**1. Install VS Code**

* Download from https://code.visualstudio.com
* Install it and open.

**2. Install Python on Your System**

* Install Python (3.10+ recommended) from <https://www.python.org>.
* Verify installation:

bash

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python --version

* Install Django (if not already):

bash

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pip install django

**3. Open Your Django Project in VS Code**

* Open VS Code → File → Open Folder → Select your Django project folder.
* If using **virtual environment**, activate it:

bash

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python -m venv venv

venv\Scripts\activate # Windows

source venv/bin/activate # Mac/Linux

**4. Necessary Extensions**

**A. Python Extension (by Microsoft)**

* Search **"Python"** in Extensions (Ctrl+Shift+X).
* Install the **official Python extension** (publisher: Microsoft).
* Features: IntelliSense, debugging, linting, virtual environment detection.

**B. Django Extension (by Baptiste Darthenay)**

* Search **"Django"** and install the one with Django template support.
* Features:
  + Syntax highlighting for Django templates.
  + Snippets for Django code.

**C. autopep8 (for Code Formatting)**

* **Install autopep8 via pip:**

bash

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pip install autopep8

* This formats your Python code using **PEP8 standards**.

**5. VS Code Settings for autopep8**

1. Open Command Palette (Ctrl+Shift+P) → search Preferences: Open Settings (JSON)
2. Add these settings:

json

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{

"python.linting.enabled": true,

"python.linting.pylintEnabled": true,

"python.formatting.provider": "autopep8",

"editor.formatOnSave": true

}

* + **Linting:** Highlights errors/warnings in code.
  + **FormatOnSave:** Automatically formats your code when you save.

**6. Run Django from VS Code Terminal**

* Open integrated terminal (Ctrl + ~).
* Run the development server:

bash

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python manage.py runserver

**7. Optional Extensions (for Better Django Development)**

* **GitLens** (Git support)
* **SQLite Viewer** (if using SQLite database)
* **HTML CSS Support** (for templates)
* **Bracket Pair Colorizer** (easier readability of code blocks)

**8. Debugging Django in VS Code (Optional)**

1. Click **Run and Debug (Ctrl+Shift+D)**.
2. Add Django debug config in launch.json:

json

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{

"name": "Django",

"type": "python",

"request": "launch",

"program": "${workspaceFolder}/manage.py",

"args": [

"runserver",

"--noreload"

],

"django": true

}

1. Press **F5** to debug.

**Summary**

1. Install **Python, Django, VS Code**.
2. Install **Python**, **Django**, and **autopep8** extensions.
3. Enable **autopep8** as formatter.
4. Use VS Code terminal to run Django commands.

## ****1. Additional Extensions for Django Development****

### ****A. Auto Rename Tag (by Jun Han)****

* Purpose: When you rename an **HTML tag** in Django templates (or normal HTML), it will **automatically rename the closing tag**.
* How to install:
  1. Open Extensions in VS Code (Ctrl+Shift+X).
  2. Search **"Auto Rename Tag"**.
  3. Install the one by **Jun Han**.
* Example:

html

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<div></div>

If you change <div> to <section>, the closing tag automatically changes too.

### ****B. SQLite Viewer (SQLite3 Editor)****

* Django’s default database is **SQLite3**. This extension lets you easily open and browse the database.
* How to install:
  1. Open Extensions (Ctrl+Shift+X).
  2. Search **"SQLite Viewer"** or **"SQLite"**.
  3. Recommended: **SQLite Viewer** by Florian Klampfer (or similar).
* How to use:
  1. Open db.sqlite3 (Django’s default database file).
  2. Right-click and select **Open Database** (if using SQLite Viewer).
  3. You can now view tables, data, and run SQL queries inside VS Code.

## ****2. Updated Extension List for Django Development in VS Code****

1. **Python (Microsoft)** – Main extension for Python/Django.
2. **Django (Baptiste Darthenay)** – Syntax support for Django templates.
3. **autopep8** – Code formatting for Python.
4. **Auto Rename Tag (Jun Han)** – Auto rename closing HTML tags.
5. **SQLite Viewer** – Browse and edit SQLite3 database.
6. (Optional) **GitLens** – Git integration.
7. (Optional) **HTML CSS Support** – Better HTML/CSS IntelliSense in templates.

## ****3. autopep8 Installation & Settings (Recap)****

1. Install:

bash

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pip install autopep8

1. Update VS Code settings.json:

json

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{

"python.linting.enabled": true,

"python.linting.pylintEnabled": true,

"python.formatting.provider": "autopep8",

"editor.formatOnSave": true

}

### ****4. Benefits of This Setup****

* Clean **formatted code** automatically.
* **HTML tags auto-renamed** in templates.
* **Browse the database visually** without external tools.
* Faster debugging & productivity in Django development.