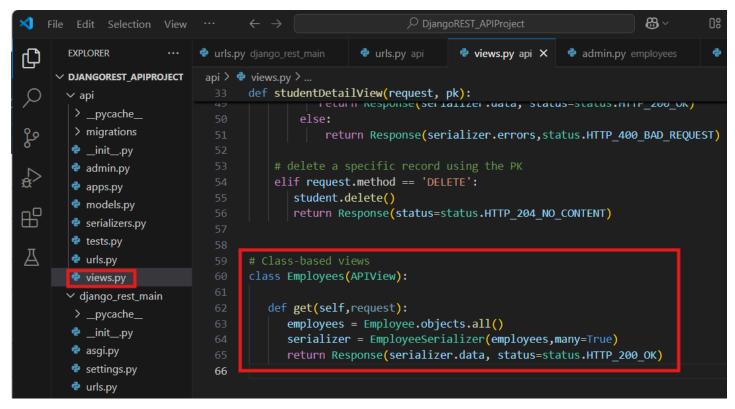
Topic: 8. Updating the Models using Class-Based Views

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 API\VIEWS.PY to create an EMPLOYEE class and its methods:



We run the new path:

| \rightarrow | C ③ 127.0.0.1:8000/api/v1/employees/ Q ☆ | ≡1 |
|---------------|--|-------|
| | Django REST framework api_django | admin |
| | Employees | |
| Г | Employees OPTIONS G | ET • |
| | GET /api/v1/employees/ | |
| | <pre>HTTP 200 OK Allow: GET, HEAD, OPTIONS Content-Type: application/json Vary: Accept [</pre> | |

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

| ⋈ | File Edit Selection View | $\cdots \leftarrow \rightarrow$ \bigcirc DjangoREST_APIProject \textcircled{B} \checkmark \textcircled{D} |
|----------|------------------------------|---|
| <u>ر</u> | EXPLORER ···· | 🕏 urls.py django_rest_main 🛛 🕏 urls.py api 🔍 🕏 views.py api • 🕏 admin.py employees 🕏 |
| | ✓ DJANGOREST_APIPROJECT | api 💈 🅏 views.py > 😭 Employees |
| Q | ∨ api | <pre>33 def studentDetailView(request, pk):</pre> |
| 1 | >pycache | 56 return Response(status=status.HTTP_204_NO_CONTENT) |
| 90 | > migrations | 57 |
| ٩ م | 🗬initpy | 58 |
| | admin.py | 59 # Class-based views 60 class Employees(APIView): |
| da ∣ | apps.py | 60 class Employees(APIView): |
| | 🕏 models.py | 62 # retrieves all records |
| ₿ | serializers.py | 63 def get(self,request): |
| | tests.py | 64 employees = Employee.objects.all() |
| Д | e urls.py | 65 serializer = EmployeeSerializer(employees,many=True) |
| | | 66 return Response(serializer.data, status=status.HTTP_200_OK) |
| | ✓ django_rest_main | 67 |
| | | 68 # stores a new record |
| | > _pycache_ | 69 def post(self,request): |
| | 🗬initpy | <pre>70 serializer = EmployeeSerializer(data=request.data) 71 if serializer.is_valid():</pre> |
| 11 | 🗬 asgi.py | 72 serializer.save() |
| | 🕏 settings.py | 73 return Response(serializer.data, status=status.HTTP_201_CREATED) |
| | 🗬 urls.py | 74 return Response(serializer.errors, status.HTTP_400_BAD_REQUEST) |
| | 🕏 wsgi.py | 75 |
| | ✓ employees | |

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

| \rightarrow G | 0 | 127.0.0. | 1:8000/ap | oi/v1/emp | oloyees/ | Q | ☆ | Q | Ď | ≡ſ |
|-----------------|--|-------------------------------------|--------------------------------------|-----------|----------|---|----|-------|-----------|-----|
| Djar | ngo RE | ST fram | ework | | | | | api_ | _djangoad | min |
| En | nployees | | | | | | | | | |
| Er | npl | oyee | es | | | | OF | TIONS | GET | • |
| GET | /api/v1 | /employees, | | | | | | | | |
| Allo | - | POST, HEAU e: applicat | - | | | | | | | |
| ſ | "em "em "de }, { "id "em | signation": ": 2, p_id": "EMM | osilie Lim", "Software (002", | | | | | | | |
| 1 | | p_name": ": signation": | ane Doe", "Web Design | ner" | | | | | | |

| Media type: | application/json | ~ |
|-------------|--|------|
| Content: | { "emp_id": "EMP003", "emp_name": "Russell Lim", "designation": "Security" } | |
| | | • • |
| | | POST |

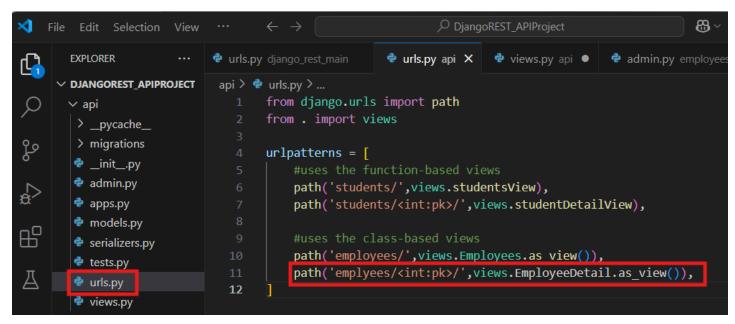
This will result to:

| \rightarrow | C (i) 127.0 | .0.1:8000/api/v1/emplo | yees/ | Q | ☆ | Q | Ð | ≡ŗ | 8 |
|---------------|--|------------------------|-------|---|---|--------|-----------|------|---|
| | Django REST fra | nmework | | | | api_ | _djangoad | lmin | |
| | Employees | | | | | | | | |
| | Employe | es | | | O | PTIONS | GET | • | |
| | POST /api/v1/employ | ees/ | | | | | | | |
| | HTTP 201 Created Allow. GET, Post, Content-Type: appl: Vary: Accept | | | | | | | | |
| | <pre>{ "id": 3, "emp_id": "EMP("emp_name": "Ru "designation": }</pre> | ssell Lim", | | | | | | | |
| | Media type: | application/json | | | | | | ~ | |
| | Content: | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

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POST

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



4. Update the API\VIEWS.PY to include EmployeeDetail class:

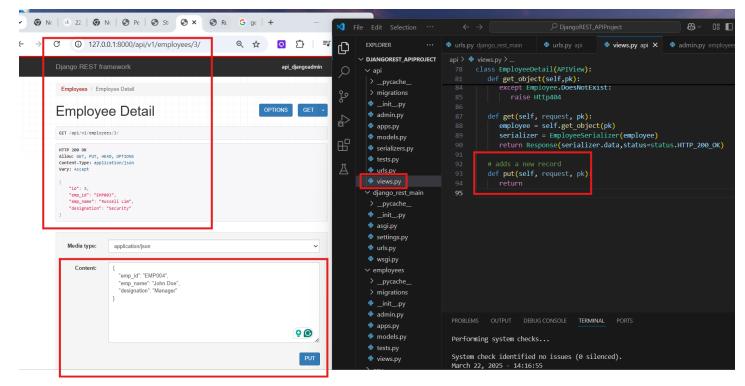
To test, add the path:

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

```
And if the record is not in the table model:
```

| → C ① 127.0.0.1:8000/api/v1/employee:/30/ | ९ ☆ [0] ⊡ =ा |
|---|-----------------|
| Django REST framework | api_djangoadmin |
| Employees / Employee Detail | |
| Employee Detail | OPTIONS GET - |
| GET /api/v1/employees/30/ | |
| HTTP 404 Not Found Allow: GET, HEAD, OPTIONS Content-Type: application/json Vary: Accept | |
| <pre>{ "detail": "Not found." }</pre> | |

5. To update a single record, update the API\VIEWS.PY as:



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

| ⋈ | File Edit Selection ··· | \leftrightarrow \rightarrow | | PIProject | 88× 0: 🛙 🗖 | □ - |
|-----------------------|------------------------------|---------------------------------|-----------------------------------|-------------------|-------------------------|--------|
| ф | EXPLORER ···· | 🗬 urls.py django_rest_main | 🕏 urls.py api | 🕏 views.py api 🗙 | 🕏 admin.py employees | 🕏 ser |
| | \vee DJANGOREST_APIPROJECT | api > 🕏 views.py > 😤 Empl | loyeeDetail | | | |
| Q | ∨ api | 78 class EmployeeD | Oetail <mark>(</mark> APIView): | | | |
| | >pycache | | ect(self,pk): | | | |
| 0 | > migrations | | <pre>ployee.DoesNotEx:</pre> | ist: | | |
| go | initpy | | Http404 | | | |
| | • • | 86 | | | | |
| $\leq_{\mathfrak{B}}$ | 🗬 admin.py | | <pre>f, request, pk):</pre> | ► / I-) | | |
| ~~ | 🗬 apps.py | | <pre>= self.get_object</pre> | | | |
| B | 🕏 models.py | | er = EmployeeSeria | | tue UTTD 200 OK) | |
| Ш Ш | 🕏 serializers.py | 90 return Re 91 | sponse (serialize | r.data,status=sta | LUS.HTTP_200_0K) | |
| _ | 🗬 tests.py | 92 # adds a new | , record | | | _ |
| 囚 | 🕏 urls.py | | , request, pk): | | | |
| | 🗬 views.py | | <pre>= self.get_object</pre> | t(pk) | | |
| | ✓ django_rest_main | | | | data=request.data) | |
| | > _pycache_ | | <pre>izer.is_valid():</pre> | | | |
| | <pre></pre> | | lizer.save() | | | |
| | asgi.py | 98 return | n Response <mark>(serial</mark> : | izer.data, status | =status.HTTP_200_OK) | |
| | | 99 return Re | esponse <mark>(serialize</mark> | r.errors, status= | status.HTTP_400_BAD_RE(| QUEST) |
| | 🕏 settings.py | 100 | | | | |
| | 🕏 urls.py | 101 | | | | |
| | 🅏 wsgi.py | | | | | |

Add the new record:

→ C ③ 127.0.0.1:8000/api/v1/employees/

÷



| | api_djangoadmin |
|--|-----------------|
| Employees | |
| Employees | OPTIONS GET - |
| GET /api/v1/employees/ | |
| <pre>HTTP 200 OK Allow: GET, POST, HEAD, OPTIONS Content-Type: application/json Vary: Accept [</pre> | |

| Media type: | application/json 🗸 |
|-------------|---|
| Content: | <pre>{ "emp_id": "EMP004", "emp_name": "John Doe", "designation": "Ai Engineer" }</pre> |
| | POST |
| | |

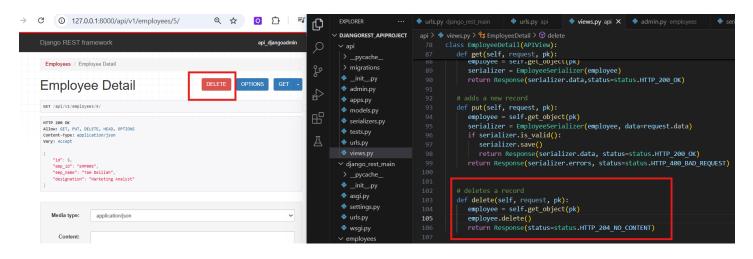
6. Using POSTMAN:

| \equiv \leftarrow \rightarrow Home Workspaces \checkmark API Netwo | k | Q Search Postman | <mark>ج+ Invite</mark> ۽ | ĝi 🗘 🧔 Upgr | ade ~ — |
|--|---|-----------------------------|----------------------------------|-------------|--------------------|
| A My Workspace New Import | 6 Overview GET h | ttp://127.0.0.1:8000, • Get | Untitled Request GET Untitled Re | equest + ~ | No environment |
| Collections | http://127.0.0.1:8000/api | /v1/employees/3/ | | Ľ | 🗍 Save 🗸 Share |
| e. nvironments | GET ~ http://127 | .0.0.1:8000/api/v1/employee | is/3/ | | Send ~ |
| © Your collection ● + *** | Params Authorization H | eaders (6) Bodv Scri | ipts Settinas | | Coc kies |
| Flows Authorization | Query Params | | | | |
| • | Кеу | Valu | ue | Description | Bulk Edit |
| History Type Antway ~ | | | | | |
| 87 | | | | | |
| Create a collection for your requests | | | | | |
| A collection lets you group related requests and easily set common | Body Cookies Headers (10 |) Test Results 4) | | 200 OK 5 m | ns 🔹 404 B 🔹 ᠿ 📔 👓 |
| authorization, tests, scripts, and variables for all requests in it. Create Collection | <pre>{} JSON ∨ ▷ Preview 1 { 2 "id": 3, 3 "emp_id": "EP 4 "emp_name": " 5 "designation" 6 }</pre> | 'Russell Lim", | | | , ⊂ Q & |

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

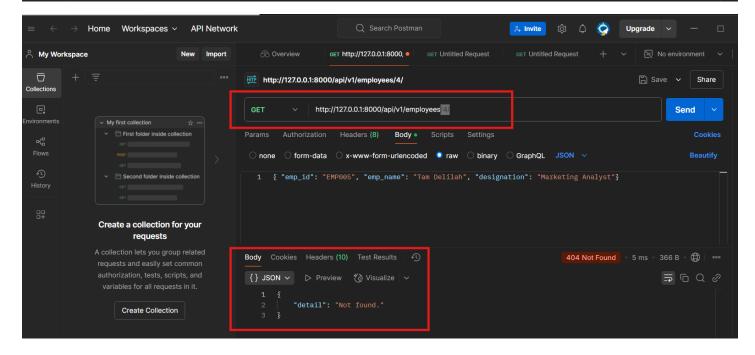
| $= \leftarrow$ | ightarrow Home Workspaces $ ightarrow$ AP | I Network | < | Q Search Postmar | 1 | 🔑 Invite 🔯 | ۵ | Upgrade | ~ - | |
|------------------|--|-----------|---|--|----------------------|---------------------|------------|---------|---------------|---|
| A My Wor | kspace New | Import | 6 Overview | Post http://127.0.0.1:800(• | GET Untitled Request | GET Untitled Reques | | ~ 🕅 No | o environment | |
| | | | m http://127.0.0.1:8000 |)/api/v1/employees/ | | | | 🖺 Savi | re 🗸 Share | |
| Environments | | | POST ~ http:/ | ://127.0.0.1:8000/api/v1/emp | loyees/ | | | | Send ~ | |
| eC eC | ✓ My first collection ☆ ↔ ✓ ➡ First folder inside collection | | Params Authorization | Headers (8) Body • | Scripts Settings | | | | | s |
| Flows History | reat art Second folder inside collection art art |) > | | ○ x-www-form-urlencode | | GraphQL JSON | | | Beautify | |
| | Create a collection for your requests | | | | | | | | | |
| | A collection lets you group relate requests and easily set commor authorization, tests, scripts, and variables for all requests in it. Create Collection | | {} JSON ∨ ▷ Previ 1 { 2 "id": 5, 3 "emp_id": 4 "emp_name" | s (10) Test Results 4 iew (3) Visualize 4 "EMP005", ": "Tam Delilah", ion": "Marketing Analy | | 2 | 01 Created | | 119B ⊕ ↔ | |

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



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

| \equiv \leftarrow \rightarrow Home | Workspaces ~ AF | PI Network | Q Search Postman 🔒 Invite 🕸 🛱 🏈 Upgrade 🗸 — 🗆 |
|--|--|------------|---|
| Ay Workspace | New | Import | Overview DEL http://127.0.0.1:8000, ● GET Untitled Request GET Untitled Request + ∨ No environment ∨ |
| ☐ + Ξ Collections | | | me http://127.0.0.1:8000/api/v1/employees/4/ |
| Environments | fy first collection 🚖 🕫 | | DELETE V http://127.0.0.1:8000/api/v1/employees/4/ |
| e C Flows | First folder inside collection | | Params Authorization Headers (8) Body Scripts Settings Cookies |
| | Post oct Second folder inside collection | | <pre>O none O form-data O x-www-form-urlencoded O raw O binary O GraphQL JSON V Beautify 1 { "emp_id": "EMP005", "emp_name": "Tam Delilah", "designation": "Marketing Analyst"}</pre> |
| History | | | |
| Cre | eate a collection for you requests | r | |
| | llection lets you group relate | | Body Cookies Headers (9) Test Results 🕤 204 No Content 16 ms 311 B 🕀 🚥 |
| | norization, tests, scripts, and riables for all requests in it. | | Image: Raw v ▷ Preview ♥ ♥ ♥ 1 1 |



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