

Django Handbook

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Django is a software that is used to create websites in python. Django is also an Object Relational Mapper Software (ORM).

In this tutorial we have used Pycharm to write Django code.

`python manage.py runserver`

use the above command to run Django project

urls.py

```
from django.contrib import admin
```

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

```
from . import views
```

```
urlpatterns = [
```

```
    path('admin/', admin.site.urls),
```

```
    path('index/', views.index),
```

```
    path("", views.home)
```

```
]
```

views.py

```
from django.shortcuts import render
```

```
from django.http import HttpResponse
```

```
#create your views here
```

```
def index(request):
```

```
    return HttpResponse("This is index view")
```

```
def home(request):
```

```
return HttpResponse("This is home page")
```

program to print text on webpage based on month given as querystring to pythonapp

urls.py

```
from django.contrib import admin
```

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

```
from . import views
```

```
urlpatterns = [
```

```
    path('admin/', admin.site.urls),
```

```
    path('index/', views.index),
```

```
    path("", views.home),
```

```
    path("<month>", views.getmonths),
```

```
]
```

views.py

```
from django.shortcuts import render
```

```
from django.http import HttpResponse, HttpResponseNotFound
```

```
#create your views here
```

```
def index(request):
```

```
    return HttpResponse("This is index view")
```

```
def home(request):
```

```
    return HttpResponse("This is home page")
```

```
def getmonths(request,month):  
    val1=None  
    if month == 'january':  
        val1='month is january'  
    elif month == 'february':  
        val1 = 'month is february'  
    elif month == 'march':  
        val1= 'month is march'  
    else:  
        val1='Enter a month jan,feb,march'  
    return HttpResponseRedirect(val1)
```

when a number is passed as query string it should number, if a string is passed it should display string

views.py

```
from django.shortcuts import render  
from django.http import HttpResponseRedirect, HttpResponseRedirectNotFound  
#create your views here
```

```
def index(request):  
    return HttpResponseRedirect("This is index view")
```

```
def home(request):  
    return HttpResponseRedirect("This is home page")
```

```
def getmonths(request,month):  
    val1=None
```

```
if month == 'january':
    val1='month is january'
elif month == 'february':
    val1 = 'month is february'
elif month == 'march':
    val1= 'month is march'
else:
    val1='Enter a month jan,feb,march'
return HttpResponse(val1)
```

```
def getmonthsnumber(request,month):
    val2=month
    return HttpResponse(val2)
```

urls.py

```
from django.contrib import admin
from django.urls import path
```

```
from . import views
urlpatterns = [
    path("<int:month>",views.getmonthsnumber),
    path("<str:month>",views.getmonths),
]
```

example of HttpResponseRedirect to send redirects

urls.py

```
from django.contrib import admin
from django.urls import path
```

```
from . import views
urlpatterns = [
    path('admin/', admin.site.urls),
    path('index/', views.index),
    path('home/', views.home),
    path('home1/', views.home1)
]
```

views.py

```
from django.shortcuts import render
from django.http import HttpResponseRedirect, HttpResponseNotFound, HttpResponseRedirect
#create your views here
```

```
def index(request):
    return HttpResponseRedirect("This is index view")
```

```
def home(request):
    return HttpResponseRedirect("This is home page")
```

```
def home1(request):
    return HttpResponseRedirect("/home")
```

how to display html page or a template in django

create a folder in djangoProject app as templates and within this folder create a folder djangoProject (Name of django App)

and within this folder create a file file1.html

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <title>Title</title>
</head>
<body>
Hello World
</body>
</html>
```

modify settings.py

```
INSTALLED_APPS = [
    'djangoProject',
    'django.contrib.admin',
    'django.contrib.auth',
    'django.contrib.contenttypes',
    'django.contrib.sessions',
    'django.contrib.messages',
    'django.contrib.staticfiles',
]
```

following is the views.py

add the following import

```
from django.template.loader import render_to_string
```

add the following code

```
def file1(request):  
    response_data=render_to_string("djangoProject/file1.html")  
    return HttpResponse(response_data)
```

modify urls.py

```
path('file1/',views.file1)
```

now go to <http://127.0.0.1:8000/file1> and you will see the output

how to serve a html file file2.html

code for file2.html

```
<!DOCTYPE html>
```

```
<html lang="en">
```

```
<head>
```

```
    <meta charset="UTF-8">
```

```
    <title>Title</title>
```

```
</head>
```

```
<body>
```

```
This is file 2
```

```
</body>
```

```
</html>
```

place the above file2.html file in templates/djangoProject

urls.py

```
path('file2/',views.file2)
```

views.py

```
def file2(request):
```

```
    return render(request,"djangoProject/file2.html")
```

—

how to display name on html page passed as a argument to request

urls.py

```
path('file2/<str:nametxt>',views.file2)
```

html file file2.html

```
<!DOCTYPE html>
```

```
<html lang="en">
```

```
<head>
```

```
    <meta charset="UTF-8">
```

```
    <title>Title</title>
```

```
</head>
```



```
<body>
{{ name }}
</body>
</html>
```

views.py

```
def file2(request,nametxt):
    return render(request,"djangoProject/file2.html",
        {
            "name":nametxt
        }
    )
```

example of for tag

file3.html

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <title>Title</title>
</head>
<body>
{% for a in list1 %}
<li>{{ a }}</li>
{% endfor %}
```

```
</body>
```

```
</html>
```

urls.py

```
path('file3/',views.file3),
```

views.py

```
def file3(request):
```

```
    li=['raman','aman','abcdef']
```

```
    return render(request,"djangoProject/file3.html",
```

```
        {
```

```
            "list1":li
```

```
        }
```

```
    )
```

example of if tag

file4.html

```
<!DOCTYPE html>
```

```
<html lang="en">
```

```
<head>
```

```
    <meta charset="UTF-8">
```

```
    <title>Title</title>
```

```
</head>
```

```
<body>
```

```
{% if name == "raman" %}
```

```
Name is raman
```

```
{% else %}
```

```
Name is not raman
```

```
{% endif %}
```

```
</body>
```

```
</html>
```

urls.py

```
path('file4/<str:nametxt>',views.file4)
```

views.py

```
def file4(request,nametxt):
```

```
    a=nametxt
```

```
    return render(request,"djangoProject/file4.html",
```

```
        {
```

```
            "name":a
```

```
        }
```

```
    )
```

how to dynamically generate urls in django

file5.html

```
<!DOCTYPE html>
```

```
<html lang="en">
```

```
<head>

    <meta charset="UTF-8">

    <title>Title</title>

</head>

<body>

{% for a in list1 %}

<li><a href="{% url 'delete' a %}">{{ a }}</a></li>

{% endfor %}

</body>

</html>
```

urls.py

```
path('file5/',views.file5),
path('delete/<str:a>',views.delete , name="delete")
```

views.py

```
def delete(request,a):
    return HttpResponseRedirect(a)

def file5(request):
    li=['raman','aman','abcdef']
    return render(request,"djangoProject/file5.html",
        {
            "list1":li
        }
    )
```

creating a django models with fields

add a file models.py to your app

```
from django.db import models
```

```
class Book(models.Model):  
    title : models.CharField(max_length=50)  
    rating : models.IntegerField()
```

and these commands in terminal

```
python manage.py makemigrations
```

```
python manage.py migrate
```
