DetailView – Class Based Views Django

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Detail View refers to a view (logic) to display one instances of a table in the database. We have already discussed basics of Detail View in Detail View – Function based Views Django. Class-based views provide an alternative way to implement views as Python objects instead of functions. They do not replace function-based views, but have certain differences and advantages when compared to function-based views:

- Organization of code related to specific HTTP methods (GET, POST, etc.) can be addressed by separate methods instead of conditional branching.
- Object oriented techniques such as mixins (multiple inheritance) can be used to factor code into reusable components.

Class based views are simpler and efficient to manage than function-based views. A function based view with tons of lines of code can be converted into a class based views with few lines only. This is where Object Oriented Programming comes into impact.

Django DetailView – Class Based Views

Illustration of **How to create and use Detail view** using an Example. Consider a project named geeksforgeeks having an app named geeks.

Refer to the following articles to check how to create a project and an app in Django.

- *How to Create a Basic Project using MVT in Django?*
- *How to Create an App in Django ?*

After you have a project and an app, let's create a model of which we will be creating instances through our view. In geeks/models.py,

Python3

```
# import the standard Django Model
# from built-in library
from django.db import models

# declare a new model with a name "GeeksModel"
class GeeksModel(models.Model):

    # fields of the model
    title = models.CharField(max_length = 200)
    description = models.TextField()

    # renames the instances of the model
    # with their title name
    def __str__(self):
        return self.title
```

After creating this model, we need to run two commands in order to create Database for the same.

```
Python manage.py makemigrations
Python manage.py migrate
```

Now let's create some instances of this model using shell, run form bash,

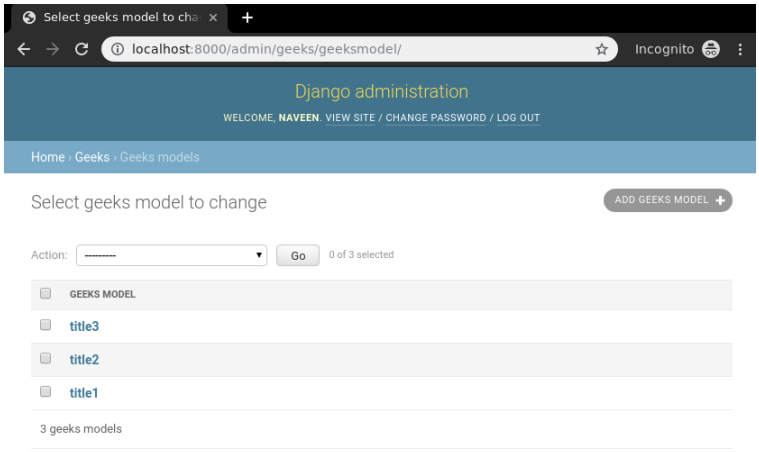
```
Python manage.py shell
```

Enter following commands

```
>>> from geeks.models import GeeksModel
>>> GeeksModel.objects.create(
                        title="title1",
                        description="description1").save()
>>> GeeksModel.objects.create(
                        title="title2",
                        description="description2").save()
>>> GeeksModel.objects.create(
```

```
title="title2",
description="description2").save()
```

Now we have everything ready for back end. Verify that instances have been created from http://localhost:8000/admin/geeks/geeksmodel/



Class Based Views automatically setup everything from A to Z. One just needs to specify which model to create DetailView for, then Class based DetailView will automatically try to find a template in app_name/modelname_detail.html. In our case it is geeks/templates/geeks/geeksmodel_detail.html. Let's create our class based view. In geeks/views.py,

Python3

```
from django.views.generic.detail import DetailView

from .models import GeeksModel

class GeeksDetailView(DetailView):
    # specify the model to use
    model = GeeksModel
```

Now create a url path to map the view. In geeks/urls.py,

Python3

```
from django.urls import path
```

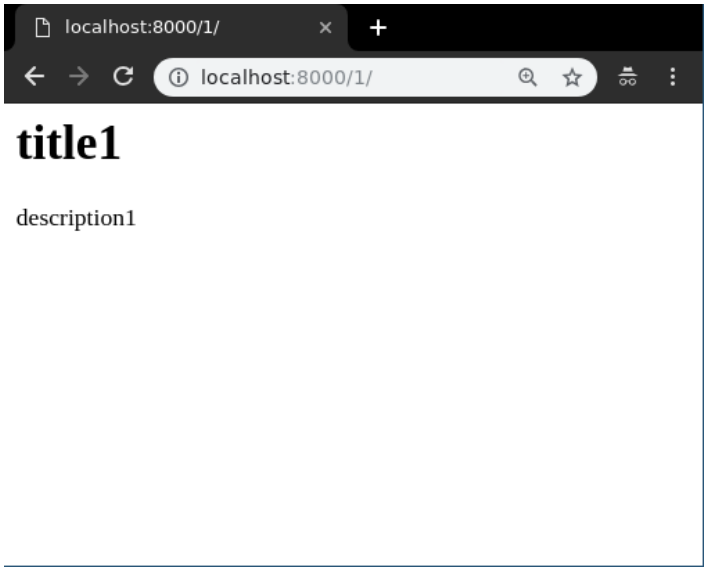
```
# importing views from views..py
from .views import GeeksDetailView
urlpatterns = [
    # <pk> is identification for id field,
    # slug can also be used
    path('<pk>/', GeeksDetailView.as_view()),
]
```

Create a template in templates/geeks/geeksmodel_detail.html,

html

```
<h1>{{ object.title }}</h1>
<p>{{ object.description }}</p>
```

Let's check what is there on http://localhost:8000/1/



Manipulate Context Data in DetailView

By default DetailView will only display fields of a table. If one wants to modify this context data before sending it to template or add some extra field, context data can be overridden. In geeks/views.py,

Python3

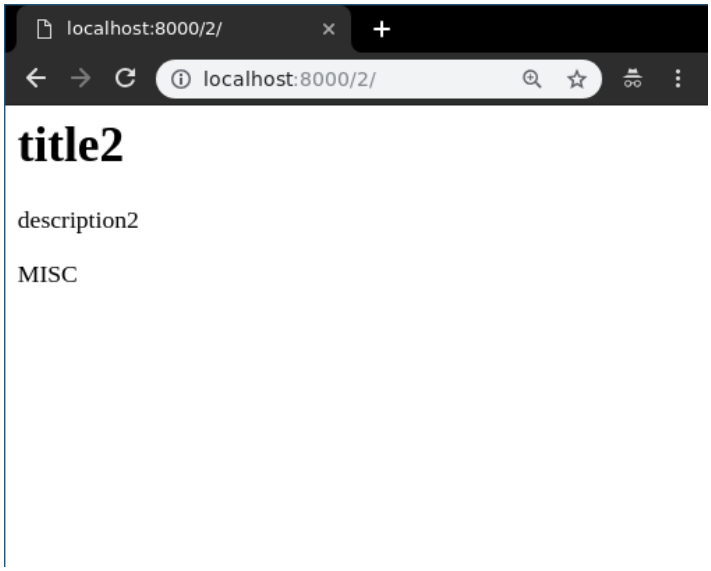
```
from django.views.generic.detail import DetailView

from .models import GeeksModel

class GeeksDetailView(DetailView):
    # specify the model to use
    model = GeeksModel

    # override context data
    def get_context_data(self, *args, **kwargs):
        context = super(GeeksDetailView,
             self).get_context_data(*args, **kwargs)
        # add extra field
        context["category"] = "MISC"
        return context
```

In geeks/templates/geeksmodel_detail.html,

html

```
<h1>{{ object.title }}</h1>
<p>{{ object.description }}</p>
<p>{{ category }}</p>
```

Now check, if the category is added.



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