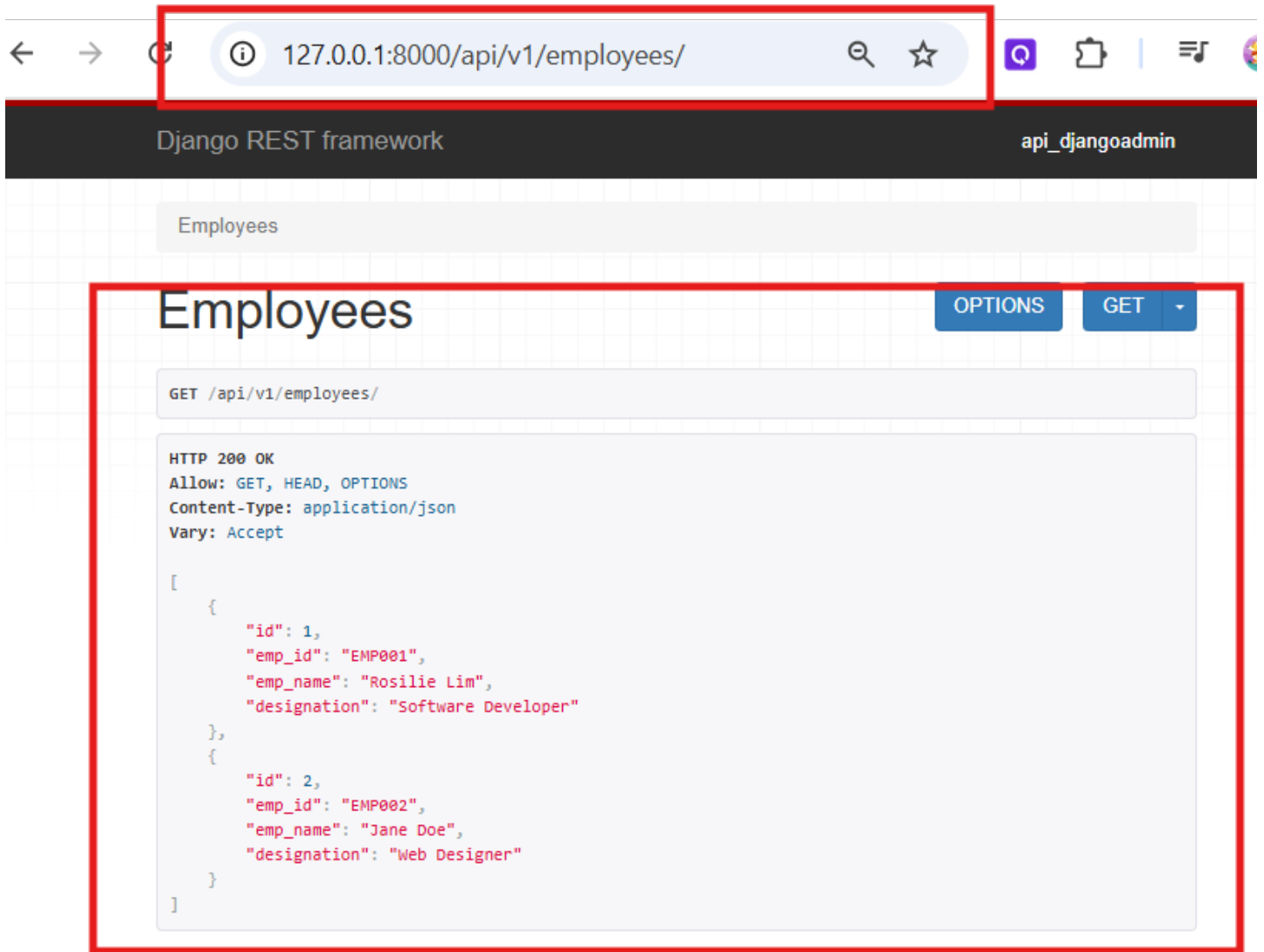
We previously created a new app called EMPLOYEES and a new Employee serializer for our Employee class.

1. Previously, we updated the APIVIEWS.PY to create an EMPLOYEE class and its methods:

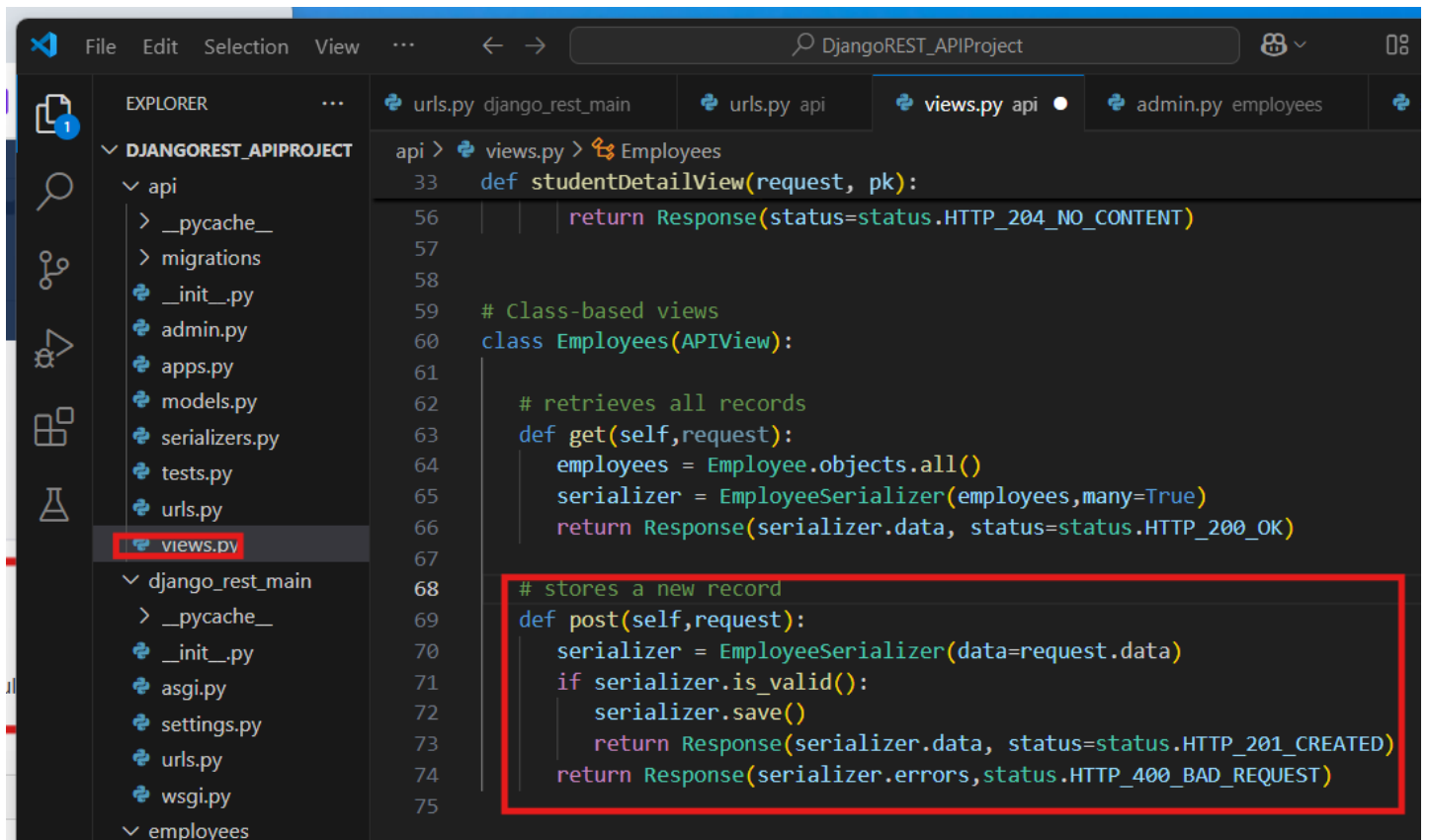
```
File Edit Selection View ... DjangoREST_APIProject
EXPLORER
  DJANGOREST_APIPROJECT
    api
      > __pycache__
      > migrations
      > __init__.py
      > admin.py
      > apps.py
      > models.py
      > serializers.py
      > tests.py
      > urls.py
      > views.py
    django_rest_main
      > __pycache__
      > __init__.py
      > asgi.py
      > settings.py
      > urls.py
  urls.py django_rest_main
  urls.py api
  views.py api X
  admin.py employees

api > views.py > ...
33 def studentDetailView(request, pk):
49     return Response(serializer.data, status=status.HTTP_200_OK)
50 else:
51     return Response(serializer.errors, status.HTTP_400_BAD_REQUEST)
52
53 # delete a specific record using the PK
54 elif request.method == 'DELETE':
55     student.delete()
56     return Response(status=status.HTTP_204_NO_CONTENT)
57
58
59 # Class-based views
60 class Employees(APIView):
61
62     def get(self, request):
63         employees = Employee.objects.all()
64         serializer = EmployeeSerializer(employees, many=True)
65         return Response(serializer.data, status=status.HTTP_200_OK)
66
```

We run the new path:



2. To post or add a new record to our model:



Add the new record. Follow the correct format to be able to save successfully.

127.0.0.1:8000/api/v1/employees/

Django REST framework

api_djangoadmin

Employees

OPTIONS GET

GET /api/v1/employees/

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

```
[
  {
    "id": 1,
    "emp_id": "EMP001",
    "emp_name": "Rosilie Lim",
    "designation": "Software Developer"
  },
  {
    "id": 2,
    "emp_id": "EMP002",
    "emp_name": "Jane Doe",
    "designation": "Web Designer"
  }
]
```

Media type: application/json

Content:

```
{
  "emp_id": "EMP003",
  "emp_name": "Russell Lim",
  "designation": "Security"
}
```

POST

This will result to:

Employees

Employees

OPTIONS

GET

POST /api/v1/employees/

HTTP 201 Created

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

```
{  
  "id": 3,  
  "emp_id": "EMP003",  
  "emp_name": "Russell Lim",  
  "designation": "Security"  
}
```

Media type:

application/json

Content:

POST

3. To allow a single record operation like CRUD on a specific record, we update our APIURLS.PY as:

The screenshot shows the VS Code editor interface. On the left, the Explorer sidebar displays the project structure for 'DJANGOREST_APIPROJECT'. The 'api' directory is expanded, showing files like '__pycache__', 'migrations', '__init__.py', 'admin.py', 'apps.py', 'models.py', 'serializers.py', 'tests.py', 'urls.py' (highlighted with a red box), and 'views.py'. The main editor window shows the 'urls.py' file for the 'api' app. The code defines 'urlpatterns' with two paths: one for 'students/' using 'views.studentsView' and another for 'employees/<int:pk>/' using 'views.EmployeeDetail.as_view()'. The second path is highlighted with a red box.

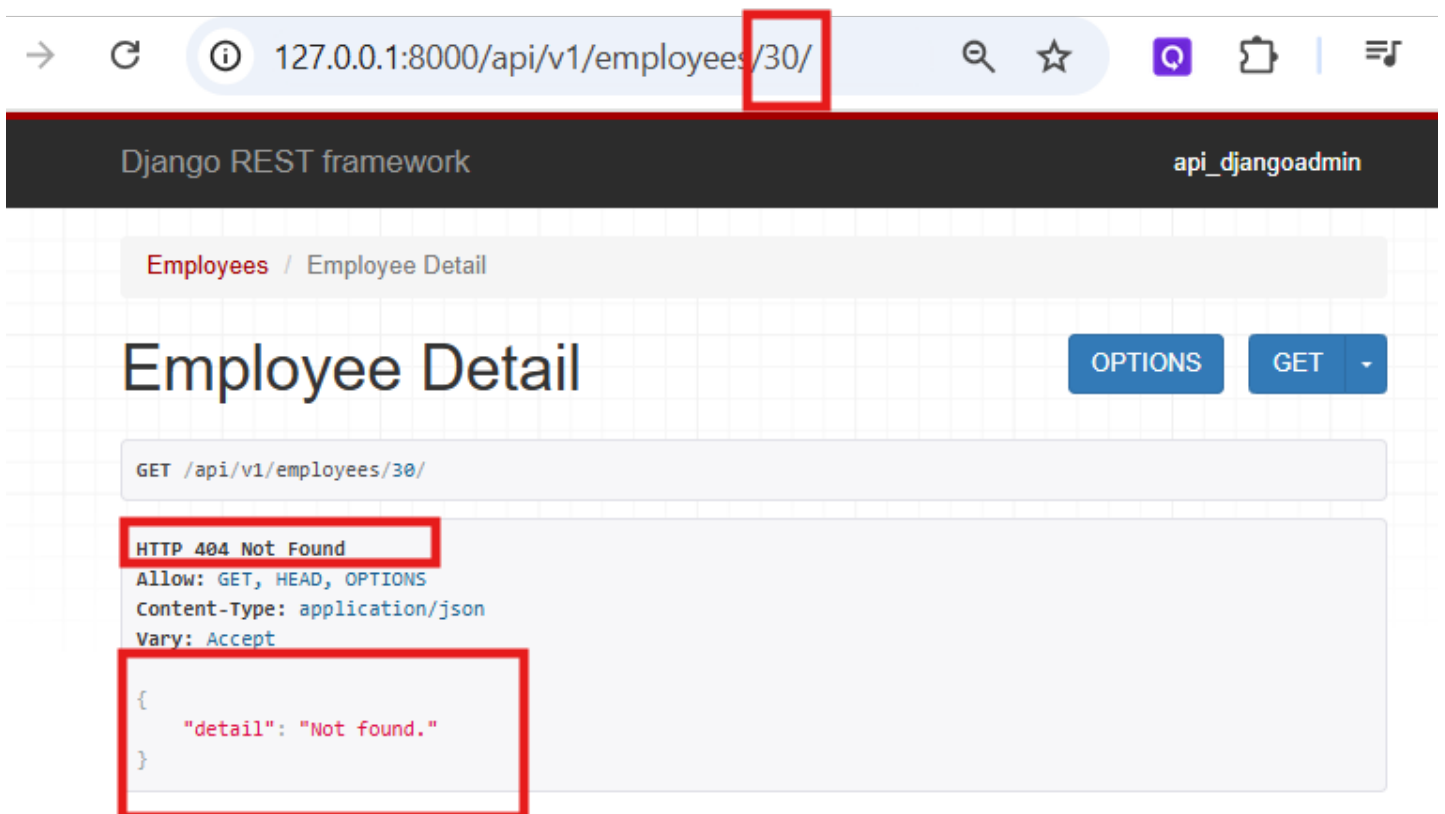
```
1 from django.urls import path
2 from . import views
3
4 urlpatterns = [
5     #uses the function-based views
6     path('students/', views.studentsView),
7     path('students/<int:pk>', views.studentDetailView),
8
9     #uses the class-based views
10    path('employees/', views.Employees.as_view()),
11    path('employees/<int:pk>', views.EmployeeDetail.as_view()),
12 ]
```

4. Update the APIVIEWS.PY to include EmployeeDetail class:

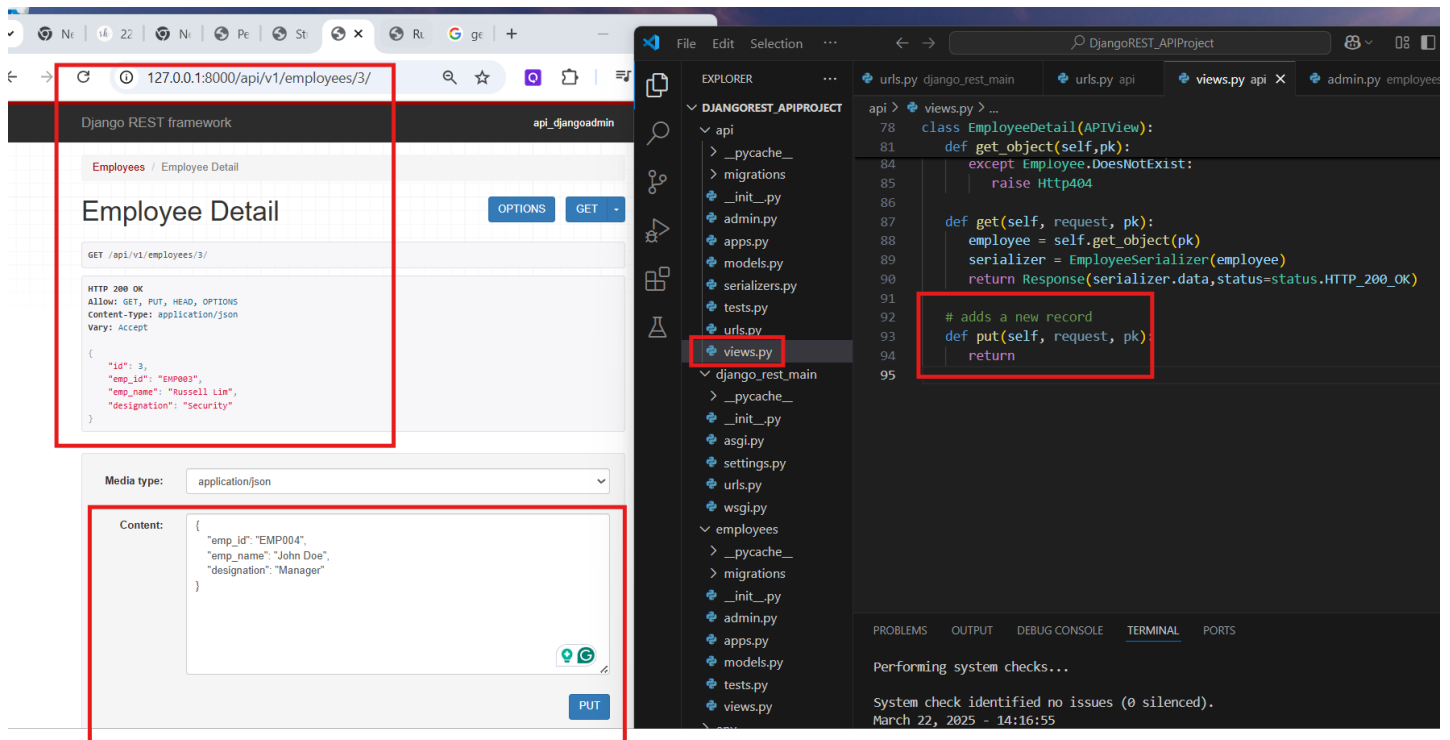
To test, add the path:

`http://127.0.0.1:8000/api/v1/employees/3/`

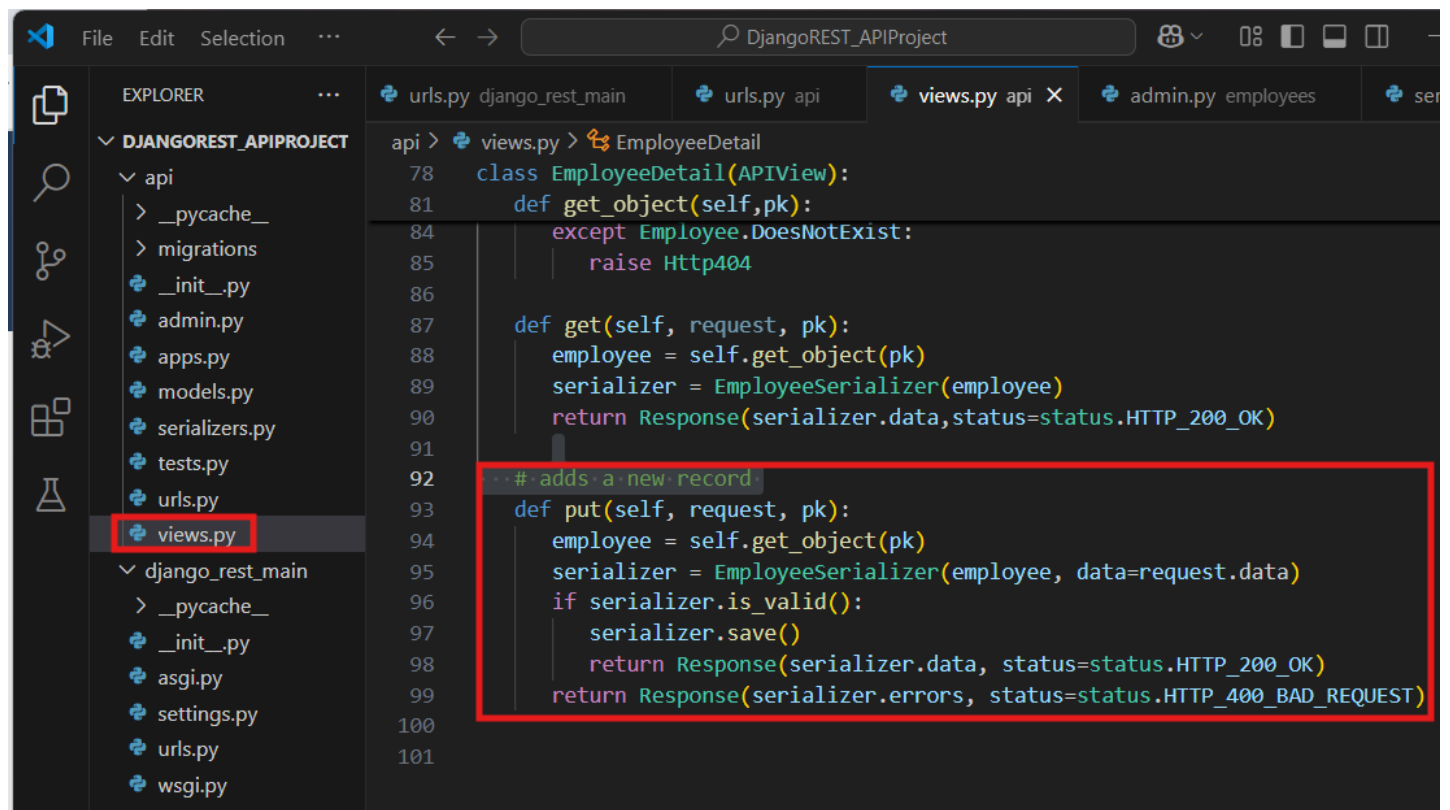
And if the record is not in the table model:



5. To update a single record, update the APIVIEWS.PY as:



This creates the form immediately but this causes an error when you submit the PUT button. So update it as:



Add the new record:

Employees

Employees

OPTIONS GET

GET /api/v1/employees/

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

[
  {
    "id": 1,
    "emp_id": "EMP001",
    "emp_name": "Rosilie Lim",
    "designation": "Software Developer"
  },
  {
    "id": 2,
    "emp_id": "EMP002",
    "emp_name": "Jane Doe",
    "designation": "Web Designer"
  },
  {
    "id": 3,
    "emp_id": "EMP003",
    "emp_name": "Russell Lim",
    "designation": "Security"
  }
]
```

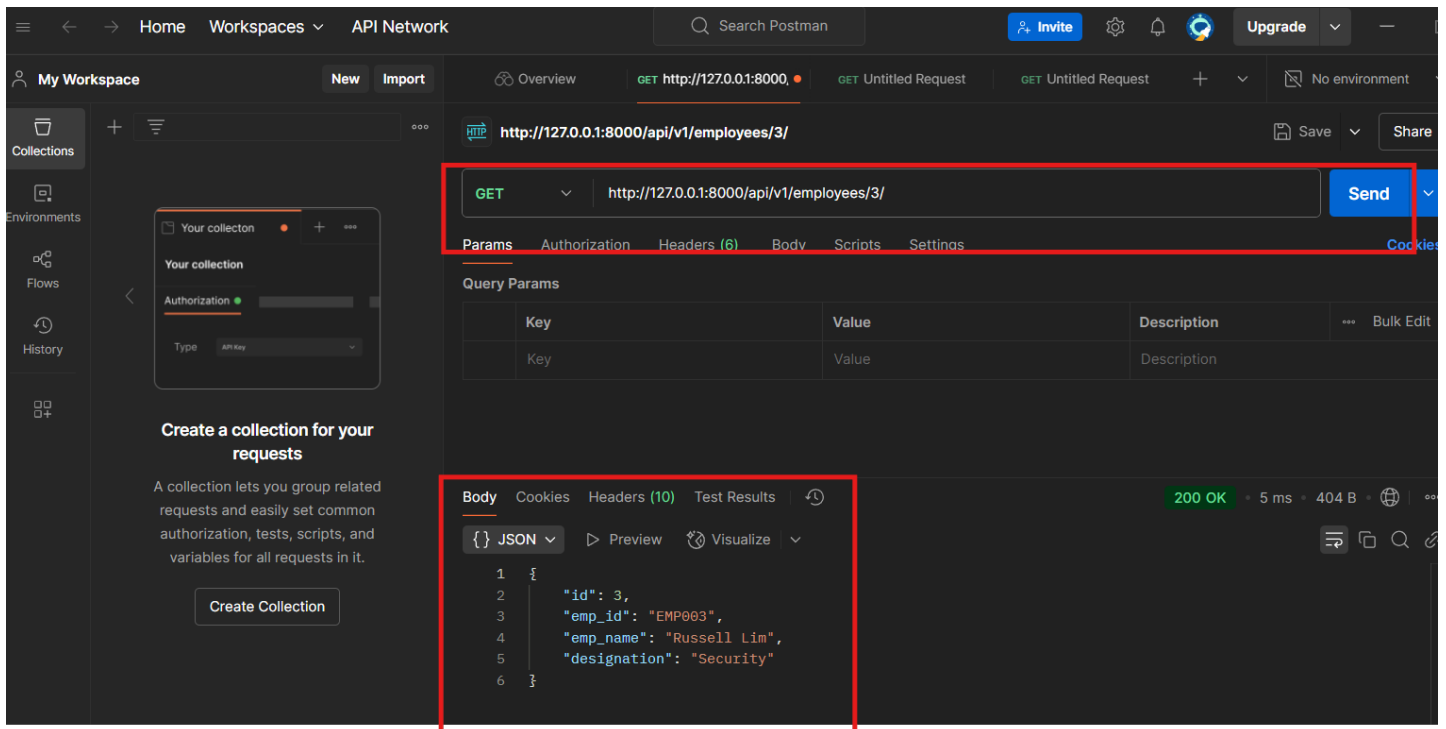
Media type:

application/json

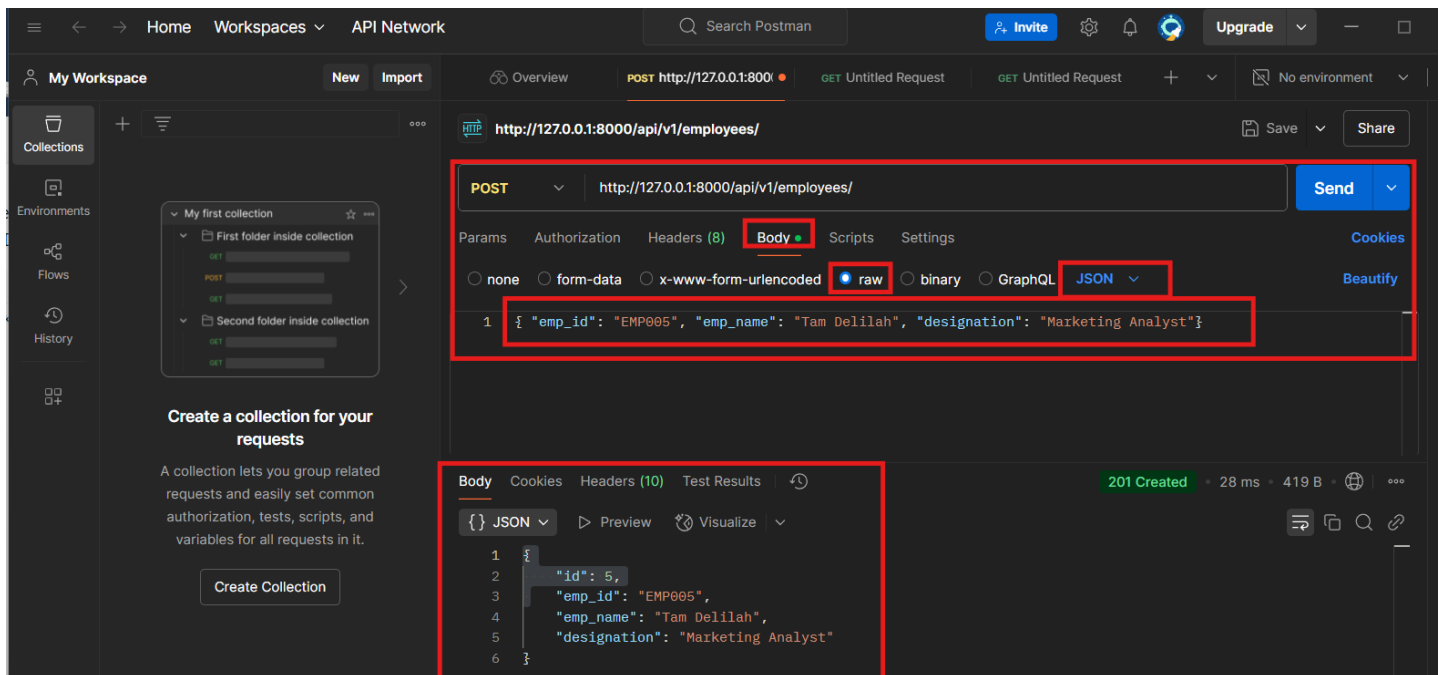
Content:

```
{
  "emp_id": "EMP004",
  "emp_name": "John Doe",
  "designation": "Ai Engineer"
}
```

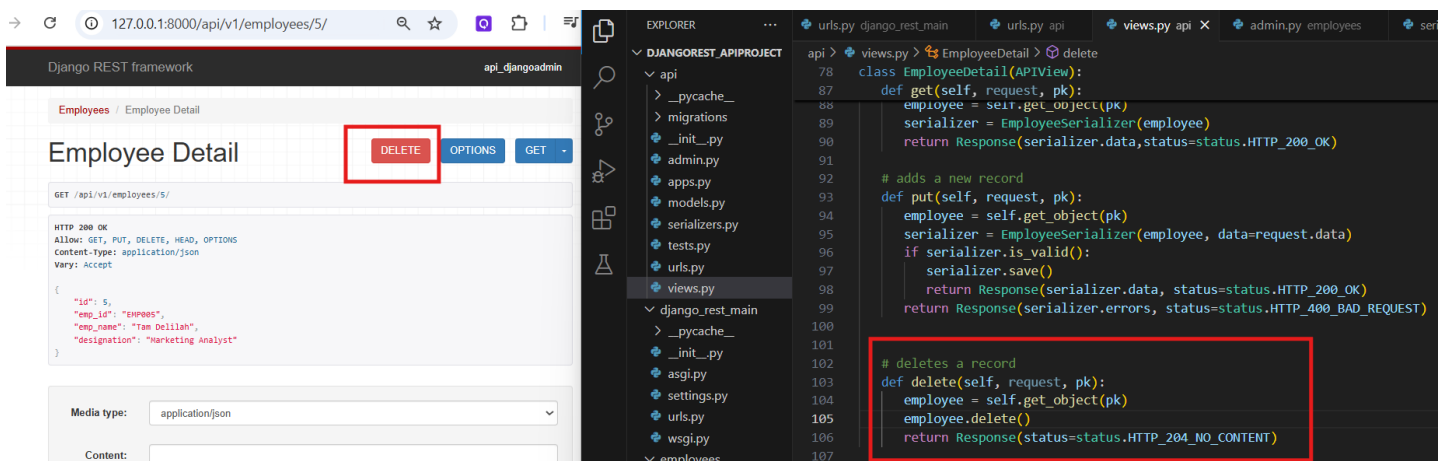
POST



Using POSTMAN to store, choose POST, then select BODY, then RAW, then JSON. Add your records then select the SEND method.



7. To delete a record, create a DELETE method and update as:



We deleted record ID = 5.

8. In POSTMAN, we can also issue a delete option:

