

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

Django's popularity among web developers stems from its unique features, particularly its Model View Template (MVT) architecture. This structure streamlines development by separating data models, user interfaces, and business logic, promoting efficient code organization. Furthermore, Django's adaptability allows easy modification and extension, ensuring applications remain loosely coupled, leading to maintainable and scalable solutions.

## Installed python, django and new environment created

```
(achievement2-practice) C:\Users\jackv>django-admin --version
4.2.4
```

```
C:\Users\jackv>python -V
Python 3.8.7rc1
```

```
C:\Users\jackv>mkvirtualenv achievement2-practice
created virtual environment CPython3.8.7.candidate.1-64 in 930ms
creator CPython3Windows(dest=C:\Users\jackv\Envs\achievement2-practice, clear=False, no_vcs_ignore=False, global=False)
)
seeder FromAppData(download=False, pip=bundle, setuptools=bundle, wheel=bundle, via=copy, app_data_dir=C:\Users\jackv\AppData\Local\pypa\virtualenv)
added seed packages: pip==23.1.2, setuptools==68.0.0, wheel==0.40.0
activators BashActivator,BatchActivator,FishActivator,NushellActivator,PowerShellActivator,PythonActivator
```

**2. 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.**

1. **Instagram** - social media application for sharing photos and videos. Instagram used to use python, however, after the platform scaled, efficiency became a bigger priority. Using Django, Instagram Engineering was able to build custom tools to meet this goal.
2. **Nat Geo** - Television network with widely read magazines, focused on the natural world, history and culture. According to my research, Nat Geo utilises django's built in CMS for their National Geographic's Education page
3. **Mozilla Firefox** - one of the well known alternative browsers to Google Chrome. Using Django, Firefox can tackle large amounts of traffic and API hits in a more efficient manner.
4. **Spotify** - A music/audio streaming platform. Python is used for Spotify's back-end services and data analysis. And Spotify uses a Django app or two to increase functionality.
5. **Pinterest** - similar to Instagram in that users share images and videos. The platform's user interface contributes to its appeal and by leveraging Django's open-source nature, Pinterest gains the flexibility to tailor the framework to its unique requirements, fostering a more personalized user experience.

**3. 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.**

Based on some of the massive apps shared above that are utilizing Django, I would suggest using it in this scenario.

- **You need fast deployment and the ability to make changes as you proceed.** In this situation, using Django would be appropriate, as it offers you a fast and easy development cycle plus it can be scaled to a larger size later.

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

Django is better for complex needs due to its out-of-the-box strength, which suits feature-rich projects. However, simpler apps lacking specific functions might not benefit from Django.

Additionally, the use of pre-written code in Django leads to higher server intensity, making it unsuitable for low-bandwidth systems.

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

Don't use Django as you lose control over internals of system

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

Python is known for its simplicity and readability, which can make the development process smoother and more manageable, especially when working on a big project. Additionally, Django offers a lot of built-in tools and features that can help streamline development and reduce the risk of getting stuck.