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## 1. SetUp Virtual Environment

1. Open your terminal or command prompt.
2. Navigate to the folder where you want to create your project.
3. Run this command to create a virtual environment:
  - `python -m venv env`
  - `.\env\Scripts\activate`

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## 2. Install Django

install Django using pip, Python's package manager

- `pip install django`
- `python -m django --version`

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## 3. Create Django project

To start a new project, run these commands:

- django-admin startproject *project\_name*
- cd *project\_name* (navigate into this folder)
- python manage.py runserver

If Django Welcome Page is there  
= Environment is Ready !

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## Understanding Django's Project Structure

### 1. manage.py

This is Django's command-line utility. You'll use it to run the server, create apps, and apply database migrations.

### 2. settings.py

This file contains your project's configurations, such as database settings, installed apps, and middleware.

### 3. urls.py

This file defines the routes for your application, mapping URLs to views.

### 4. wsgi.py/asgi.py

These files handle server deployment and communication between your app and the web server.

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## 4. Creating My First Django App

- *Apps* are modular components of your *project*
- Generate an app  
→ `python manage.py startapp app_name`
- Add *app\_name* to your project's settings  
→ open *settings.py* and add '*app\_name*', to the *INSTALLED\_APPS* list.

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## Understanding App Structure

### 1. `models.py`:

Define your database structure here.

### 2. `views.py`:

Write the logic for handling user requests and returning responses.

Handles user requests and responses.

### 3. `urls.py`:

Create routes for this app ( create this file manually).

Link views to URLs in *urls.py*

#### 2.1. What is a View?

A view is a Python function that takes a web request and returns a web response.

- Open `myapp/views.py`

```
from django.http import HttpResponse

def home(request):
    return HttpResponse("Hello, World!")
```

#### 3.1. What are Urls?

- Now, connect this view to a URL.
- Open *myproject/urls.py*

```
from django.urls import path
from myapp import views
```

```
urlpatterns = [  
    path("", views.home, name='home'),  
]
```

## 4. What is a Template?

A template is an HTML file that lets you create dynamic web pages.

- Create a folder named *templates* inside your *app\_name* directory.
- Add a file called *home.html* with this content:

```
<!DOCTYPE html>  
<html>  
<head>  
    <title>Welcome</title>  
</head>  
<body>  
    <h1>Hello, Django Templates!</h1>  
</body>  
</html>
```

- Update your view to render this template:

```
-> open myapp/views.py
```

```
from django.shortcuts import render

def home(request):
    return render(request, 'home.html')
```

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## 5. Models and Databases

Django uses models to define the structure of your database.

- Open *myapp/models.py*
- Define a model:

```
from django.db import models

class Item(models.Model):
    name = models.CharField(max_length=100)
    price = models.DecimalField(max_digits=10)
    desc = models.TextField(blank=True, null=True)
    created_at = models.DateTimeField(
        auto_now_add=True)
```

- Apply *migrations* to create the database table:
  - python manage.py makemigrations
  - python manage.py migrate

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## 6. Django Admin Panel

- Create a superuser and access the admin panel at */admin*.
  - python manage.py createsuperuser
- Use Django's admin interface to add and manage items.
- Register the model in *admin.py*:

```
from django.contrib import admin
from .models import Item

admin.site.register(Item)
```

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## 7. User authentication

8. Forms and Validations

9. Static and Media Files

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### C.R.U.D Functionality

- C - *POST* Request
  - R - *GET* Request
  - U - *PUT* Request
  - D - *DELETE* Request
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I will provide you with the material from a chat about learning django as a beginner

Based on this material and your own knowledge

Please expand further on the transcript and



provide more details and a bit more advanced topics