Topic: 11. CRUD using Viewsets

Speaker: Personal | Notebook: API Development using Django Framework

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According to Django Documentation:

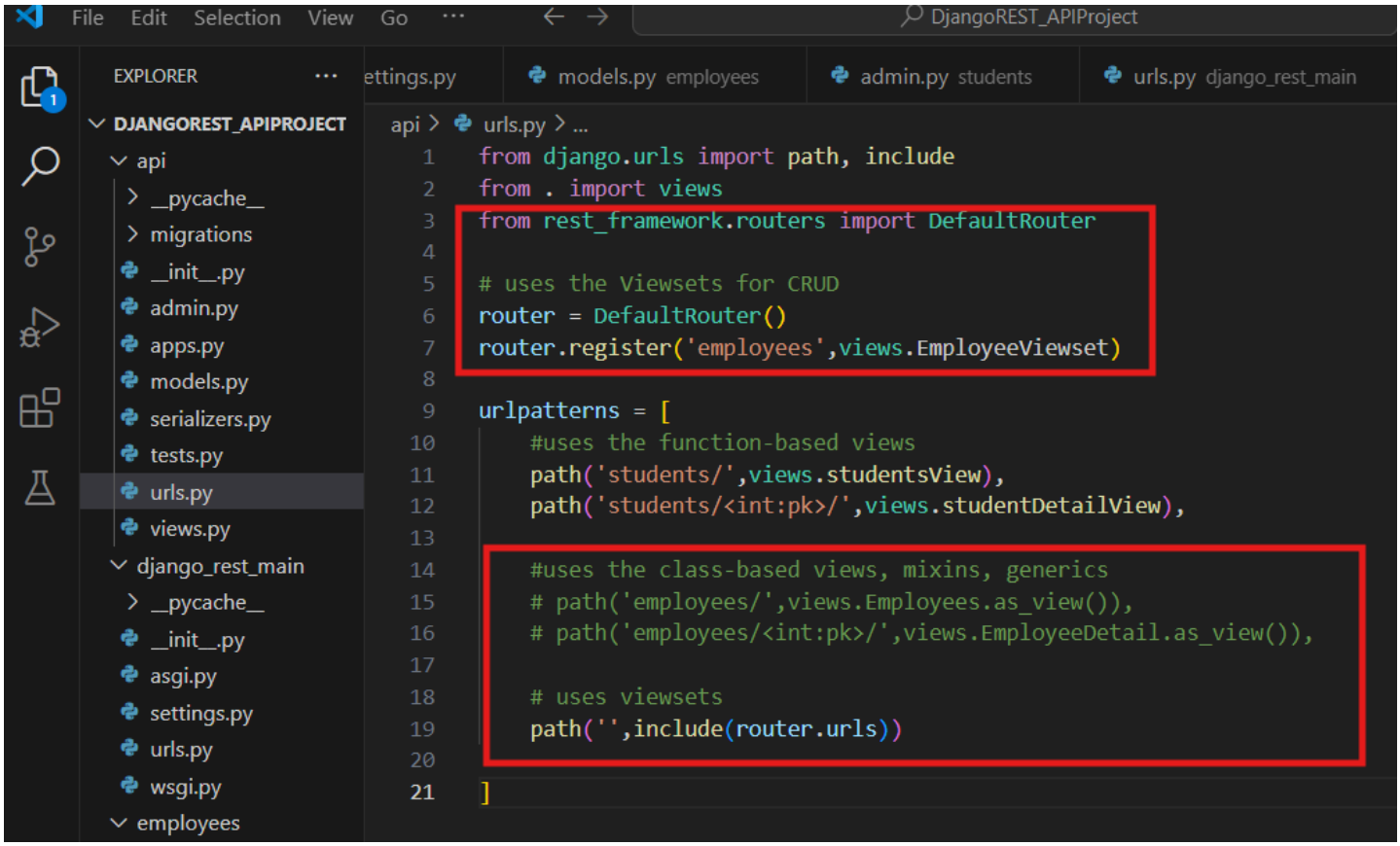
Django REST framework allows you to combine the logic for a set of related views in a single class, called a `ViewSet`. In other frameworks, you may also find conceptually similar implementations named 'Resources' or 'Controllers'.

A `ViewSet` class is simply **a type of class-based View, that does not provide any method handlers** such as `.get()` or `.post()`, and instead provides actions such as `.list()` and `.create()`.

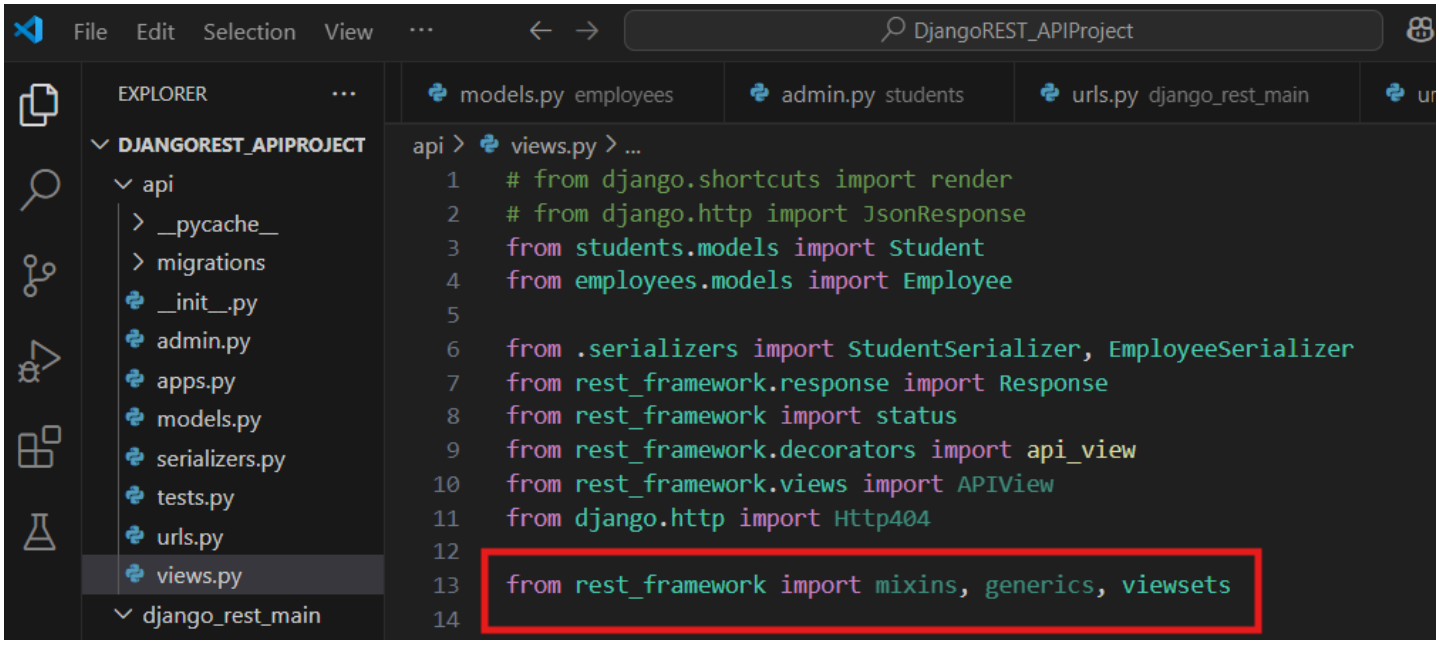
The method handlers for a `ViewSet` are only bound to the corresponding actions at the point of finalizing the view, using the `.as_view()` method.

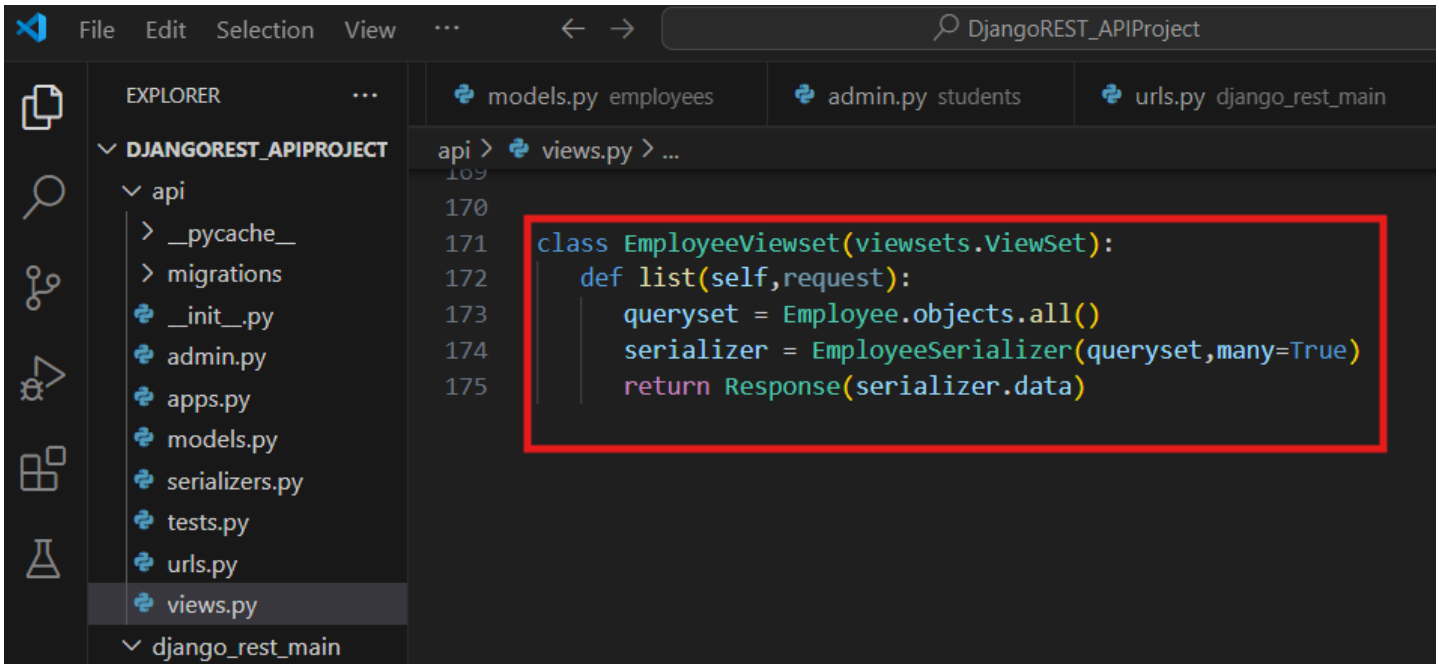
1. We use `viewsets.ViewSet` class for `list(), retrieve(), update(), create, delete()`. The `viewsets.ModelViewSet` uses only queryset and serializer_class and provides for pk and non-pk-based operations.

2. To use Viewsets, we use ROUTERS with the paths that we normally use in our Django project. So we comment on the paths we used with function-based, class-based, mixins, and generics in our URLS.PY.

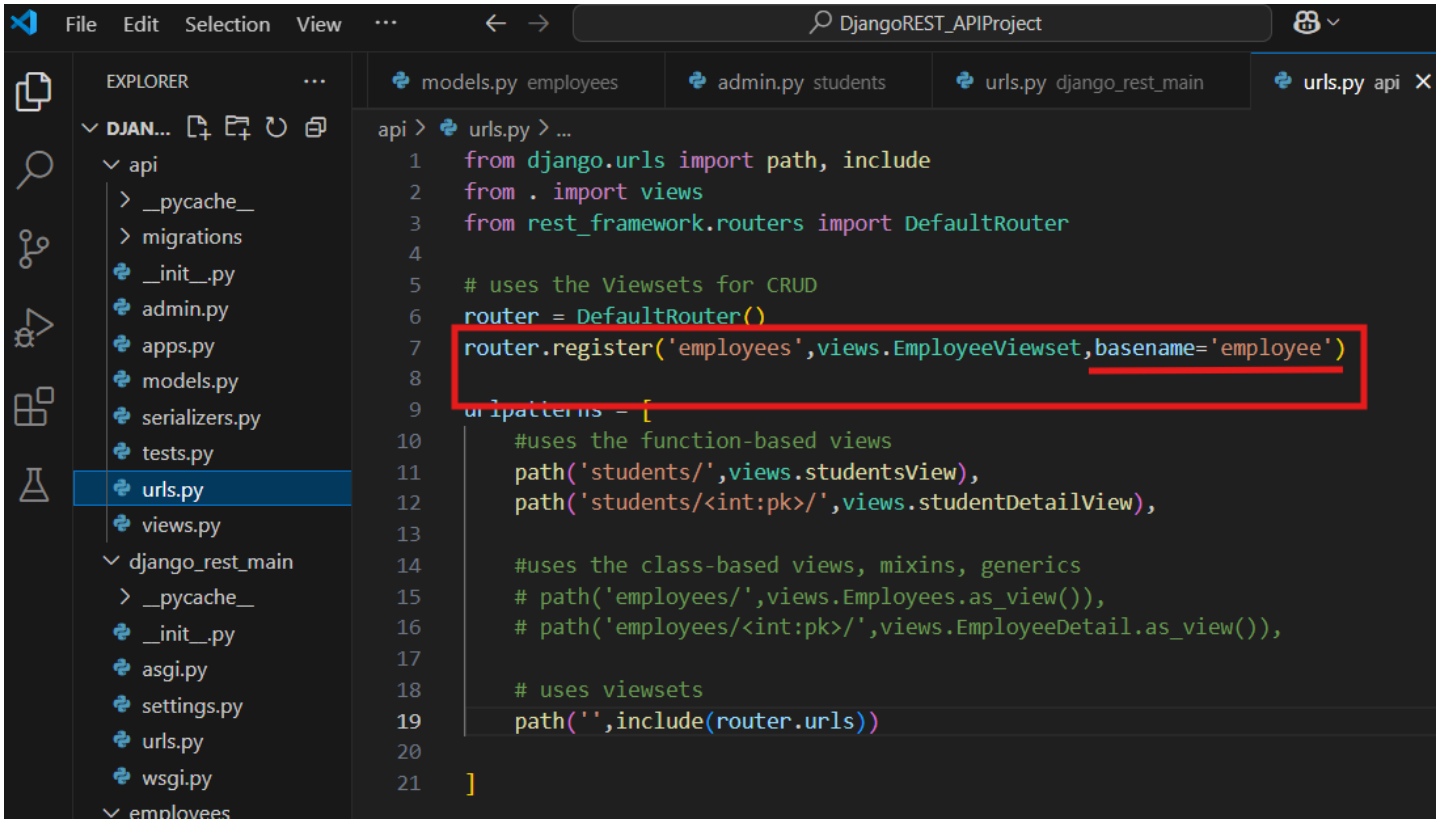


3. Update the VIEWS.PY as:

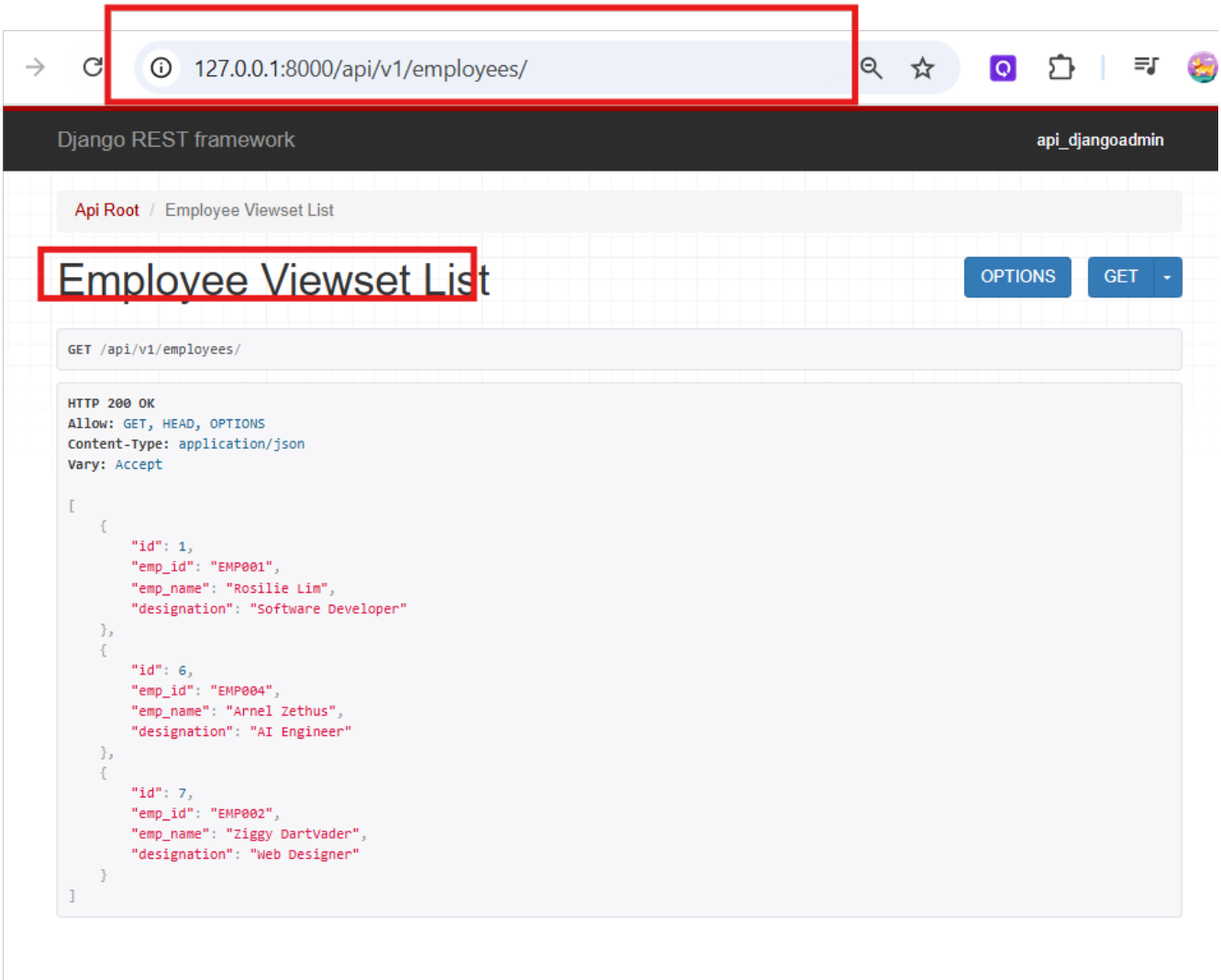




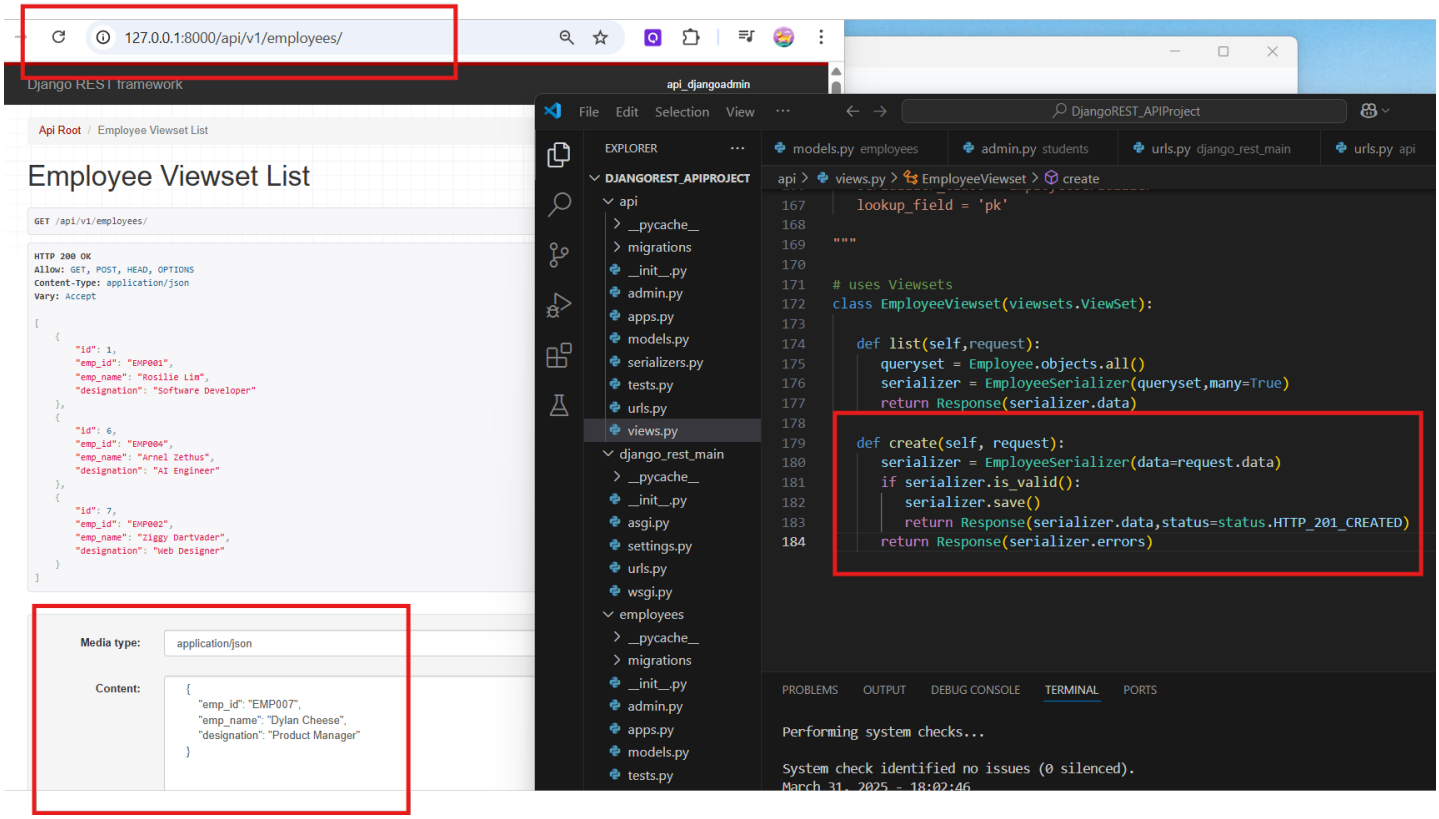
We further update our URLS.PY to include the basename as the name of our model.



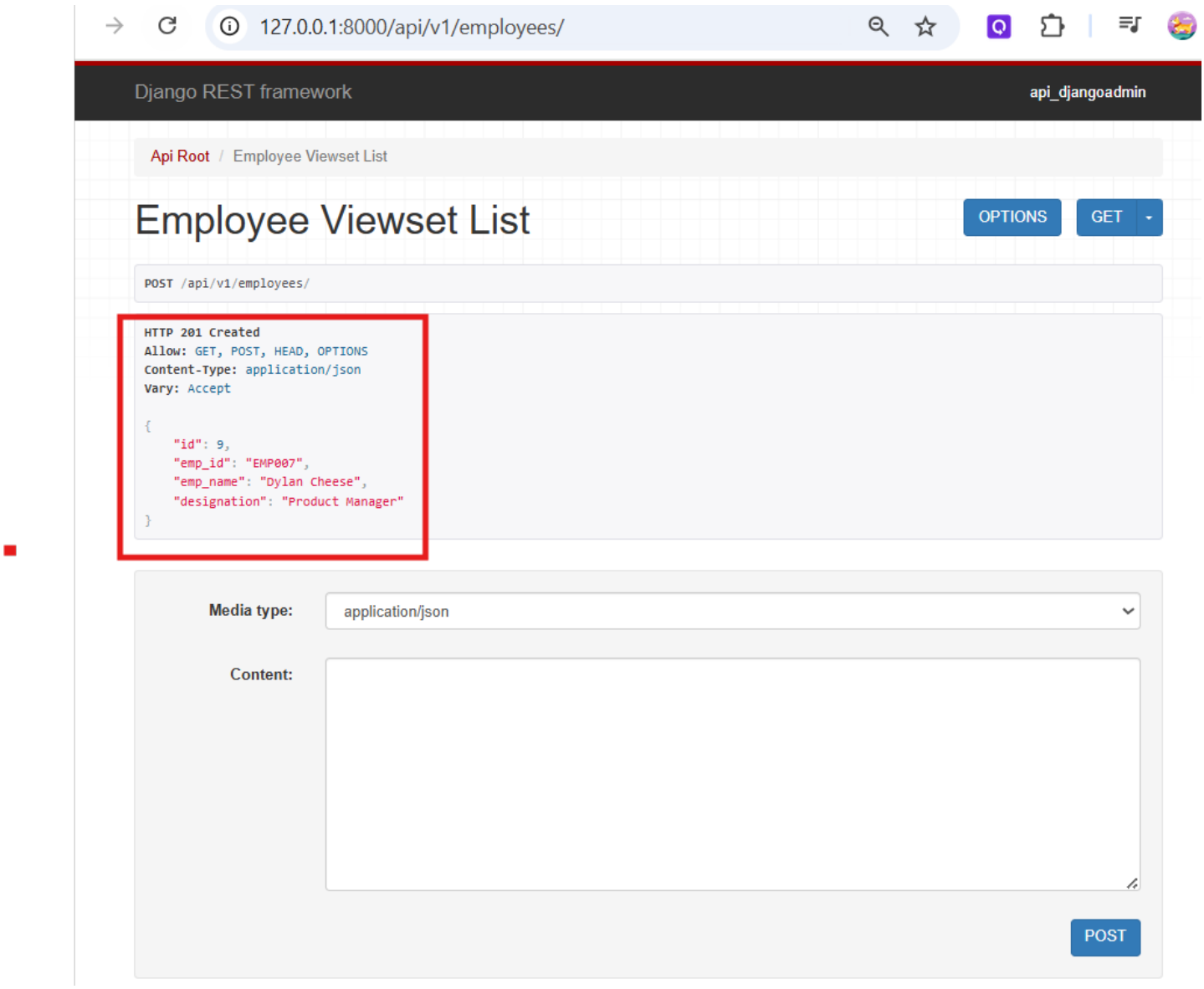
So, when we run our path for Employees:



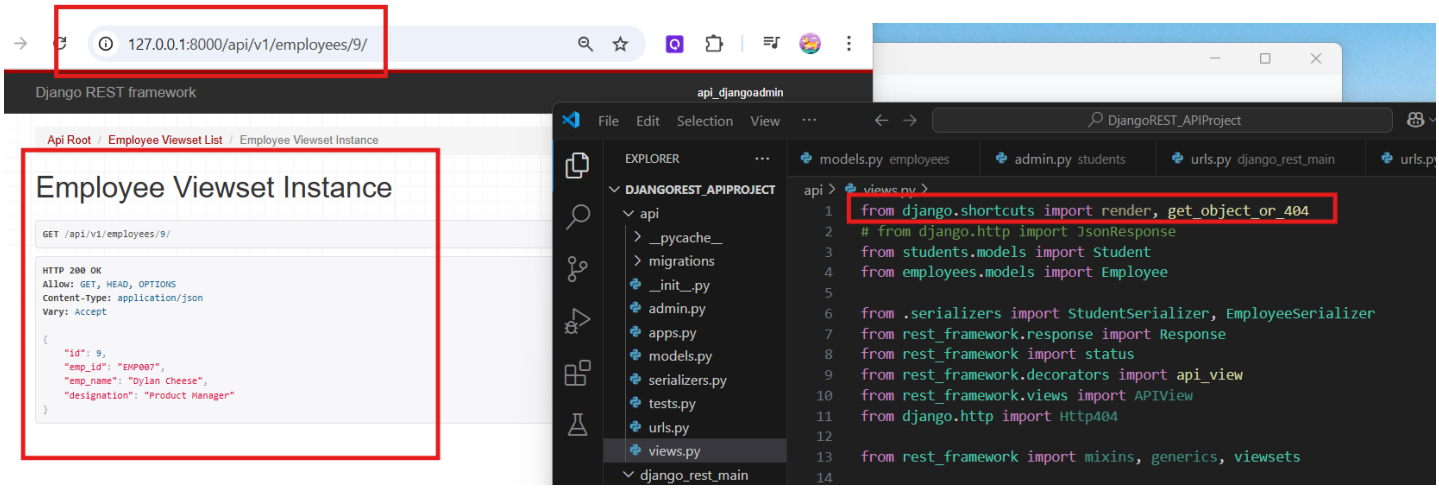
4. For other CRUD operations, we create a new method, CREATE, to add a new record:

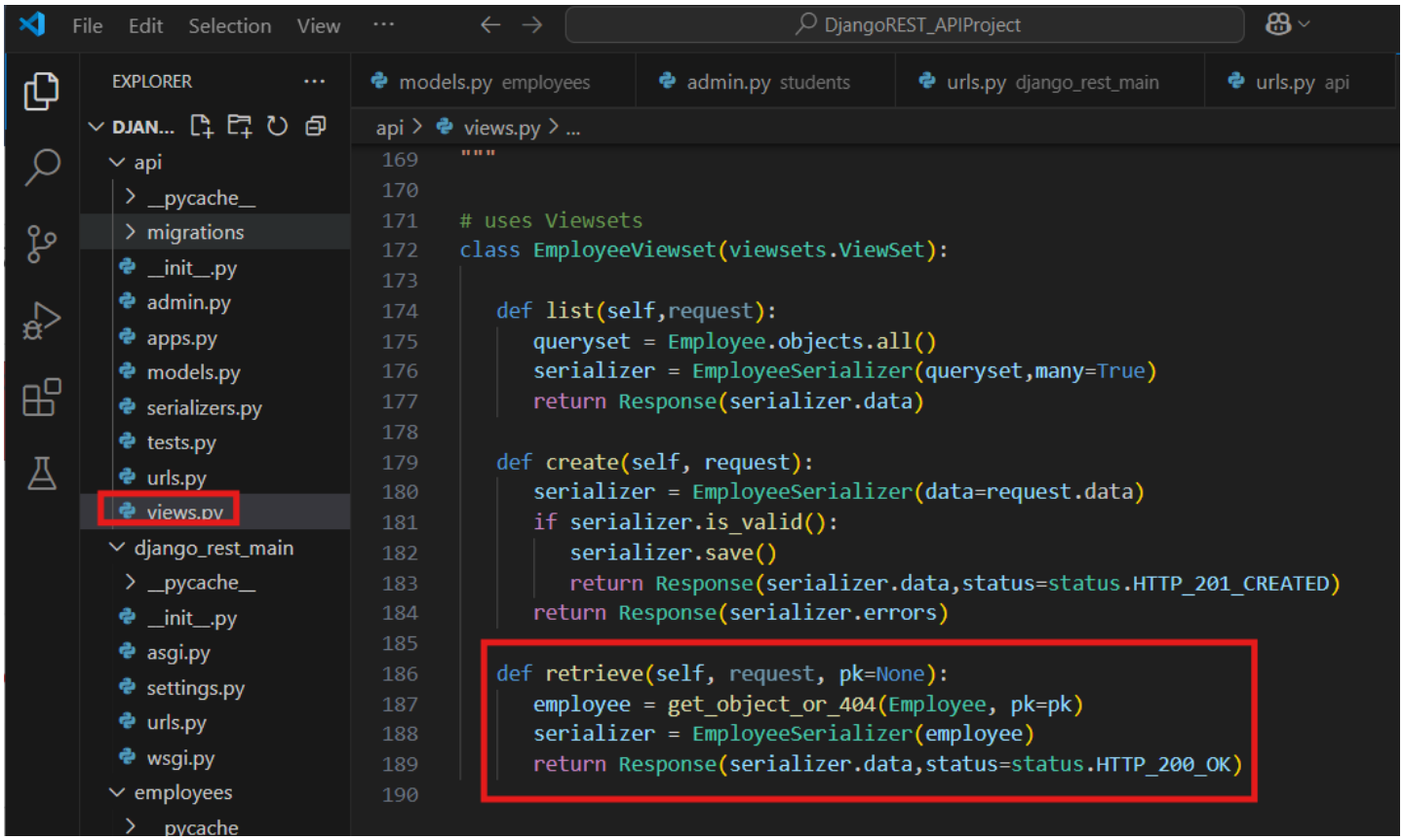


This results to:

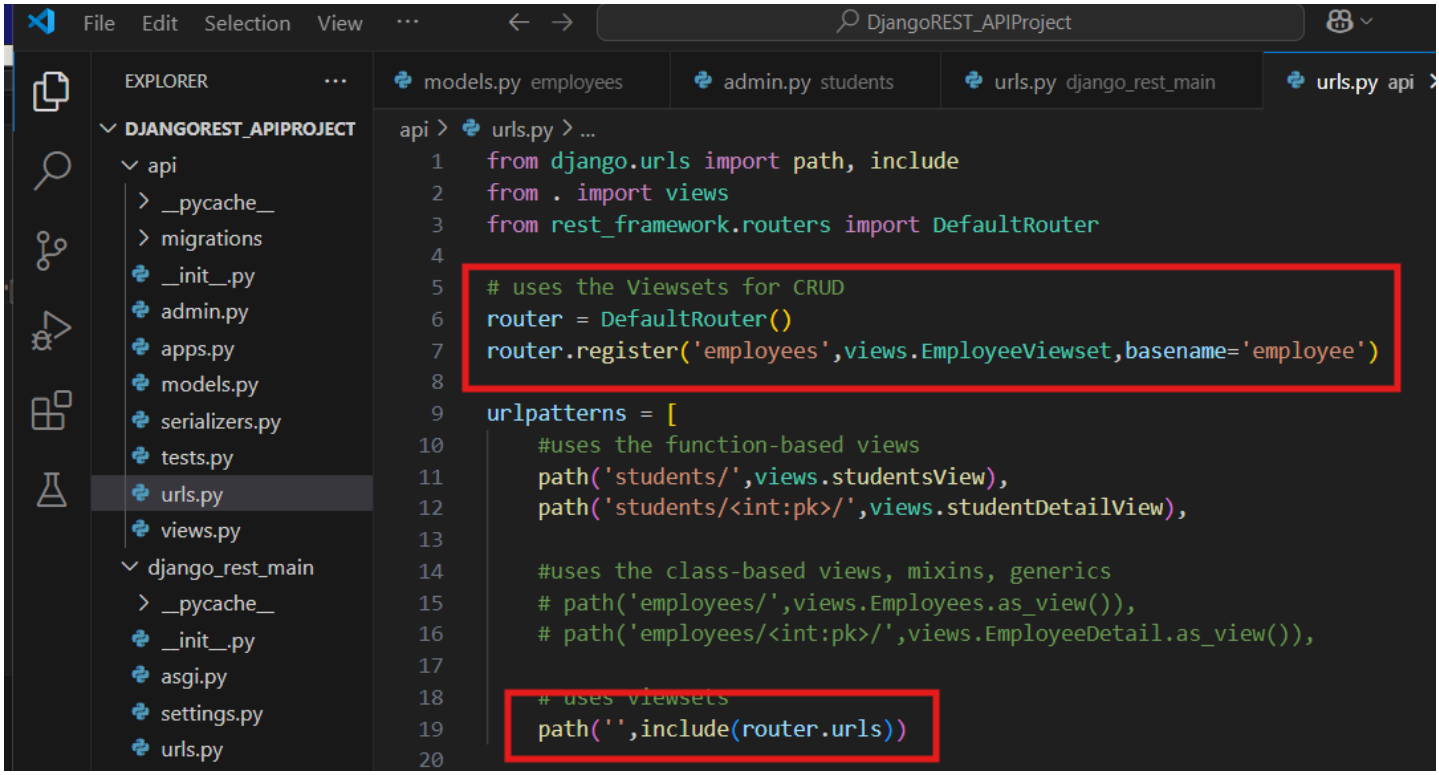


5. To retrieve a single record, we don't have to create a separate path for our employee details, by using the retrieve method, we can get this record immediately.

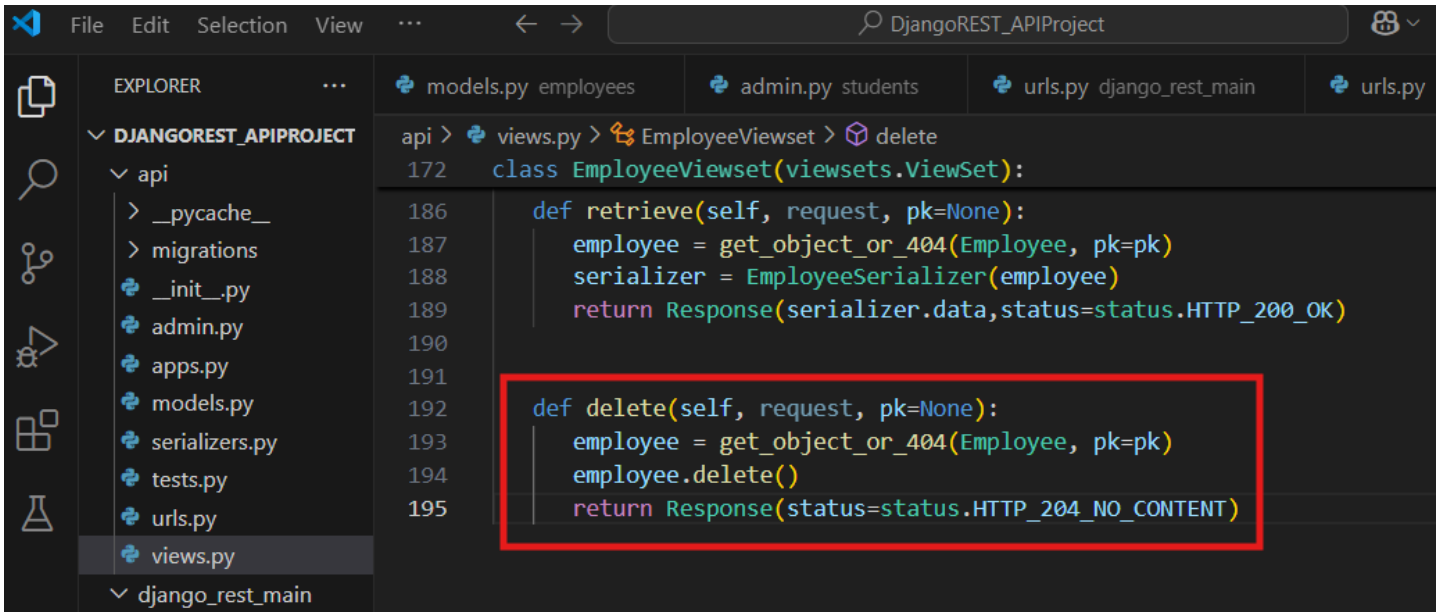




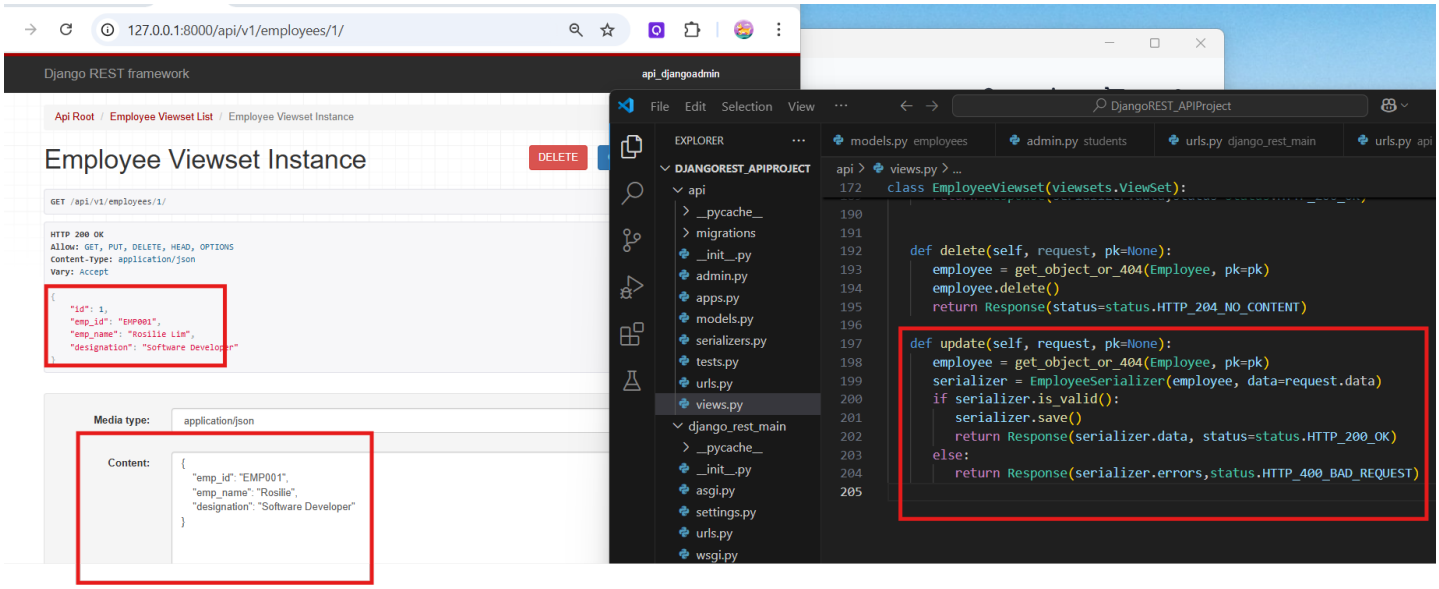
Our URLS.PY is still this:



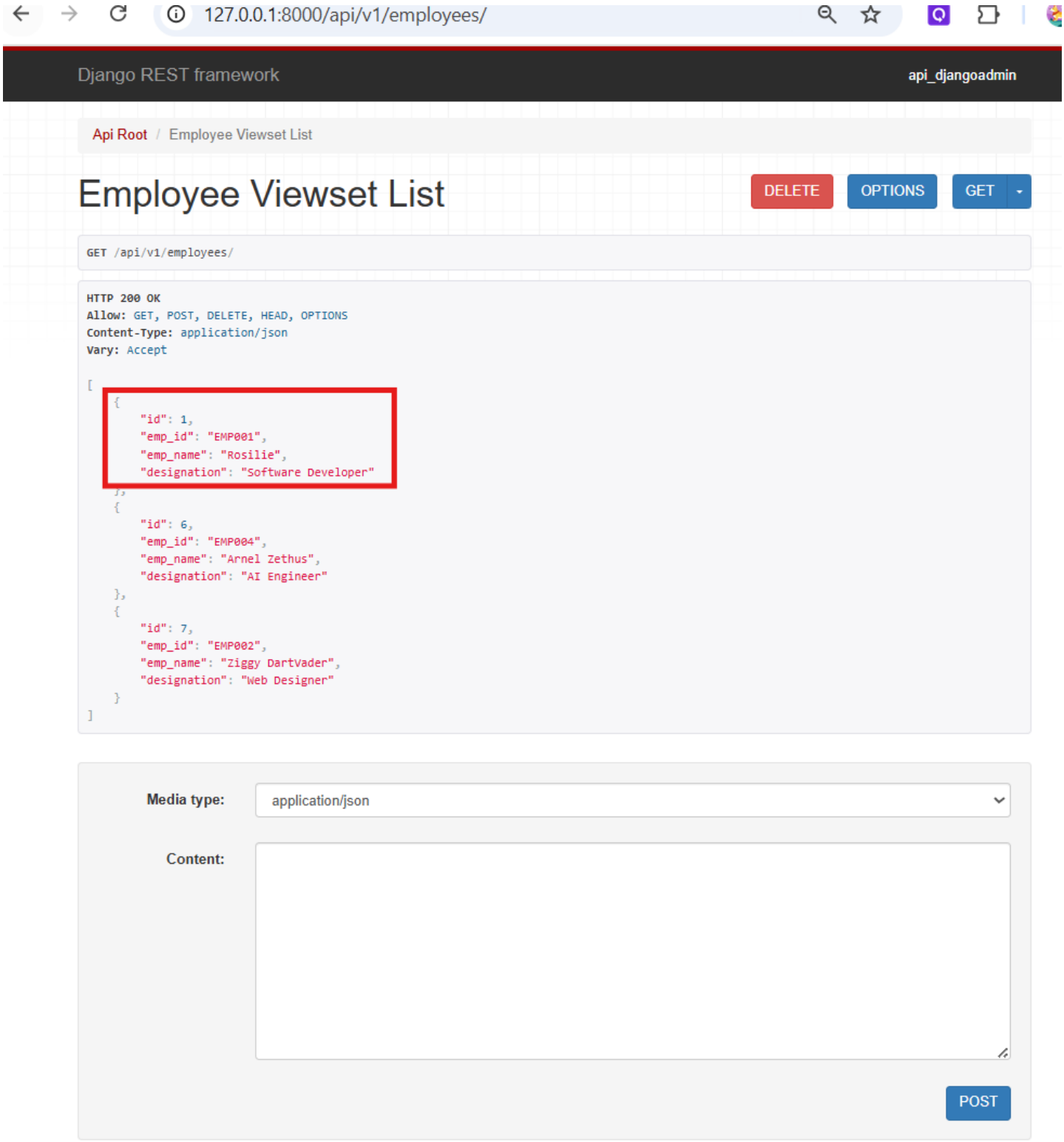
6. To delete a record, we create a new method:



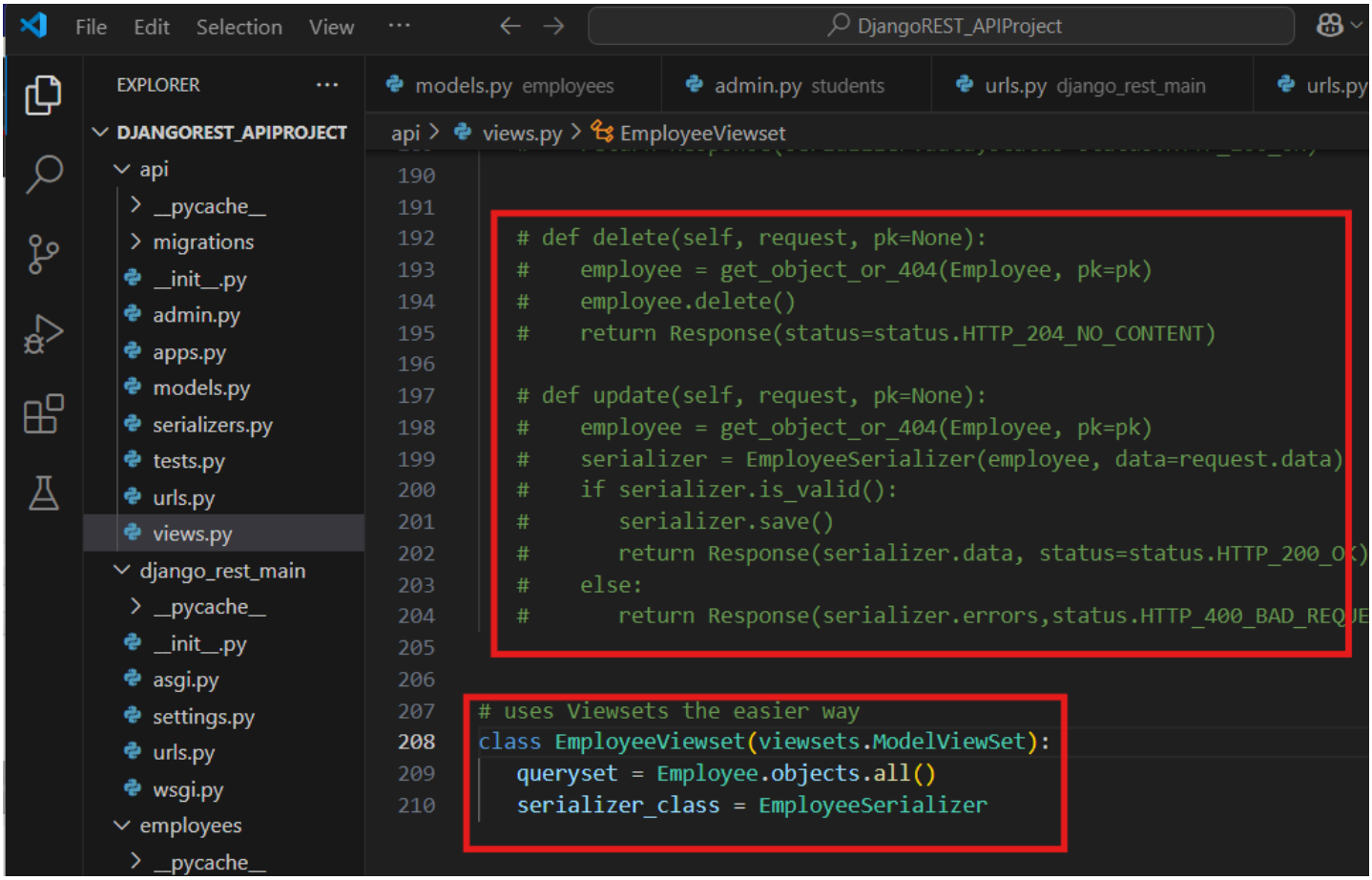
7. To update the record,



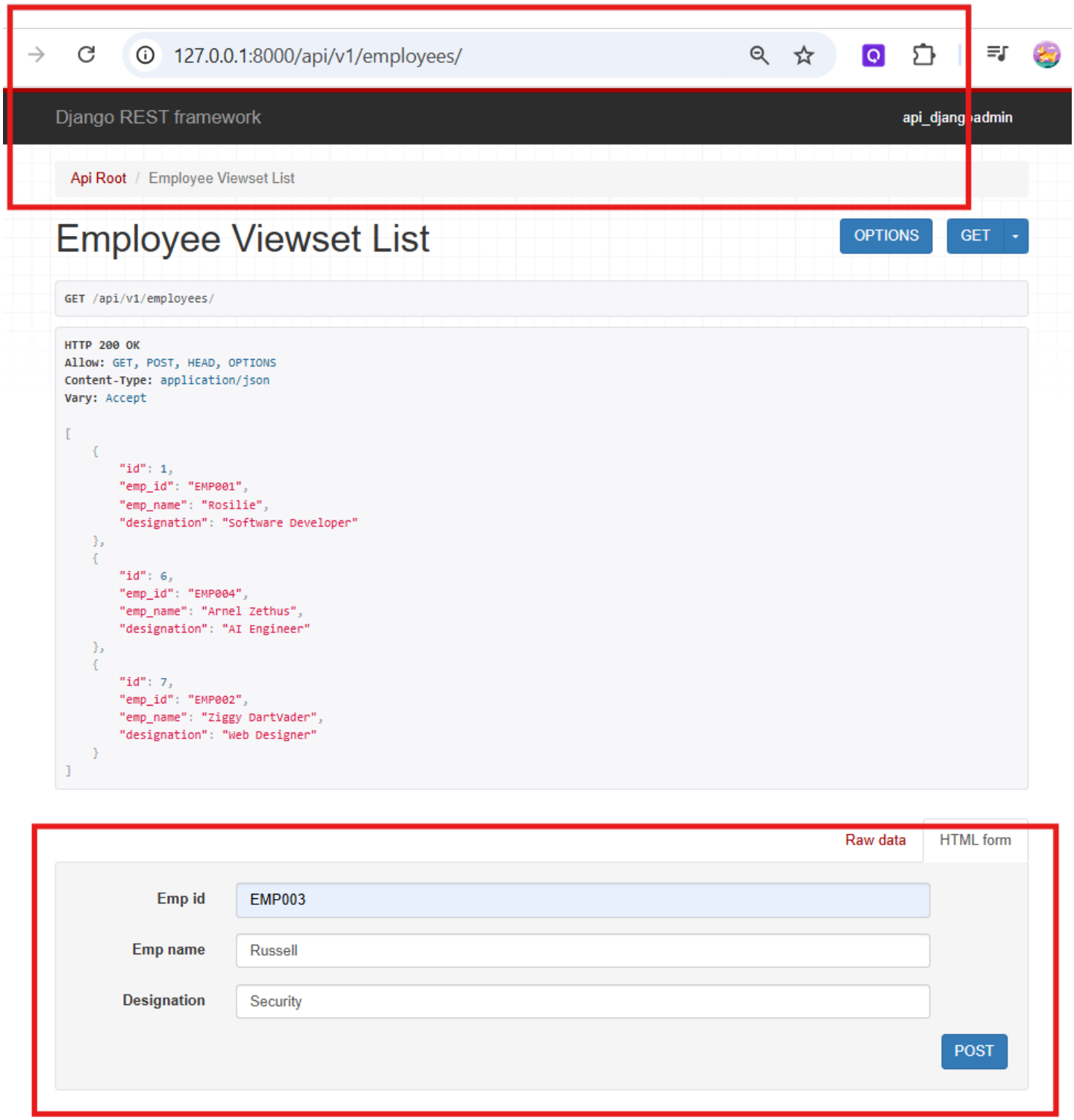
8. Our updated Employee model shall look like this:



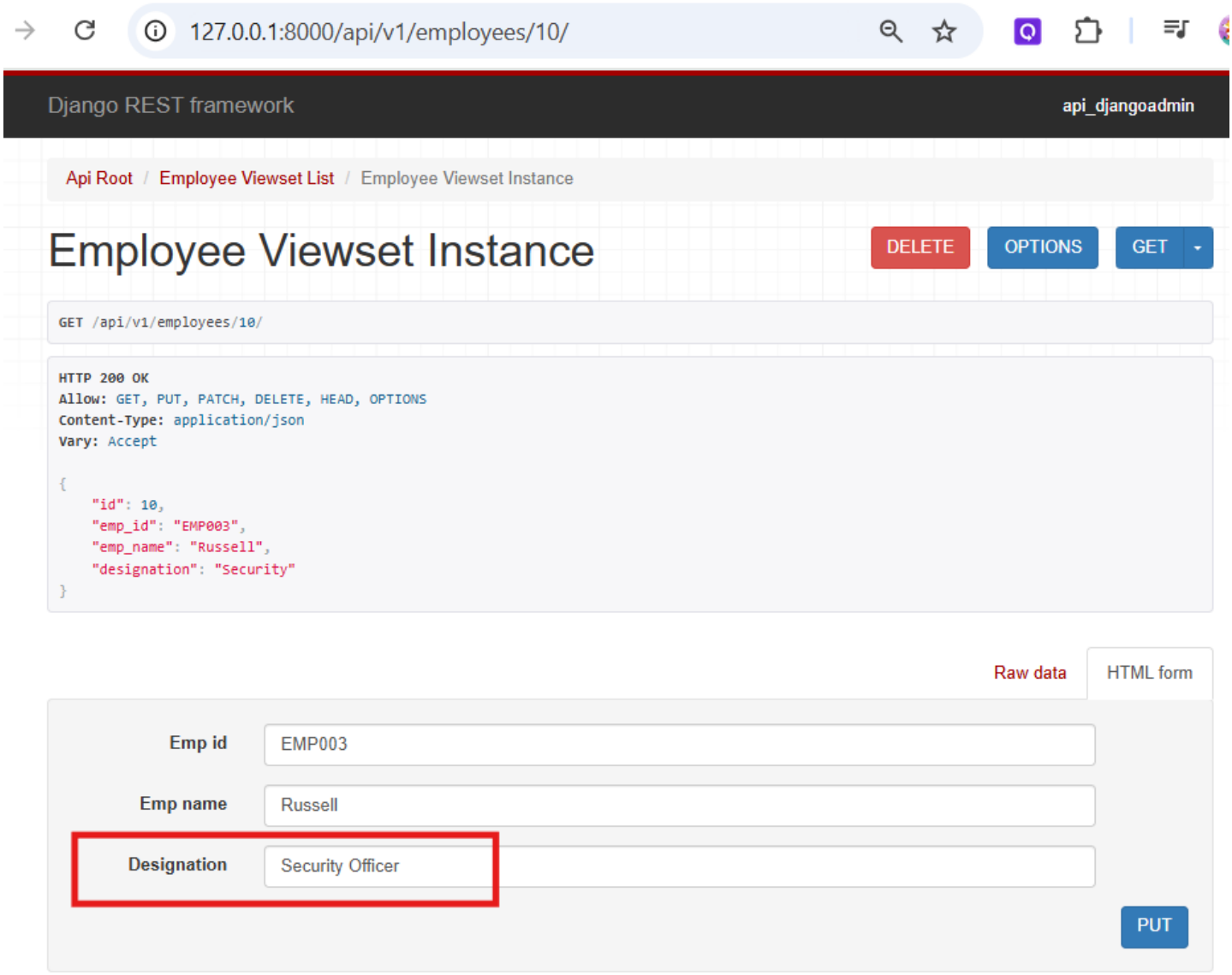
Using the steps above, we were able to create one class with several methods to perform CRUD operations. However, there is an easier alternative, the use of `viewsets.ModelViewset`, which will handle all the CRUD operations an easier and more efficient way.



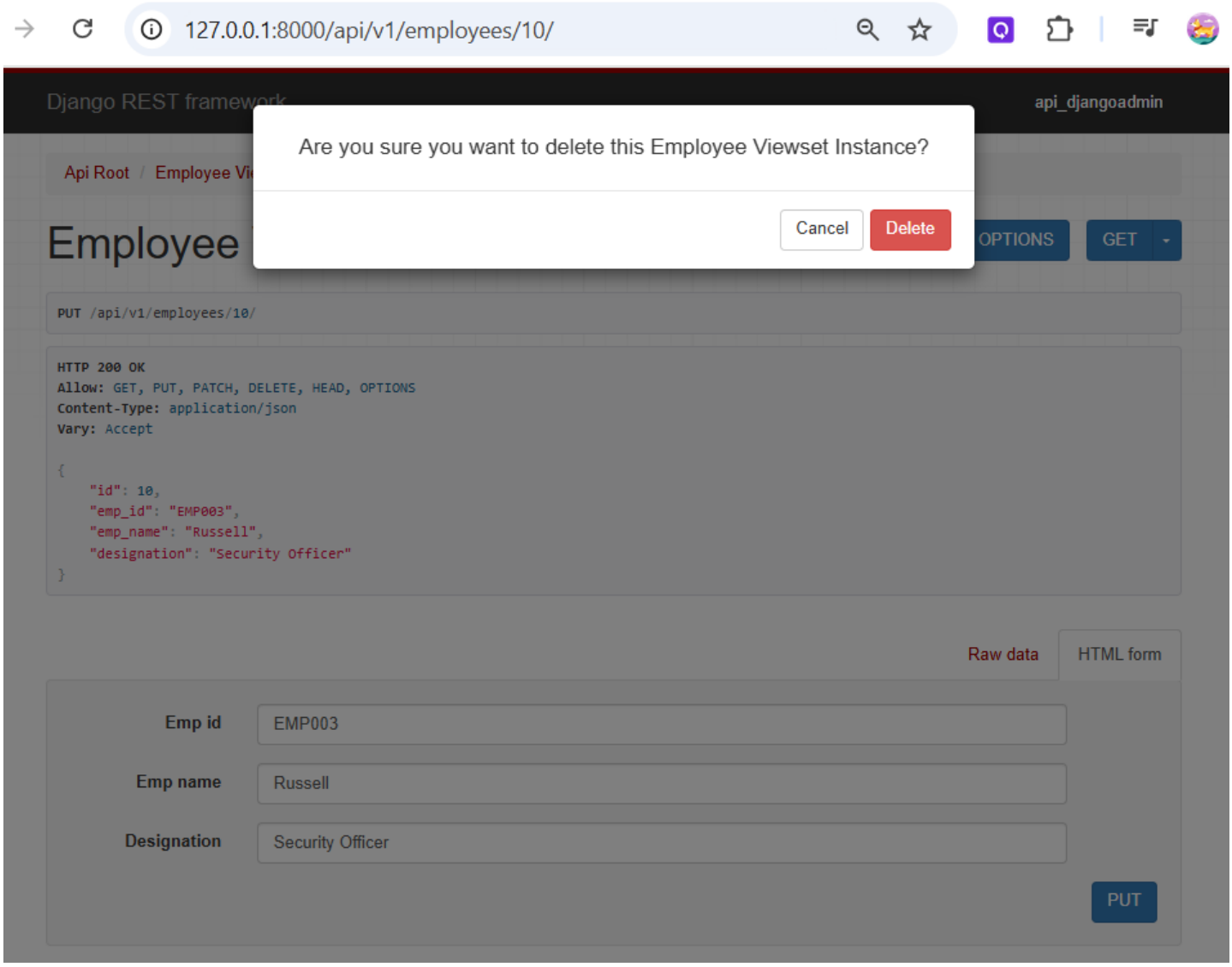
To add a new record:



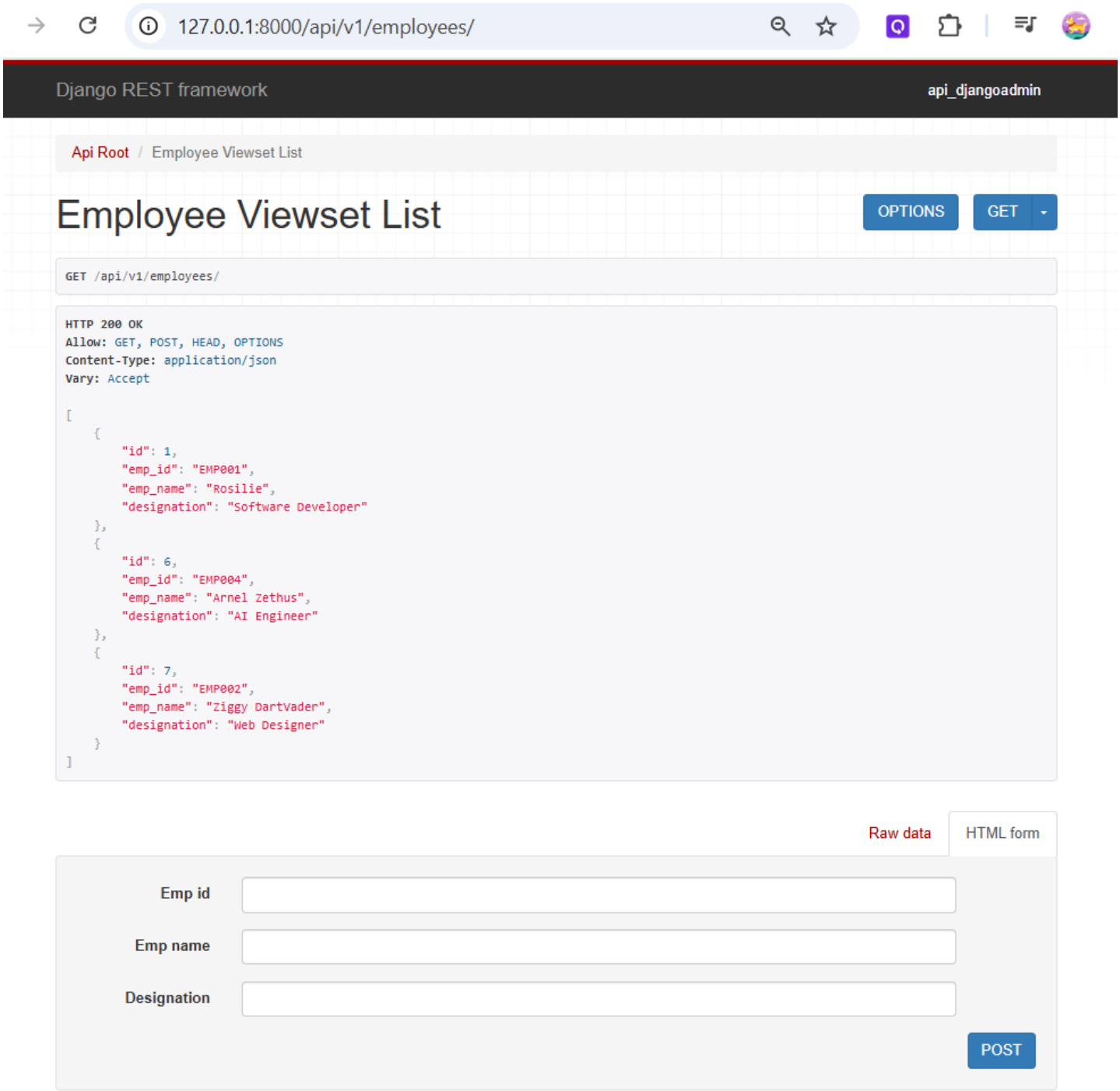
To update a record:



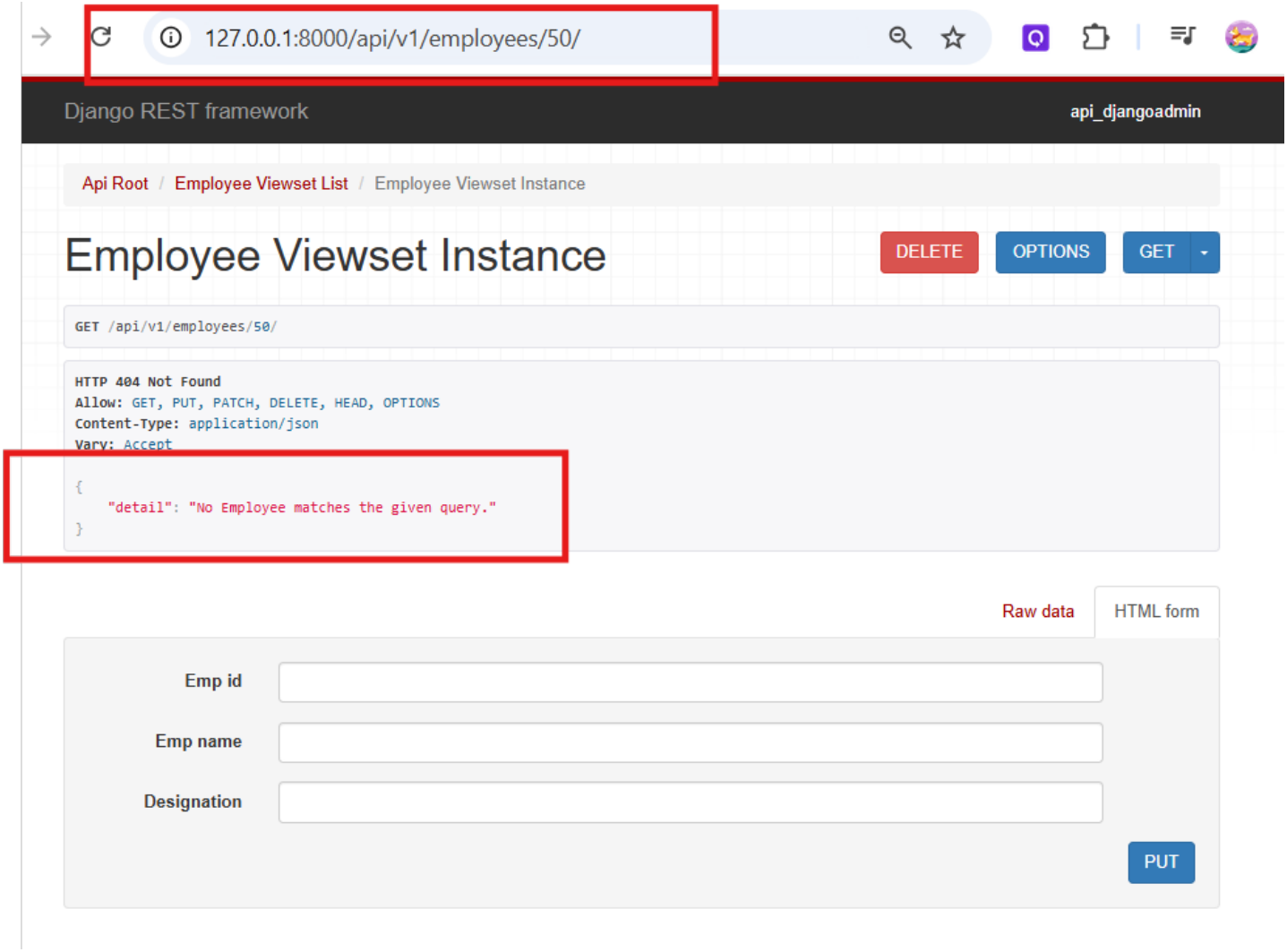
To delete a record:



Viewing our updated list:



To view a non-existent record, it also shows validations:



9. In summary, the `viewsets.ModelViewset` is much faster than other methods.
