

Task 2.1: Answers

1. Why is Django so popular among web developers?

Django is popular among web developers because it is a high-level Python web framework that encourages rapid development and clean, pragmatic design. It includes a variety of built-in features like an ORM, authentication, and an admin panel, which helps developers build secure, scalable, and maintainable applications quickly.

2. List five large companies that use Django, their product or service, and what they use Django for:

- **Instagram:** A social media platform for sharing photos and videos. They use Django to handle large volumes of data and manage user interactions efficiently.
- **Pinterest:** A visual discovery engine for finding ideas like recipes, home and style inspiration. Pinterest uses Django to handle a massive amount of data and traffic.
- **Spotify:** A digital music service that gives you access to millions of songs. Spotify uses Django for its web services to manage its vast library and user data.
- **Dropbox:** A file hosting service that offers cloud storage, file synchronization, personal cloud, and client software. Django powers parts of Dropbox's backend to manage its complex data operations.
- **Disqus:** A global blog comment hosting service for websites and online communities. They use Django to handle user comments and moderation at scale.

3. Scenario Analysis for Using Django:

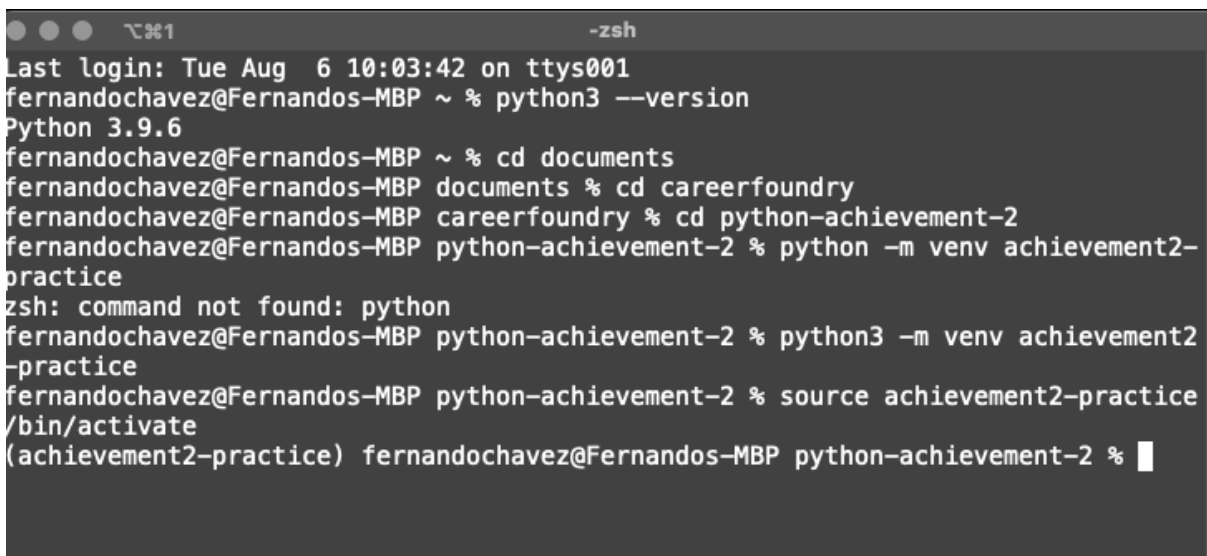
- **Develop a web application with multiple users:** Yes, Django would be a good choice because it comes with built-in user authentication and authorization features, which make managing multiple users easy and secure.
- **Need fast deployment and the ability to make changes as you proceed:** Yes, Django supports rapid development and has a flexible architecture that allows for quick iterations and changes during the development process.
- **Build a very basic application, which doesn't require any database access or file operations:** No, Django might be overkill for very basic applications that do not need database access or file operations. A simpler framework or library might be more appropriate in this case.
- **Build an application from scratch and want a lot of control over how it works:** No, while Django is very powerful, it follows the "Django way" of doing things which might restrict some low-level control. A micro-framework like Flask might be more suitable for fine-grained control.
- **Start working on a big project and afraid of getting stuck and needing additional support:** Yes, Django has extensive documentation and a large community. This means getting help and finding resources to solve problems is easier, which is beneficial for large projects.

Python version:

A terminal window with a dark background and light gray text. The title bar shows three colored circles (red, yellow, green) on the left, a magnifying glass icon, and the text "1" on the right. The terminal content shows a login message, a command to check the Python version, and the output "Python 3.9.6".

```
● ● ● 1 -zsh
Last login: Tue Aug 6 10:03:42 on ttys001
fernandochavez@Fernandos-MBP ~ % python3 --version
Python 3.9.6
fernandochavez@Fernandos-MBP ~ %
```

Set Up Virtual Environment:

A terminal window with a dark background and light gray text. The title bar shows three colored circles (red, yellow, green) on the left, a magnifying glass icon, and the text "1" on the right. The terminal content shows a series of commands to navigate to a specific directory and create a virtual environment.

```
● ● ● 1 -zsh
Last login: Tue Aug 6 10:03:42 on ttys001
fernandochavez@Fernandos-MBP ~ % python3 --version
Python 3.9.6
fernandochavez@Fernandos-MBP ~ % cd documents
fernandochavez@Fernandos-MBP documents % cd careerfoundry
fernandochavez@Fernandos-MBP careerfoundry % cd python-achievement-2
fernandochavez@Fernandos-MBP python-achievement-2 % python -m venv achievement2-practice
zsh: command not found: python
fernandochavez@Fernandos-MBP python-achievement-2 % python3 -m venv achievement2-practice
fernandochavez@Fernandos-MBP python-achievement-2 % source achievement2-practice/bin/activate
(achievement2-practice) fernandochavez@Fernandos-MBP python-achievement-2 %
```

Install Django and Verify Installation:

```

Last login: Tue Aug  6 10:03:42 on ttys001
fernandochavez@Fernandos-MBP ~ % python3 --version
Python 3.9.6
fernandochavez@Fernandos-MBP ~ % cd documents
fernandochavez@Fernandos-MBP documents % cd careerfoundry
fernandochavez@Fernandos-MBP careerfoundry % cd python-achievement-2
fernandochavez@Fernandos-MBP python-achievement-2 % python -m venv achievement2-practice
zsh: command not found: python
fernandochavez@Fernandos-MBP python-achievement-2 % python3 -m venv achievement2
-practice
fernandochavez@Fernandos-MBP python-achievement-2 % source achievement2-practice/bin/activate
(achievement2-practice) fernandochavez@Fernandos-MBP python-achievement-2 % pip install django
Collecting django
  Downloading Django-4.2.14-py3-none-any.whl (8.0 MB)
    | 8.0 MB 2.2 MB/s
Collecting asgiref<4,>=3.6.0
  Downloading asgiref-3.8.1-py3-none-any.whl (23 kB)
Collecting sqlparse>=0.3.1
  Downloading sqlparse-0.5.1-py3-none-any.whl (44 kB)
    | 44 kB 14.2 MB/s
Collecting typing-extensions>=4
  Downloading typing_extensions-4.12.2-py3-none-any.whl (37 kB)
Installing collected packages: typing-extensions, sqlparse, asgiref, django
Successfully installed asgiref-3.8.1 django-4.2.14 sqlparse-0.5.1 typing-extensions-4.12.2
WARNING: You are using pip version 21.2.4; however, version 24.2 is available.
You should consider upgrading via the '/Users/fernandochavez/Documents/careerfoundry/python-achievement-2/achievement2-practice/bin/python3 -m pip install --upgrade pip' command.
(achievement2-practice) fernandochavez@Fernandos-MBP python-achievement-2 % django-admin --version
4.2.14
(achievement2-practice) fernandochavez@Fernandos-MBP python-achievement-2 %
```