

2.1: Getting Started with Django

Directions

1. Create a text document where you can write your answers to the following questions. You'll want to do some research online to help you develop your answers.

2. Write two to three sentences on why Django is so popular among web developers.

Django's popularity among web developers can be attributed to its robust and well-organized framework that streamlines the process of building web applications. Its built-in features for authentication, database management, and URL routing simplify development, while its emphasis on the "Don't Repeat Yourself" (DRY) principle promotes efficient and maintainable code. Additionally, Django's active community, extensive documentation, and support for scalability make it a top choice for developers seeking a powerful and reliable tool for web application development.

3. After some research, list five large companies that use Django. Specify what the company's product or service is and what they use Django for.

- YouTube: a video sharing platform. YouTube's developers have used Django to ensure new features are added and upgrades are implemented as quickly as possible, while also limiting mistakes.

- Spotify: an online audio-streaming platform. Spotify uses Django for its web application backend, which has helped the company manage user accounts, playlists, and content delivery.

- Instagram: a photo and video sharing platform. Django is used for its backed infrastructure. The framework's scalability and rapid development capabilities help the app process massive amounts of data and user interactions.

- Nasa: United States government agency responsible for the nation's civilian space exploration and aeronautics research. NASA has used Django for various web applications and projects. One notable example is the Mars Rover project, where Django helped in managing and presenting mission data in a user-friendly manner on their website.

- Pinterest – a visual discovery engine. Pinterest uses Django to execute multiple tasks, scale, and maintain excellent performance. Django's ability to handle content organization and user interactions has contributed to Pinterest's user-friendly interface and content delivery.

4. For each of the following scenarios, explain if you would use Django (and why or why not):

- ***You need to develop a web application with multiple users.***

Yes – Django is suitable for this scenario due to its built-in authentication system, user management, and ORM. It has tools to manage user accounts, permissions, and access control.

- ***You need fast deployment and the ability to make changes as you proceed.***

Yes – the framework has rapid development capabilities, automatic admin interface, and

reusable components that allow for quick deployment and modifications along the way. It has pre-built functionalities that can save time.

- You need to build a very basic application, which doesn't require any database access or file operations.

No – Django's strength and appeal lies in its database and model handling capabilities. A basic application may be better created using a more lightweight framework.

- You want to build an application from scratch and want a lot of control over how it works.

Yes – though there are a lot of built in functionalities in Django, it can still be highly customizable. Developers have considerable control over their application's architecture and behavior thanks to the framework's modularity.

- You're about to start working on a big project and are afraid of getting stuck and needing additional support.

Yes – there is extensive documentation, an active community, and a great number of third-party packages that make Django a reliable choice for large projects.

5. Download and install Python (if you haven't done so already).

Run the appropriate command to check the Python version.

Take a screenshot of the terminal window with the command and version and paste it into your answers document.

```
(cfPython_Achievement2) → cfPython_Achievement2 git:(main) python --version  
Python 3.12.4
```

6. Open a new terminal window and go to the folder where you want to create your projects.

7. If you haven't done so already, set up and create a virtual environment and name it achievement2-practice. Then:

Activate the virtual environment.

Take a screenshot of the activated environment and paste it into your answers document.

```
• → desktop python3 -m virtualenv cfPython_Achievement2  
created virtual environment CPython3.12.4.final.0-64 in 161ms  
creator CPython3Posix(dest=/Users/vadymmakohon/Desktop/cfPython_Achievement2, clear=False, no_vcs  
_ignore=False, global=False)  
seeder FromAppData(download=False, pip=bundle, via=copy, app_data_dir=/Users/vadymmakohon/Library  
/Application Support/virtualenv)  
added seed packages: pip==24.1  
activators BashActivator,CShellActivator,FishActivator,NushellActivator,PowerShellActivator,Pytho  
nActivator  
• → desktop source cfPython_Achievement2/bin/activate  
• (cfPython_Achievement2) → desktop  
• (cfPython_Achievement2) → desktop cd  
• (cfPython_Achievement2) → ~ cd Desktop/cfPython_Achievement2
```

8. Install Django and verify the installation by checking the version. Then:

Take a screenshot of the terminal with the command and version.

Paste it into your answers document.

```
• (cfPython_Achievement2) → cfPython_Achievement2 git:(main) django-admin --version  
5.0.6
```