**DJANGO**

**Django:**

Django is a high-level Python web framework that encourages rapid development and clean, pragmatic design. Built by experienced developers, it takes care of much of the hassle of web development, so you can focus on writing your app without needing to reinvent the wheel. It’s free and open source.

Django is a web application development framework.

Using Django we can develop a complete web application by doing all the server side programming and we run our application on as Django Server.

Once we have an application running and the user request comes in from the web browser, the Django Server will take their request invoke the appropriate component inside our web application and whatever response that component gives the Django Server will take it and send it back to the client browser.

Django Features

1. The application development is super quick.
2. Once we have the requirements set Django has a lot of inbuilt things that we can readily use so it comes fully loaded.
3. We can use Django ORM content administration, RSS feeds all those already in.
4. Security: Lot of inbuilt things, It prevents Sequal injection, Support for cross site scripting authentication and authorization.
5. Scalable : They are easy to scale, which our applications are used by millions and millions of users.
6. Versatile: It can be used to develop any kind of application.

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**Why Django**

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**Django Philosophy** A white background with black text

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**Django Advantages:**

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**Django Installation (Command Prompt)**

[Download Django | Django (djangoproject.com)](https://www.djangoproject.com/download/)

C:\Users\kamal>py -m pip install Django==5.0.4

Collecting Django==5.0.4

Downloading Django-5.0.4-py3-none-any.whl.metadata (4.1 kB)

Collecting asgiref<4,>=3.7.0 (from Django==5.0.4)

Downloading asgiref-3.8.1-py3-none-any.whl.metadata (9.3 kB)

Collecting sqlparse>=0.3.1 (from Django==5.0.4)

Downloading sqlparse-0.5.0-py3-none-any.whl.metadata (3.9 kB)

Collecting tzdata (from Django==5.0.4)

Downloading tzdata-2024.1-py2.py3-none-any.whl.metadata (1.4 kB)

Downloading Django-5.0.4-py3-none-any.whl (8.2 MB)

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Downloading asgiref-3.8.1-py3-none-any.whl (23 kB)

Downloading sqlparse-0.5.0-py3-none-any.whl (43 kB)

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Downloading tzdata-2024.1-py2.py3-none-any.whl (345 kB)

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Installing collected packages: tzdata, sqlparse, asgiref, Django

WARNING: The script sqlformat.exe is installed in 'C:\Users\kamal\AppData\Local\Programs\Python\Python312\Scripts' which is not on PATH.

Consider adding this directory to PATH or, if you prefer to suppress this warning, use --no-warn-script-location.

WARNING: The script django-admin.exe is installed in 'C:\Users\kamal\AppData\Local\Programs\Python\Python312\Scripts' which is not on PATH.

Consider adding this directory to PATH or, if you prefer to suppress this warning, use --no-warn-script-location.

Successfully installed Django-5.0.4 asgiref-3.8.1 sqlparse-0.5.0 tzdata-2024.1

C:\Users\kamal>

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**Django follows MVT Pattern – (Model View Template)**

* Model : Persistence Logic
* View : Business Logic
* Template : Presentation Logic

When a user request comes from the web browser, the Django server will hand the request over to a particular view.

It knows which request to which view based on the confirmation information we provide in urls.py.

Once the view takes the request, it will then process it, uses a model, if there are database interactions that are required.

Model Component is responsible for performing the crud operations against a database.

The view will take then whatever the model use and hands it over to a template that will render the response back to the web browser.

Template component is where the html resides, also have some dynamic Django tags, also responsible for rendering the final output.

Every Django project is a collection of multiple Django Applications.

The main advantages of Django is Reusability and Maintenance is easy.

As a part of Django Installation, we get:

Lightweight Server: Server will automatically restart when we made any changes to the coding.

Database: Built In Database – SqLite

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A close-up of a computer screen

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