

# Setting Up the Development Environment

To start developing with Django, it's essential to set up your development environment correctly. This involves installing Python, setting up Django, and using a virtual environment to manage dependencies. Here's a step-by-step guide to get you started:



#### Janja Programmers

### 1. Download Python:

- Visit the official Python website.
- Go to the "Downloads" section and choose the version suitable for your operating system (Windows, macOS, or Linux).

### 2. Install Python:

- Windows:
  - Run the downloaded installer.
  - Make sure to check the box that says "Add Python to PATH."
  - Follow the installation prompts.

#### 3. Verify Installation:

- Open a terminal (Command Prompt on Windows, Terminal on macOS/Linux).
- Type python --version or python3 --version to ensure Python is installed



## 2. Set Up a Virtual Environment

**Overview**: A virtual environment is a self-contained directory tree that contains a Python installation for a particular version of Python, along with additional packages. This setup allows you to have multiple separate Python environments on a single computer, avoiding conflicts between project dependencies.





## 3. Install Django in the Virtual Environment

**Overview**: Django is a high-level Python web framework that encourages rapid development and clean, pragmatic design.

- 1. Open a terminal.
- 2. Install Django using pip:
  - Ensure pip is installed: pip --version or pip3 --version.
  - Install Django: pip install django.
- 3. Verify Installation:
  - Type django-admin --version to check if Django is installed correctly.

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### 4. Introduction to the Command Line and Basic Commands

**Overview**: The command line is a powerful tool that allows you to interact with your computer and manage your Django projects efficiently. Here are some basic commands you'll need

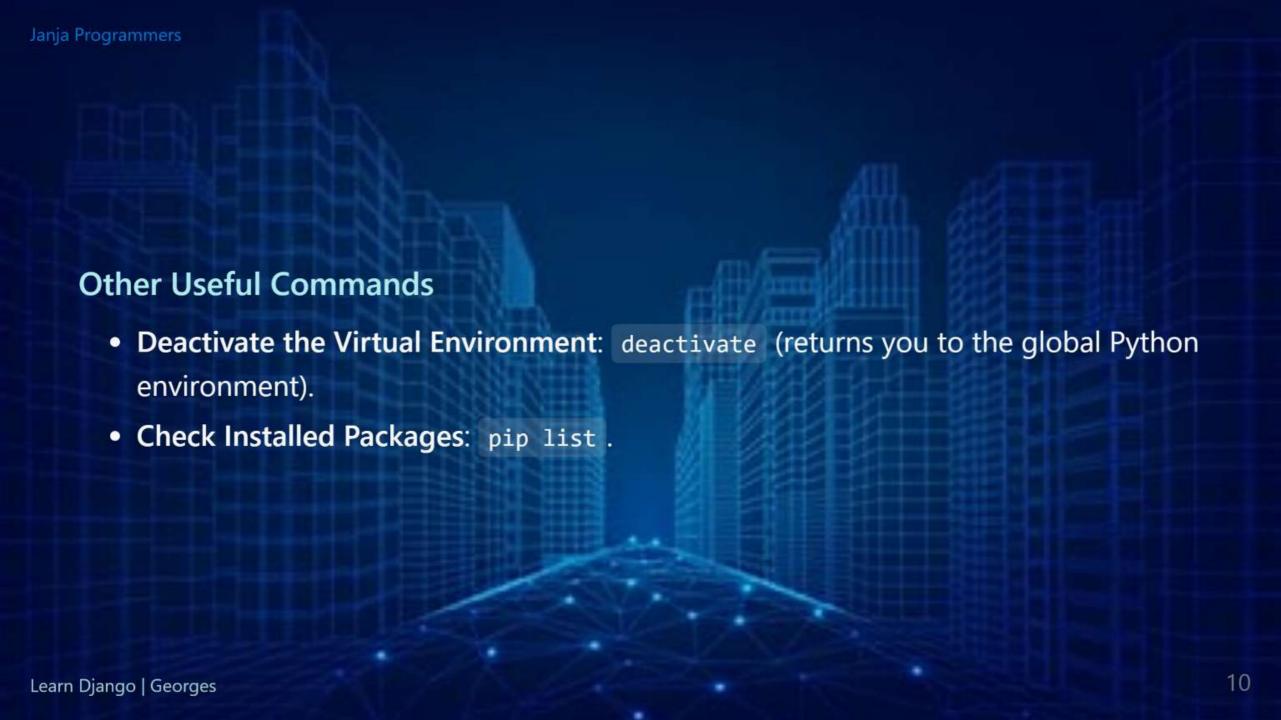
### **Navigating Directories**

- Change Directory: cd directory\_name (e.g., cd myproject to navigate into the myproject directory).
- List Files and Directories:
  - Windows: dir
  - o macOS/Linux: 1s
- Go Up One Directory Level: cd ...

### **Managing Django Projects**

- Create a New Django Project: django-admin startproject projectname (replace projectname with your project's name).
- Run the Development Server:
  - Navigate to your project directory: cd projectname.
  - Start the server: python manage.py runserver.
- Create a New Django App: python manage.py startapp appname (replace appname with your app's name).
- Apply Migrations: python manage.py migrate (sets up your database tables based on your models).

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### Conclusion

By following these steps, you'll have a well-organized and isolated development environment, ensuring a smoother and more manageable workflow as you delve into Django development.

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