

Exercise 2.1

Why is Django so popular among web developers?

Django is a fast and simple framework which helps save time. It also has a good security system. Its benefits include automatically generated admin panel, security, scalability, easy to work with and has a huge community of contributors which means easier to get support if need to.

List 5 large companies that use Django. Specify what the company's product or service is and what they use Django for

1. Instagram – a social media platform for users to share photos and videos. With Django, application is able to process large amount of data and able to help on the application scaling and efficiency.
2. Pinterest – a social media platform where able to share images for users to gain inspiration on various topics. Relies on Django to handle large amounts of media data and maintain a user-friendly interface for millions of users. Its scalability and perform also make Django an ideal choice for handling Pinterest's vast amount of content and user interactions
3. Spotify – an audio streaming provider for users to listen to music. Python is used for its back-end services and data analysis and uses Django to increase its functionality
4. Mozilla – firefox browser. With Django, Firefox able to tackle large amounts of traffic.
5. Eventbrite – an event management and ticketing service. Django brings benefits such as URL routing, form building, unit tests

Explain if would use Django for below scenarios and why/why not:

- Develop a web application with multiple users

Would use Django. Django provides a lot of built-in functionality including authentication and authorization which makes it user to build multi-user applications.

- Need fast deployment and ability to make changes as you proceed

Would use Django. Django's MVT architecture ensures fast development, suitable for fast prototyping, a lot of changes and high-speed applications

- Build very basic application, which doesn't require any database access or file operations

Would not use Django. Django is a web-development framework suitable for application with backend and frontend. If doesn't need database, don't need to use Django

- Build an application from scratch and want a lot of control over how it works

Would not use Django. Django needs to go Django-way which means developer will lose control over some parts of system. If want to have control, not suitable to use Django.

- About to start working on a big project and are afraid of getting stuck and needing additional support

Would use Django. Django is good choice for large-scale systems. Moreover, has a huge community which means easier to get support

Download and install Python. Check Python version

```
(web-dev) C:\Users\pacwe>python --version  
Python 3.8.7
```

Open new terminal window and go to the folder where you want to create projects

```
C:\Users\pacwe\Python>cd Achievement2  
C:\Users\pacwe\Python\Achievement2>
```

Set up and create a virtual environment and name it achievement2-practice. Then activate the virtual environment

```
C:\Users\pacwe\Python>cd Achievement2  
C:\Users\pacwe\Python\Achievement2>mkvirtualenv achievement2-practice  
created virtual environment CPython3.8.7.final.0-64 in 485ms  
creator CPython3Windows(dest=C:\Users\pacwe\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\pacwe\AppData\Local\pypa\virtualenv)  
    added seed packages: pip==23.3, setuptools==68.2.2, wheel==0.41.2  
  activators BashActivator,BatchActivator,FishActivator,NushellActivator,PowerShellActivator,PythonActivator
```

```
(achievement2-practice) C:\Users\pacwe\Python\Achievement2>
```

Install Django and verify installation.

```
(web-dev) C:\Users\pacwe>django-admin --version  
4.2.7
```