List View – Function based Views Django

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List View refers to a view (logic) to list all or particular instances of a table from the database in a particular order. It is used to display multiple types of data on a single page or view, for example, products on an eCommerce page. Django provides extra-ordinary support for List Views but let's check how it is done manually through a function-based view. This article revolves around list View which involves concepts such as Django Forms, Django Models.
For List View, we need a project with some models and multiple instances which will be displayed.

Django List View – Function Based Views

Illustration of **How to create and use List 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,

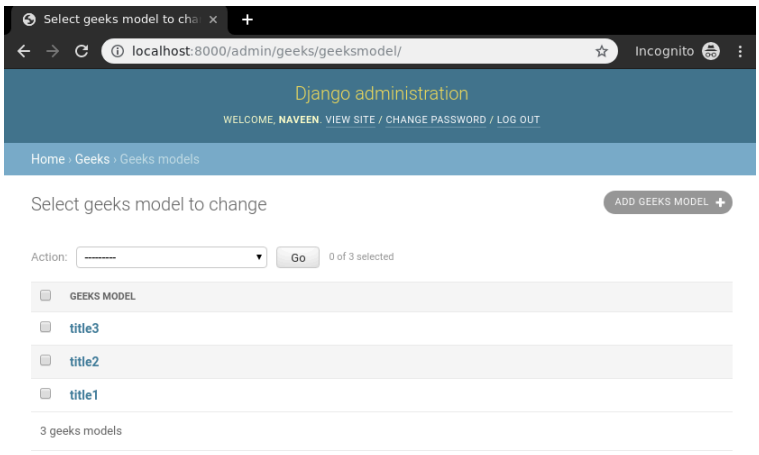
```
Python manage.py shell
```

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/



Let's create a view and template for the same. In geeks/views.py,

Python3

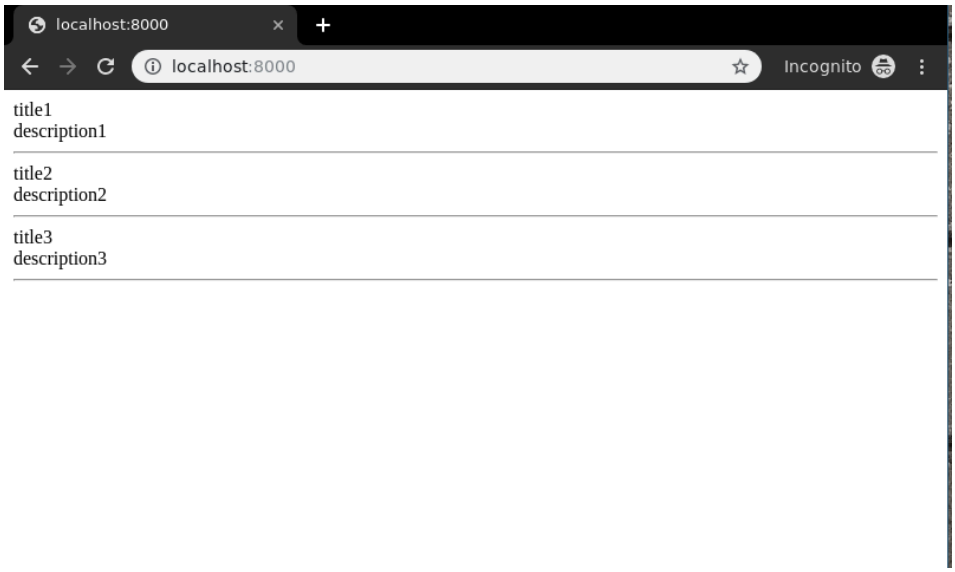
```
from django.shortcuts import render

# relative import of forms
from .models import GeeksModel


def list_view(request):
    # dictionary for initial data with
    # field names as keys
    context ={}

    # add the dictionary during initialization
    context["dataset"] = GeeksModel.objects.all()

    return render(request, "list_view.html", context)
```

Create a template in templates/list_view.html,

html

```
<div class="main">

    {% for data in dataset %}.

    {{ data.title }}<br/>
    {{ data.description }}<br/>
    <hr/>

    {% endfor %}

</div>
```

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



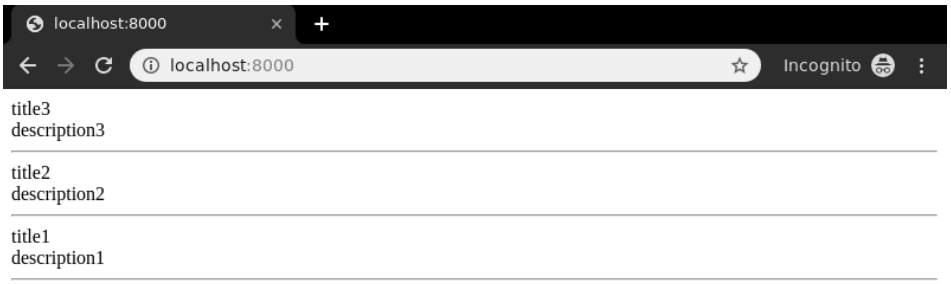
Bingo..!! list view is working fine. One can also display filtered items or order them in different orders based on various features. Let's order the items in reverse manner.
In geeks/views.py,

Python3

```
from django.shortcuts import render

# relative import of models
from .models import GeeksModel


def list_view(request):
    # dictionary for initial data with
    # field names as keys
    context ={}

    # add the dictionary during initialization
    context["dataset"] = GeeksModel.objects.all().order_by("-id")

    return render(request, "list_view.html", context)
```

order_by to arrange instances in different orders

Now visit http://localhost:8000/



filter to show selective instances

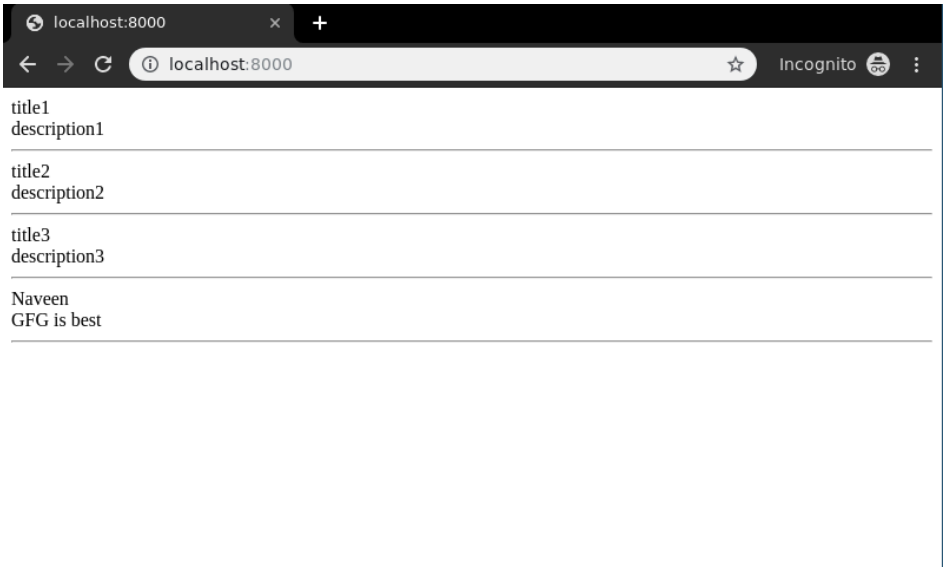
Let's create a different instance to show how filter works. Run

```
Python manage.py shell
```

Now, create another instance,

```
from geeks.models import GeeksModel
GeeksModel.objects.create(title = "Naveen", description = "GFG is
Best").save()
```

Now visit http://localhost:8000/



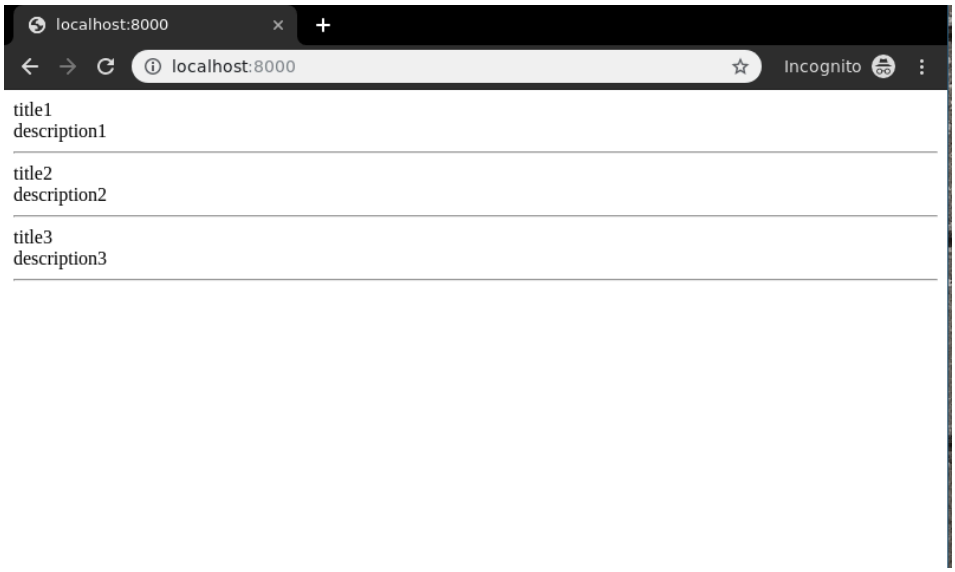
Let's filter this data to those containing word "title" in their title.
In **geeks/views.py**,

Python3

```
from django.shortcuts import render

# relative import of forms
from .models import GeeksModel


def list_view(request):
    # dictionary for initial data with
    # field names as keys
    context ={}

    # add the dictionary during initialization
    context["dataset"] = GeeksModel.objects.all().filter(
        title__icontains = "title"
```

```
    )

    return render(request, "list_view.html", context)
```

Now visit http://localhost:8000/ again,



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