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

   Django is popular with web developers because it features "batteries included" tag meaning it has most things that would possibly be needed to develop an application right out of the box. You have built-in security features enabled by default to prevent things like cross-site scripting attacks, SQL injection, clickjacking and request forgery. A nice feature is also the web admin panel that is generated automatically to help you control your website's database information.

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.

Instagram is a social media channel where users can make posts, share photos and videos and correspond with friends and followers. Django (and Python) was chosen for several reasons. It would enable rapid development, ORM services, error reporting using Sentry, and the entire platform is written in Python.

Spotify is one of the largest audio streaming and media service providers. It allows users to access their music library from anywhere and with any device and has changed the way people listen to, share, and purchase music online. Their developers chose Django because it would provide a fast backend as well as machine learning options for their application. They also make use of Django's ORM to simplify database interactions and help efficiently manage their data, user data, and analytics.

DoorDash is an online food ordering and delivery business and is the largest food delivery platform in the United States. DoorDash uses Django as their primary framework for web applications due to its rapid development and iteration on features. They initially built their app as monolithic, but after some time their codebase became unmanageable and required significant understanding to make changes. They also encountered issues where changes were affecting code in other areas of the application without explanation. They since have transitioned into a microservices architecture while still using Django for their backend development.

National Geographic is a monthly magazine that focuses on geography, history, nature, science and world culture and is known for stunning photography and storytelling. National Geographic uses Django for its custom CMS (content management system) as it needs to handle rendering high-traffic content and image data for its website.

Robinhood is a commission-free stock/cryptocurrency trading platform. It was built using Django to provide fast and secure transactions to a large (and growing) user base. The scalability of Django allowed for handling the millions of transactions without having to compromise security or performance.

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

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

      Yes, it comes with built-in authentication and user management features (including a web admin panel) to make handling users and their roles/data easier.

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

      Yes, Django is known for rapid development and iterations of features so it would be suited for this.

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

      No, the framework would be overkill for this situation and may even slow down response time due to processing overhead.

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

      No, if you need something from scratch with absolute control, Django would not be a good choice because it forces you into its structure and does not allow for control of some aspects of the code.

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

Yes, there is a very large and active community for Django where you might be able to find answers or seek help with a problem when using the framework.

Python installed and virtual environment:

```
(web-dev) C:\Users\Phil\Python\Envs\CF\CF_Python>python --version
Python 3.13.7

(web-dev) C:\Users\Phil\Python\Envs\CF\CF_Python>deactivate

C:\Users\Phil\Python\Envs\CF\CF_Python>if defined _OLD_VIRTUAL_PYTHONPATH (set "PY
THONPATH=" )

C:\Users\Phil\Python\Envs\CF\CF_Python>mkvirtualenv achievement2-practice
created virtual environment CPython3.13.7.final.0-64 in 11166ms
  creator CPython3Windows(dest=C:\Users\Phil\Envs\achievement2-practice, clear=Fal
se, no_vcs_ignore=False, global=False)
  seeder FromAppData(download=False, pip=bundle, via=copy, app_data_dir=C:\Users\P
hil\AppData\Local\pypa\virtualenv)
    added seed packages: pip==25.2
  activators BashActivator,BatchActivator,FishActivator,NushellActivator,PowerShel
lActivator,PythonActivator

(achievement2-practice) C:\Users\Phil\Python\Envs\CF\CF_Python>
```