**🐍 Django 5 Documentation**

**✅ Prerequisites**

Before starting Django 5, you should have a basic understanding of the following:

* **HTML** – Structure of web pages
* **CSS** – Styling and layout
* **JavaScript** – Frontend interactivity
* **SQL** – Database querying and operations
* **Python** – Core programming language for Django
* **MVT Architecture** – Model, View, Template structure used by Django
* **PIP** – Python package installer to install Django and other libraries

**📦 Django 5 Virtual Environment Setup — Documentation**

### 🛠️ Step 1: Go to Your Desired Directory

D:

cd Django5

mkdir ch1

cd ch1

✅ This creates and navigates into your Django chapter/project folder.

### 🌐 Step 2: Install virtualenv (Only once if not already installed)

pip install virtualenv

Installs the virtualenv package globally using pip.

### 🧪 Step 3: Create a Virtual Environment

virtualenv venc

This creates a virtual environment named venc inside the ch1 folder.

After running, you will see a new folder created:

D:\Django5\ch1\venc\

### 🚀 Step 4: Activate the Virtual Environment

#### ✅ For Windows CMD:

venc\Scripts\activate

✅ Output will change like this:

(venc) D:\Django5\ch1>

This means your virtual environment is active. Now, any package you install (like Django) will only install inside this environment.

### ❌ Step 5: Deactivate Virtual Environment (When you're done)

deactivate

**Install multiple packages from a requirements.txt**

If your project has a requirements.txt file:

pip install -r requirements.txt

This will install all the dependencies listed in that file.

### 📌 Notes

* Always **activate the virtual environment** before running your Django project.
* All Django packages you install inside venc will stay local and not affect your system Python.

## ✅ Activating Virtual Environment in Windows and Linux

### 🪟 ****On Windows (CMD or PowerShell)****

Assuming your virtual environment folder is named venc:

#### 📌 Command:

venc\Scripts\activate

#### ✅ You’ll see:

(venc) D:\Django5\ch1>

### 🐧 ****On Linux / Ubuntu / macOS (Bash Terminal)****

Assuming your virtual environment folder is named venc:

#### 📌 Command:

source venc/bin/activate

#### ✅ You’ll see:

(venc) user@machine:~/Django5/ch1$

### ⛔ To Deactivate (Same on both OS):

deactivate

### ❗ Tips:

* Always **navigate into the folder** where the virtual environment is located before activating it.
* If you get a “permission denied” error on Linux, you might need to run:

chmod +x venc/bin/activate

## 📘 Django 5 Project Setup — Full Documentation

### ✅ Step 1: Activate Your Virtual Environment

#### 🔹 Windows:

venc\Scripts\activate

#### 🔹 Linux/macOS:

source venc/bin/activate

You should now see (venc) in your terminal — virtual environment is active.

### 🧱 Step 2: Install Django

Run the following command:

pip install django

✅ Example Output:

Successfully installed django-5.0.7 ...

This installs the latest Django version in your virtual environment.

### 🚀 Step 3: Verify Django Installation

django-admin --version

✅ Example Output:

5.0.7

### 🏗️ Step 4: Create a Django Project

Now create a new project (e.g., called myproject):

django-admin startproject myproject .

**🔍 Important:** Don’t forget the . at the end!  
This means: create the project **in the current directory**.

### 🧾 After This, Your Folder Structure Looks Like:

Django5/

└── ch1/

├── venc/ ← virtual environment

├── manage.py

└── myproject/

├── \_\_init\_\_.py

├── settings.py

├── urls.py

├── asgi.py

└── wsgi.py

### ⚙️ Step 5: Run the Development Server

python manage.py runserver

✅ Output Example:

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

Visit <http://127.0.0.1:8000> in your browser — you’ll see the Django welcome page!

### 📦 Summary of Commands:

# Activate virtual environment

venc\Scripts\activate # Windows

source venc/bin/activate # Linux/macOS

# Install Django

pip install django

# Check version

django-admin --version

# Create project

django-admin startproject myproject .

# Run server

python manage.py runserver

Let me know if you want the next steps:

* Creating an app
* MVT explanation
* Making a webpage
* Admin panel setup