

An Introduction to Django

Patrick Turley & 'Wole Solana

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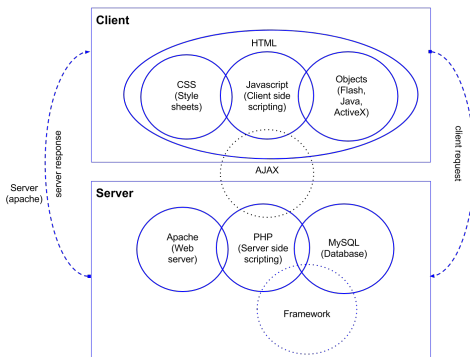
- **Django** is an open source web application (web app) framework written in Python, and follows the **Model-View-Controller** (MVC) design pattern.
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- Other frameworks include Rails (Ruby), Drupal (PHP) and Spring (Java)
- Popular sites built with Django include NASA, Instagram, The Guardian.



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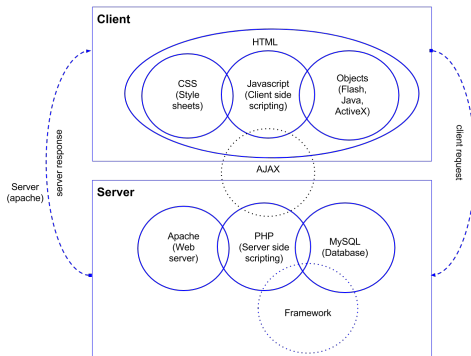


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Figure : Schematic diagram of a web app

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- It enables us to build web apps faster by focusing on the unique functionality of our web app rather than the infrastructure
- Most provide us with with libraries and templates which we can reuse, thus enhancing our productivity.

Figure : Schematic diagram of a web app

Model-View-Controller

Model-View-Controller

- A design pattern (which extends OOP) that helps us better organise our web app by **separating concerns**

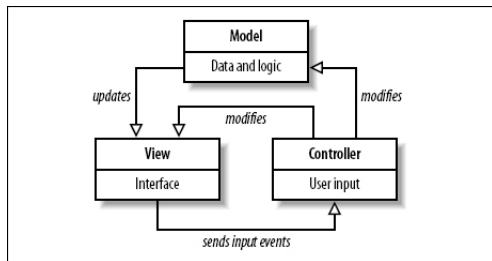


Figure : The MVC pattern

Model-View-Controller

- A design pattern (which extends OOP) that helps us better organise our web app by **separating concerns**
- The **model** contains **data and logic**, the **view** forms the **user interface** (what the user sees) and the **controller** manages the **interaction** between the model and view.

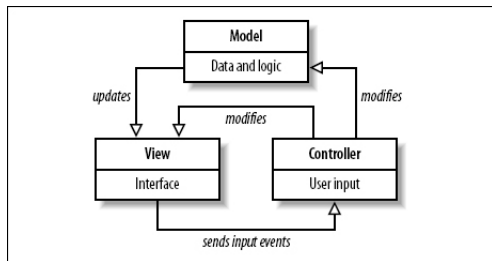


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Installation and set up

■ Setup your virtual environment

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■ Start your project

```
1 django-admin startproject first_site
```


Let's take a look at our app

- Setup the database. Go into the `firstsite` folder and run

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- In your browser, navigate to `http://127.0.0.1:8000/`, and *voila!*

Let's add some content

- Still in the `firstsite` folder, run

```
1 python manage.py startapp my_library
```

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```
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```

- Open the settings.py file and in the file, add 'my_library' to the INSTALLED_APPS list so you have something like this:

```
INSTALLED_APPS = (  
    'django.contrib.admin',  
    'django.contrib.auth',  
    'django.contrib.contenttypes',  
    'django.contrib.sessions',  
    'django.contrib.messages',  
    'django.contrib.staticfiles',  
    'my_library',  
)
```

Creating the book model

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2 python manage.py migrate my_library
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- Open the `my_library/admin.py` file. Update it with the following content:

```
from django.contrib import admin  
from my_library.models import Book  
admin.site.register(Book)
```

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- Open the `my_library/admin.py` file. Update it with the following content:

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from django.contrib import admin  
from my_library.models import Book  
admin.site.register(Book)
```

- In your browser, visit `'http://127.0.0.1:8000/admin'`

Some admin

■ Create a superuser

```
python manage.py createsuperuser  
2 python manage.py migrate my_library
```

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- Go back to 'http://127.0.0.1:8000/admin', log in and create some books

So how do we get to see our view?