

BACK END

- ✓ Backend is responsible to generate required response to the end user, which is displayed by the Front-End.

BACKEND COMPONENTS

- ✓ **LANGUAGES:** PYTHON, JAVA, etc.,
- ✓ **FRAMEWORKS:** Django, Pyramid, Flask, etc.,
- ✓ **DATABASES:** SQLite, Oracle, MySQL, etc.,

DJANGO

- ✓ Django is a free and open-source web framework.
- ✓ It is the most popular web application framework for Python.
- ✓ Model-View-Template (MVT) architectural pattern.
- ✓ It is maintained by the Django Software Foundation (DSF).
- ✓ It is Fast, Secure and Scalable.
- ✓ It provides inbuilt database (SQLite).

FEATURES OF DJANGO FRAMEWORK:

- ✓ Fast
- ✓ Fully loaded
 - ✓ It takes care of user authentication, content administration, site maps, RSS feeds, and many more tasks.
- ✓ Security
 - ✓ Django helps developers avoid many common security mistakes (SQL injection, cross-site scripting, cross-site request forgery and clickjacking).
 - ✓ Its user authentication system provides a secure way to manage user accounts and passwords.
- ✓ Scalability
- ✓ Versatile

INSTALLING DJANGO

1. Open Command Prompt

`pip install django`

or

```
pip install django == 1.11.9 #(Particular Version)
```

```
[100%] Downloading collected packages: tmdat...  
  tmdat (2.0.1) |████████| 339 kB 2.2 MB/s  
  suspense (1.0.0) |████████| 339 kB 2.2 MB/s  
  asgiref (3.4.1) |████████| 25 kB  
  django (4.0.1) |████████| 8.0 MB 2.2 MB/s  
  salparser (0.4.2) |████████| 742 kB 394 kB/s  
  tzdata (2021.5) |████████| 1339 kB 2.2 MB/s  
  collecting tmdat  
  Downloading tmdat-2.0.1-py3-none-any.whl (339 kB)  
  Downloading suspense-1.0.0-py3-none-any.whl (339 kB)  
  Downloading asgiref-3.4.1-py3-none-any.whl (25 kB)  
  Downloading django-4.0.1-py3-none-any.whl (8.0 MB)  
  Downloading salparser-0.4.2-py3-none-any.whl (742 kB)  
  Collecting asgiref  
  Collecting salparser  
  Collecting django  
  Collecting tmdat
```

VIEWING CURRENT DJANGO VERSION

```
py -m django --version
```

```
C:\Windows\system32\cmd.exe
C:\>py -m django --version
4.0.1
```

C:\>

DJANGO PROJECT

- ✓ Django project is a collection of applications and configurations which forms a full web application.

Eg: Bank Project

DJANGO APPLICATION

- ✓ Django Application is responsible to perform a particular task in our entire web application.

Eg: loan app, registration app, polling app etc, Bank Project Configurations Loan App, Insurance App, Investment App, Customer App.

Project = Several Applications + Configuration Information

CREATE DJANGO PROJECT

1. Open Command Prompt.

```
django-admin startproject project1
```

C:\Windows\system32\cmd.exe

```
D:\Django>django-admin startproject project1
```

```
D:\Django>
```

This PC > New Volume (D:) > Django > project1

 project1

 manage
PROJECT1**PROJECT1**
__init__.py

It is a blank python script.

asgi.py
urls.py

to store all our url-patterns of our project.

WEB DEVELOPMENT

settings.py

specify all our project settings and configurations like installed applications, middleware configurations, database configurations etc

wsgi.py

Web Server Gateway Interface

manage.py to run development server, run tests, create migrations etc.

This PC > New Volume (D:) > Django > project1 > project1

Name	Date modified	Type	Size
__init__.py	1/18/2022 5:55 PM	Python file	0 KB
asgi.py	1/18/2022 5:55 PM	Python file	1 KB
settings.py	1/18/2022 5:55 PM	Python file	4 KB
urls.py	1/18/2022 5:55 PM	Python file	1 KB
wsgi.py	1/18/2022 5:55 PM	Python file	1 KB

WSGI Webserver interface

RUN DJANGO DEVELOPMENT SERVER

python manage.py runserver

```
D:\Django>cd project1
D:\Django\project1>python manage.py runserver
Watching for file changes with StatReloader
Performing system checks...
System check identified no issues (0 silenced).

You have 18 unapplied migration(s). Your project may not work properly until you apply the migrations f
or app(s): admin, auth, contenttypes, sessions.
Run 'python manage.py migrate' to apply them.
January 18, 2022 - 18:09:45
Django version 4.0.1, using settings 'project1.settings'
Starting development server at http://127.0.0.1:8000/
Quit the server with CTRL-BREAK.
```

WEB DEVELOPMENT

TO SEND FIRST REQUEST

Open browser.

http://127.0.0.1:8000/

<u>http://127.0.0.1:8000/</u>	-	local host
http	-	host
127.0.0.1	-	system
8000	-	django server running port number



ROLE OF WEB SERVER

- ✓ Web Server provides environment to run our web applications.
- ✓ Web Server is responsible to receive the request and forward request to the corresponding web component based on url-pattern and to provide response to the end user.
- ✓ Django framework is responsible to provide development server.

INBUILT DATABASE

db.sqlite3

CREATE A WEB APPLICATION

`python manage.py startapp first`

D:\Windows\system32\cmd.exe

D:\Django\project1>python manage.py startapp first

D:\Django\project1>

This PC > New Volume (D:) > Django > project1 > first

Name	Date modified	Type	Size
migrations	1/18/2022 6:12 PM	File folder	
__init__.py	1/18/2022 6:12 PM	Python file	0 KB
admin.py	1/18/2022 6:12 PM	Python file	1 KB
apps.py	1/18/2022 6:12 PM	Python file	1 KB
models.py	1/18/2022 6:12 PM	Python file	1 KB
tests.py	1/18/2022 6:12 PM	Python file	1 KB
views.py	1/18/2022 6:12 PM	Python file	1 KB

- ✓ **manage.py**
- ✓ **__init__.py:** It is a blank Python script.
- ✓ **admin.py:** We can register our models in this file.
- ✓ **apps.py:** to specify application's specific configurations.
- ✓ **models.py:** have to store application's data models.
- ✓ **tests.py:** have to specify test functions to test our code.
- ✓ **views.py:** have to save functions that handle requests and return required responses.
- ✓ **Migrations Folder** This directory stores database specific information related to models.

CONFIGURING SETTINGS FILE

Adding the app name. Ex: first

```

FOLDERS           settings.py
project1          31 # Application definition
first             32
project1          33 INSTALLED_APPS = [
__pycache__       34     'django.contrib.admin',
_init_.py         35     'django.contrib.auth',
asgi.py          36     'django.contrib.contenttypes',
settings.py       37     'django.contrib.sessions',
urls.py          38     'django.contrib.messages',
wsgi.py          39     'django.contrib.staticfiles',
db.sqlite3        40     'first'
manage.py         41 ]
42

```

CREATING A VIEW IN VIEWS FILE

- ✓ View is responsible to prepare required response to the end user.
- ✓ View contains business logic.

Types of views:

- ✓ Function Based Views
 - ✓ Class Based Views
- ✓ Type this commands in view.py

```

from django.http import HttpResponse

def myfunction(request):
    s='<html><body bgcolor="blue"><h1><font color="white">Welcome to systech
    group</font></h1></body></html>'
    return HttpResponse(s)

```

DEFINING A URL-PATTERN IN URL FILE

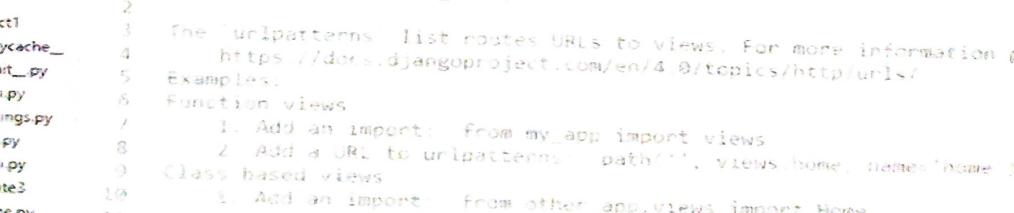
from first import views

```
urlpatterns = [
```

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

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

1



The screenshot shows a code editor with the file `urls.py` open. The code defines a URL configuration for the `project1` application. It includes imports for `admin` from `django.contrib.admin` and `path` from `django.urls`. It then imports `views` from the `first` app. The `urlpatterns` list contains two entries: a path for the admin site and a path for a custom view function `myfunction`.

```
1 """project1 URL Configuration
2
3 The urlpatterns list routes URLs to views. For more information please see
4     https://docs.djangoproject.com/en/4.0/topics/http/urls/
5 Examples:
6     Function views
7         1. Add an import: from my_app import views
8             2. Add a URL to urlpatterns: path('', views.home, name='home')
9 Class-based views
10    1. Add an import: from other_app.views import Home
11    2. Add a URL to urlpatterns: path('', Home.as_view(), name='home')
12 including another URLconf
13     1. Import the include() function: from django.urls import include, path
14     2. Add a URL to urlpatterns: path('blog/', include('blog.urls'))
15
16 from django.contrib import admin
17 from django.urls import path
18 from first import views
19
20 urlpatterns = [
21     path('admin/', admin.site.urls),
22     path('index/', views.myfunction)
23 ]
```

RUNNING THE SERVER

Open Command prompt

`python manage.py runserver`

```
D:\Django\project1>python manage.py runserver
Watching for file changes with StatReloader
Performing system checks...

System check identified no issues (0 silenced).

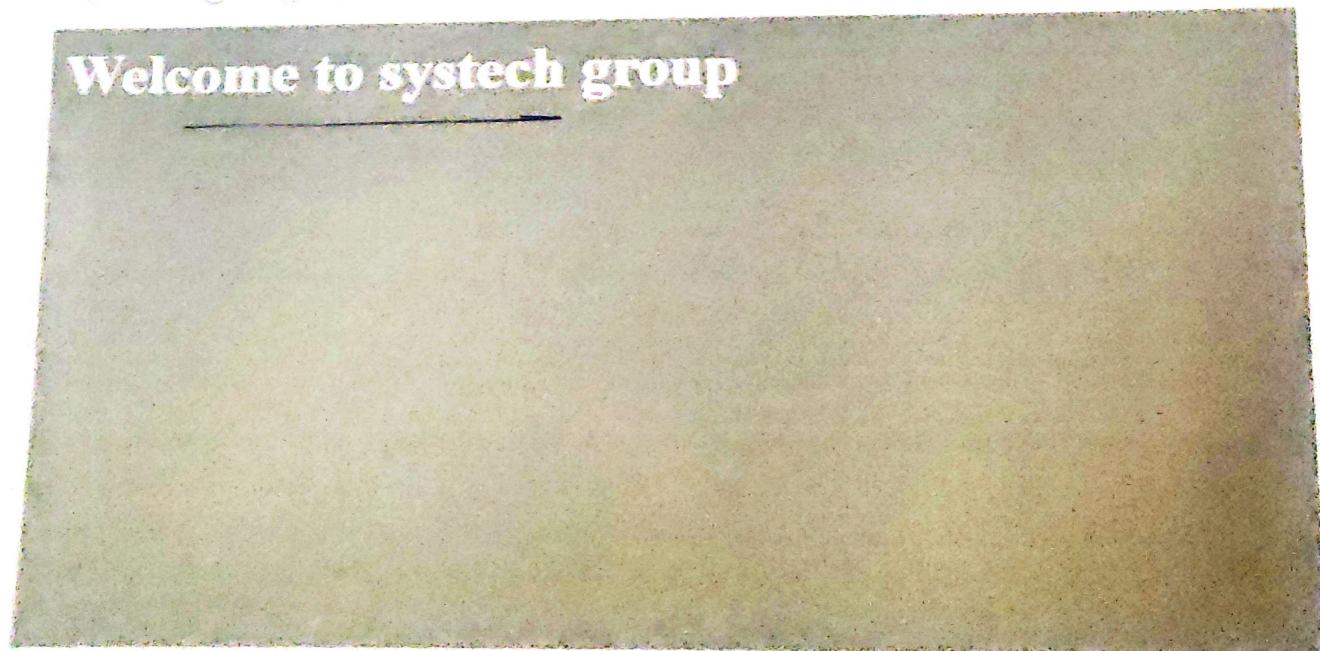
You have 18 unapplied migration(s). Your project may not work properly until you apply the migrations for
or app(s): admin, auth, contenttypes, sessions.
Run 'python manage.py migrate' to apply them.

January 18, 2022 - 18:21:58
Django version 4.0.1, using settings 'project1.settings'
Starting development server at http://127.0.0.1:8000/
Quit the server with CTRL-BREAK.
```

OUTPUT

Open Browser

`http://127.0.0.1:8000/index`



1. PROJECT : CREATE A WEB APPLICATION WITH HTTP REQUEST

1. Create the Project and Application.

D:\Windows\system32\cmd.exe

D:\Django>django-admin startproject project2

D:\Django>cd project2

D:\Django\project2>python manage.py startapp serverapp

D:\Django\project2>

2. Configuring Settings file.

```
project2
  project2
    +__pycache__
    +__init__.py
    +asgi.py
    +settings.py
    +urls.py
    +wsgi.py
  serverapp
  manage.py

  settings.py

19 # Quick start development settings - unsuitable for production
20 # See https://docs.djangoproject.com/en/4.0/howto/deployment/checklist/
21
22 # SECURITY WARNING: keep the secret key used in production secret!
23 SECRET_KEY = 'django-insecure-a_99&ytzvhkisiz79+idnw!p89l#9_137_aew-2139-0_49'
24
25 # SECURITY WARNING: don't run with debug turned on in production!
26 DEBUG = True
27
28 ALLOWED_HOSTS = []
29
30
31 # Application definition
32
33 INSTALLED_APPS = [
34     'django.contrib.admin',
35     'django.contrib.auth',
36     'django.contrib.contenttypes',
37     'django.contrib.sessions',
38     'django.contrib.messages',
39     'django.contrib.staticfiles',
40     'serverapp'
41 ]
42
```

3. Configuring Views file.

The screenshot shows a code editor with a sidebar titled "FOLDERS" and a main pane titled "views.py".

FOLDERS:

- project2
 - __pycache__
 - __init__.py
 - asgi.py
 - settings.py
 - urls.py
 - wsgi.py
- serverapp
 - migrations
 - __init__.py
 - admin.py
 - apps.py
 - models.py
 - tests.py
 - views.py
- manage.py

4. Configuring url file.

```
 1 """project2 URL Configuration
 2
 3 The urlpatterns list routes URLs to views. For more information please see
 4     https://docs.djangoproject.com/en/4.0/topics/http/urls/
 5 Examples:
 6 Function views
 7     1. Add an import: from my_app import views
 8         2. Add a URL to urlpatterns: path('', views.home, name='home')
 9 Class-based views
10     1. Add an import: from other_app.views import Home
11         2. Add a URL to urlpatterns: path('', Home.as_view(), name='home')
12 Including another URLconf
13     1. Import the include() function: from django.urls import include, path
14         2. Add a URL to urlpatterns: path('blog/', include('blog.urls'))
15
16 from django.contrib import admin
17 from django.urls import path
18 from serverapp import views
19 urlpatterns = [
20     path('admin/', admin.site.urls),
21     path('index/', views.timefunction)
22 ]
```

5. Run the server.

```
D:\Django\project2>python manage.py runserver  
Watching for file changes with StatReloader  
Performing system checks...
```

System check identified no issues (0 silenced).

You have 18 unapplied migration(s). Your project may not work properly until you apply the migrations for or app(s): admin, auth, contenttypes, sessions.
Run 'python manage.py migrate' to apply them.
January 18, 2022 - 18:33:51
Django version 4.0.1, using settings 'project2.settings'
Starting development server at http://127.0.0.1:8000/
Quit the server with CTRL-BREAK.

OUTPUT

<http://127.0.0.1:8000/index>

127.0.0.1:8000/index/ X +

← → C 127.0.0.1:8000/index/

CURRENT TIME IS:2022-01-18 18:35:28.355488

2. PROJECT : CREATE A WEB APPLICATION WITH HTTP REQUEST

1. Create the Project and Application.

```
Administrator: C:\Windows\system32\cmd.exe
```

```
D:\Django>django-admin startproject webcss
```

```
D:\Django>cd webcss
```

```
D:\Django\webcss>python manage.py startapp webapp
```

```
D:\Django\webcss>
```

2. Configuring Settings file.

```
INSTALLED_APPS = [  
    'django.contrib.admin',  
    'django.contrib.auth',  
    'django.contrib.contenttypes',  
    'django.contrib.sessions',  
    'django.contrib.messages',  
    'django.contrib.staticfiles',  
    'webapp'  
]  
  
MIDDLEWARE = [  
    'django.middleware.security.SecurityMiddleware',  
    'django.contrib.sessions.middleware.SessionMiddleware',  
    'django.middleware.common.CommonMiddleware',  
    'django.middleware.csrf.CsrfViewMiddleware',  
    'django.contrib.auth.middleware.AuthenticationMiddleware',  
    'django.contrib.messages.middleware.MessageMiddleware',  
    'django.middleware.clickjacking.XFrameOptionsMiddleware',  
]
```

3. Configuring Views file.

```
from django.shortcuts import render
from django.http import HttpResponse
from datetime import *
def test(request):
    today=datetime.now()
    x='<h1>TODAY IS : '+str(today.strftime("%d-%m-%y"))+'</h1>'
    return HttpResponse(x)
```

4. Configuring url file.

```
from django.contrib import admin
from django.urls import path
from webapp import views
urlpatterns = [
    path('admin/', admin.site.urls),
    path('index/',views.test)
]
```

WEB DEVELOPMENT

5. Run the server.

D:\Django\webcss>python manage.py runserver

Watching for file changes with StatReloader
Performing system checks...

System check identified no issues (0 silenced).

You have 18 unapplied migration(s). Your project may not work properly until you apply the migrations for app(s): admin, auth, contenttypes, sessions.

Run 'python manage.py migrate' to apply them.

March 31, 2022 - 18:49:51

Django version 4.0.1, using settings 'webcss.settings'

Starting development server at http://127.0.0.1:8000/

Quit the server with CTRL-BREAK.

OUTPUT

http://127.0.0.1:8000/index

⟳ 127.0.0.1:8000/index/ x +

← → C ⓘ 127.0.0.1:8000/index/

TODAY IS : 31-03-22

3. PROJECT : CREATE A WEB APPLICATION WITH RANDOM MODULE

1. Create the Project and Application.

```
D:\Django>django-admin startproject randomproject
D:\Django>cd randomproject
D:\Django\randomproject>python manage.py startapp ranapp
D:\Django\randomproject>
```

2. Configuring Settings file.

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

MIDDLEWARE = [
    'django.middleware.security.SecurityMiddleware',
    'django.contrib.sessions.middleware.SessionMiddleware',
    'django.middleware.common.CommonMiddleware',
    'django.middleware.csrf.CsrfViewMiddleware',
    'django.contrib.auth.middleware.AuthenticationMiddleware',
    'django.contrib.messages.middleware.MessageMiddleware',
    'django.middleware.clickjacking.XFrameOptionsMiddleware',
]
```

3. Configuring Views file.

```
from django.shortcuts import render
from django.http import HttpResponse
from random import *
def testing(request):
    a=[10,20,30,40,50,60,70,80,90]
    result=choice(a)
    x='<h1>Random Value is:.....'+str(result)+'</h1>'
    return HttpResponse(x)
```

4. Configuring url file.

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

urlpatterns = [
    path('admin/', admin.site.urls),
    path('index/',views.testing)
]
```

5. Run the server.

D:\Django\randomproject>python manage.py runserver

Watching for file changes with StatReloader
Performing system checks...

System check identified no issues (0 silenced).

You have 18 unapplied migration(s). Your project may not work properly until you apply the migrations for app(s): admin, auth, contenttypes, sessions.

Run 'python manage.py migrate' to apply them.

March 31, 2022 - 19:02:37

Django version 4.0.1, using settings 'randomproject.settings'

Starting development server at http://127.0.0.1:8000/

Quit the server with CTRL-BREAK.

[31/Mar/2022 19:02:41] "GET /index/ HTTP/1.1" 200 33

OUTPUT

http://127.0.0.1:8000/index



127.0.0.1:8000/index/ x +
← → C 127.0.0.1:8000/index/

Random Value is:.....60

4. PROJECT : CREATE A WEB APPLICATION WITH ADDING 2 NUMBERS

1. Create the Project and Application.

```
Administrator | Windows System | cmd.exe
```

```
D:\Django>django-admin startproject addpro
```

```
D:\Django>cd addpro
```

```
D:\Django\addpro>python manage.py startapp addapp
```

```
D:\Django\addpro>
```

2. Configuring Settings file.

```
INSTALLED_APPS = [  
    'django.contrib.admin',  
    'django.contrib.auth',  
    'django.contrib.contenttypes',  
    'django.contrib.sessions',  
    'django.contrib.messages',  
    'django.contrib.staticfiles',  
    'addapp'  
]  
  
MIDDLEWARE = [  
    'django.middleware.security.SecurityMiddleware',  
    'django.contrib.sessions.middleware.SessionMiddleware',  
    'django.middleware.common.CommonMiddleware',  
    'django.middleware.csrf.CsrfViewMiddleware',  
    'django.contrib.auth.middleware.AuthenticationMiddleware',  
    'django.contrib.messages.middleware.MessageMiddleware',  
    'django.middleware.clickjacking.XFrameOptionsMiddleware',  
]  
]
```

3. Configuring Views file.

```
from django.shortcuts import render
from django.http import HttpResponse
def testing(request):
    a=3
    b=5
    c=a+b
    x=x='<h1>A VALUE IS... '+str(a) +'B VALUE IS... '+str(b) +'SUM VALUE IS... '+str(c)+ '</h1>'
    return HttpResponse(x)
```

4. Configuring url file.

```
from django.contrib import admin
from django.urls import path
from addapp import views
urlpatterns = [
    path('admin/', admin.site.urls),
    path('add/', views.testing)
]
```

5. Run the server.

```
D:\Django\addpro>python manage.py runserver
Watching for file changes with StatReloader
Performing system checks...
```

System check identified no issues (0 silenced).

You have 18 unapplied migration(s). Your project may not work properly until you apply the migrations for app(s): admin, auth, contenttypes, sessions.
Run 'python manage.py migrate' to apply them.
March 31, 2022 - 19:42:12
Django version 4.0.1, using settings 'addpro.settings'
Starting development server at http://127.0.0.1:8000/
Quit the server with CTRL-BREAK.

OUTPUT

http://127.0.0.1:8000/add



A VALUE IS... 30B VALUE IS... 50SUM VALUE IS... 80

5. PROJECT : CREATE A WEB APPLICATION WITH FACTORIAL

1. Create the Project and Application.

Administrator: C:\Windows\System32\cmd.exe

D:\Django>django-admin startproject factpro

D:\Django>cd factpro

D:\Django\factpro>python manage.py startapp factapp

D:\Django\factpro>

2. Configuring Settings file.

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

3. Configuring Views file.

```
from django.shortcuts import render
from django.http import HttpResponse
def fact(request):
    a=1
    fact=1
    for i in range(1,a+1):
        fact*=i
    x='<h1><font color="red">VALUE IS... '+str(a) +' FACTORIAL VALUE IS... '+str(fact)+ '</font></h1>'
    return HttpResponse(x)
```

4. Configuring url file.

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

urlpatterns = [
    path('admin/', admin.site.urls),
    path('index/',views.fact)
]
```

8. Run the server.

D:\Django\factpro>python manage.py runserver

Watching for file changes with StatReloader

Performing system checks...

System check identified no issues (0 silenced).

You have 18 unapplied migration(s). Your project may not work properly until you apply the migrations for app(s): admin, auth, contenttypes, sessions.

Run 'python manage.py migrate' to apply them.

March 31, 2022 - 20:20:29

Django version 4.0.1, using settings 'factpro.settings'

Starting development server at http://127.0.0.1:8000/

Quit the server with CTRL-BREAK.

OUTPUT

http://127.0.0.1:8000/index

127.0.0.1:8000/index/

x +

← → C 127.0.0.1:8000/index/

VALUE IS... 5 FACTORIAL VALUE IS... 16

6. PROJECT : CREATE A WEB APPLICATION WITH POWER CALCULATION

1. Create the Project and Application.

Administrator C:\Windows\System32\cmd.exe

D:\Django>django-admin startproject powerpro

D:\Django>cd powerpro

D:\Django\powerpro>python manage.py startapp powerapp

D:\Django\powerpro>

2. Configuring Settings file.

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

3. Configuring Views file.

```
from django.shortcuts import render
from django.http import HttpResponse
import math
def testing(request):
    a=5
    s=math.pow(a, 3)
    x='<h1><font color="red">VALUE IS... '+str(a) +' POWER VALUE IS... '+str(s)+'</font></h1>'
    return HttpResponse(x)
```

4. Configuring url file.

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

urlpatterns = [
    path('admin/', admin.site.urls),
    path('power/',views.testing)
]
```

5. Run the server.

```
C:\Windows\system32\cmd.exe - Dark mode
```

```
D:\Django\powerpro>python manage.py runserver  
Watching for file changes with StatReloader  
Performing system checks...
```

System check identified no issues (0 silenced).

You have 18 unapplied migration(s). Your project may not work properly until you apply the migrations for app(s): admin, auth, contenttypes, sessions.
Run 'python manage.py migrate' to apply them.

March 31, 2022 - 20:25:04

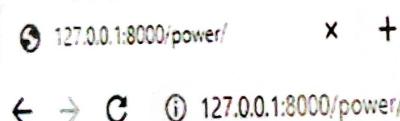
Django version 4.0.1, using settings 'powerpro.settings'

Starting development server at http://127.0.0.1:8000/

Quit the server with CTRL-BREAK.

OUTPUT

http://127.0.0.1:8000/power



127.0.0.1:8000/power/ x +
← → C 127.0.0.1:8000/power/

VALUE IS... 5 POWER VALUE IS... 125.0

7. PROJECT : CREATE A WEB APPLICATION WITH BIGGEST OF 2 NUMBERS

1. Create the Project and Application.

```
Administrator:~\Windows\System32\cmd.exe
```

```
D:\Django>django-admin startproject bigpro
```

```
D:\Django>cd bigpro
```

```
D:\Django\bigpro>python manage.py startapp bigapp
```

```
D:\Django\bigpro>
```

2. Configuring **Settings** file.

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

3. Configuring Views file.

```
from django.shortcuts import render
from django.http import HttpResponse
def testing(request):
    a=5
    b=10
    if a>b:
        s="A is Big"
    else:
        s="B is Big"
    x=<h1><font color="red">A IS... '+str(a) +' B IS... '+str(b) +' '+str(s)+</font></h1>
    return HttpResponse(x)
```

4. Configuring url file.

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

urlpatterns = [
    path('admin/', admin.site.urls),
    path('index/',views.testing)
]
```

WEB DEVELOPMENT

5. Run the server.

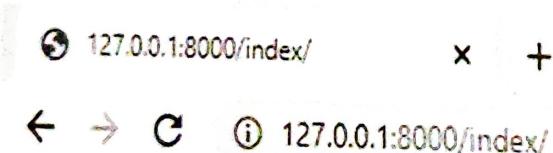
```
D:\Django\bigpro>python manage.py runserver  
Watching for file changes with StatReloader  
Performing system checks...
```

System check identified no issues (0 silenced).

You have 18 unapplied migration(s). Your project may not work properly until you apply the migrations for app(s): admin, auth, contenttypes, sessions.
Run 'python manage.py migrate' to apply them.
April 01, 2022 - 10:11:07
Django version 4.0.1, using settings 'bigpro.settings'
Starting development server at http://127.0.0.1:8000/
Quit the server with CTRL-BREAK.

OUTPUT

http://127.0.0.1:8000/index



A IS... 5 B IS... 10 B is Big

8. PROJECT: FINDING POSITIVE OR NEGATIVE VALUE

1. Create the Project and Application.

D:\Django>django-admin startproject positivepro

D:\Django>cd positivepro

D:\Django\positivepro>python manage.py startapp positiveapp

D:\Django\positivepro>

2. Configuring Settings file.

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

3. Configuring Views file.

```
from django.shortcuts import render
from django.http import HttpResponse
def testing(request):
    a=request.GET['a']
    if a>0:
        s="A is +VE"
    else:
        s="A is -VE"
    x=<h1><font color="red">A IS... '+str(a) +'RESULT IS:...'+str(s)+</font></h1>
    return HttpResponse(x)
```

4. Configuring url file.

```
from django.contrib import admin
from django.urls import path
from positiveapp import views
urlpatterns = [
    path('admin/', admin.site.urls),
    path('index/',views.testing)
]
```

WEB DEVELOPMENT

5. Run the server.

```
D:\Django\positivepro>python manage.py runserver
Watching for file changes with StatReloader
Performing system checks...

System check identified no issues (0 silenced).

You have 18 unapplied migration(s). Your project may not work properly until you apply the migrations
for app(s): admin, auth, contenttypes, sessions.
Run 'python manage.py migrate' to apply them.
April 01, 2022 - 10:57:47
Django version 4.0.1, using settings 'positivepro.settings'
Starting development server at http://127.0.0.1:8000/
Quit the server with CTRL-BREAK.
[01/Apr/2022 10:57:51] "GET /index/ HTTP/1.1" 200 64
```

OUTPUT

http://127.0.0.1:8000/index



A IS... 5RESULT IS:...A is +VE