

Exercise 2.1

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

Django is a popular framework for developers because, once install, it comes with most of the necessities a developer will need to get started on a project. Django lets the developer focus on the logic because it includes important plugins that make user-friendly admin panels and is known for fast development.

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.

5 companies that use Django:

- **Instagram - Social media:** "Instagram is one of the best examples of how the Django framework can be used. Since it doesn't require any external plugins and addons, it allowed the co-founders of Instagram to develop the very first version of the app in just two weeks." When the platform began to grow quickly, the developers decided to stick with Django and Python because the scalability and efficiency gave them the capacity to handle thousands of users per second
- **Pinterest – Social media:** "Pinterest has more than 400 million monthly active users [and] it needs a website that is both fast and scalable. Django is the perfect fit for such a project, giving the platform the tools it needs to process huge amounts of data."
- **Spotify – Music Streaming:** "[Spotify's] key features include listening to music across different devices and providing its users with personalized playlists. Both of those things are handled using Python and Django."
- **NASA – US Government Agency:** "Django supports the use of incredibly high-definition videos and images of space, which are one of the main highlights of the NASA website. Second, it meets very high security standards, which helps protect the site against common security threats."
- **YouTube – Social media (Video Sharing):** "[YouTube's] rapid growth forced the team to switch to Django. By simplifying its code, Django made the platform a lot easier to maintain. The framework gave YouTube the capacity to effectively scale up to meet the demands of their growing audience."

[Django Examples: Top 18 Django Websites \(stxnext.com\)](http://stxnext.com)

[Top 10 Django Apps Examples \(netguru.com\)](http://netguru.com)

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. Yes, I would use Django because with multiple users I would anticipate that I would need to scale the app eventually. Given that Django uses MVT(Model-View-Template) architecture, the app would be able to scale efficiently like Instagram or YouTube.
 - You need fast deployment and the ability to make changes as you proceed: Yes, I would use Django because it comes with the plugins necessary for me to get started quickly so that I really can focus on just the logic of the code.
 - You need to build a very basic application, which doesn't require any database access or file operations: No, I would not use Django for this. Django comes with a lot of plugins and if an app doesn't need those plugins it can make the app run slow unnecessarily.
 - You want to build an application from scratch and want a lot of control over how it works. No, I would not use Django for this because certain steps have to be taken in a certain manner. This means that there's not much room for me to deviate from the structure and thus I would not have the control I desired.
 - You're about to start working on a big project and are afraid of getting stuck and needing additional support. Yes, I would use Django because it is such a popular framework there is a large community and thorough documentation that I can reference.

Screenshot Virtual Environment – achievement2-practice

```
C:\Users\rweat> mkvirtualenv achievement2-practice
created virtual environment CPython3.8.7.final.0-64 in 2221ms
creator CPythonWindows(dest=C:\Users\rweat\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\rweat\AppData\Local\pypa\virtualenv)
added seed packages: pip==24.1.2, setuptools==70.1.1, wheel==0.43.0
activators BashActivator,BatchActivator,FishActivator,NushellActivator,PowerShellActivator,PythonActivator
(achievement2-practice) C:\Users\rweat>
```

Screenshot Django install

```
(achievement2-practice) C:\Users\rweat\Documents\careerfoundry\Python\intro-Python\achievement_2>py -m pip install Django
Collecting Django
  Using cached Django-4.2.14-py3-none-any.whl.metadata (4.1 kB)
Collecting asgiref<4,>=3.6.0 (from Django)
  Using cached asgiref-3.8.1-py3-none-any.whl.metadata (9.3 kB)
Collecting sqlparse>=0.3.1 (from Django)
  Using cached sqlparse-0.5.1-py3-none-any.whl.metadata (3.9 kB)
Collecting backports.zoneinfo (from Django)
  Using cached backports.zoneinfo-0.2.1-cp38-cp38-win_amd64.whl.metadata (4.7 kB)
Collecting tzdata (from Django)
  Using cached tzdata-2024.1-py2.py3-none-any.whl.metadata (1.4 kB)
Collecting typing_extensions>=4 (from asgiref<4,>=3.6.0->Django)
  Using cached typing_extensions-4.12.2-py3-none-any.whl.metadata (3.0 kB)
Using cached Django-4.2.14-py3-none-any.whl (8.0 MB)
Using cached asgiref-3.8.1-py3-none-any.whl (23 kB)
Using cached sqlparse-0.5.1-py3-none-any.whl (44 kB)
Using cached backports.zoneinfo-0.2.1-cp38-cp38-win_amd64.whl (38 kB)
Using cached tzdata-2024.1-py2.py3-none-any.whl (345 kB)
Using cached typing_extensions-4.12.2-py3-none-any.whl (37 kB)
Installing collected packages: tzdata, typing_extensions, sqlparse, backports.zoneinfo, asgiref, Django
Successfully installed Django-4.2.14 asgiref-3.8.1 backports.zoneinfo-0.2.1 sqlparse-0.5.1 typing_extensions-4.12.2 tzdata-2024.1

(achievement2-practice) C:\Users\rweat\Documents\careerfoundry\Python\intro-Python\achievement_2>django-admin --version
4.2.14
```