

# Achievement 2

## Web Development & Django

### ***Exercise 2.1***

#### *Getting Started with Django*

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

Django is easily scalable due to loosely coupled view and model components as part of the MVT architecture that it's built upon. It also includes additional plugins such as for admin panels and authentication taking the load off from the developer in terms of coding this functionality. It also is known for fast and secure deployment and great community support which makes it a popular choice among developers, especially for larger-scale projects.

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.**

#### **National Geographic**

- **Product/Service:** Television channel, magazine, and online platform focusing on geography, history, and world cultures.
- **What They Use Django For:** National Geographic uses Django to build dynamic websites and applications for their audience. This includes integrating multimedia content like photos and videos, managing subscriptions, and delivering engaging, educational content to users worldwide.

#### **The Washington Post**

- **Product/Service:** Major American newspaper and news outlet.
- **What They Use Django For:** The Washington Post uses Django to power some of its content management systems and to streamline the

process of publishing articles, managing multimedia, and handling real-time updates. Django's flexibility allows them to serve breaking news quickly and efficiently to their global readership.

## Bitbucket

- **Product/Service:** Git repository hosting service for source code and development projects.
- **What They Use Django For:** Bitbucket, owned by Atlassian, uses Django to manage its source code repositories and facilitate collaboration among development teams. Django provides the backend structure for managing users, repositories, pull requests, and integration with other services like Jira and Trello.

## Dropbox

- **Product/Service:** Cloud-based file storage and synchronization service.
- **What They Use Django For:** Dropbox started with Django as one of its core frameworks. Although they've moved to other frameworks for scaling purposes over time, Django was used to build much of the initial file-sharing functionality and backend infrastructure. Even today, they rely on Django for parts of their internal admin and billing systems.

## YouTube

- **Product/Service:** Online video-sharing and streaming platform.
- **What They Use Django For:** YouTube uses Django in several parts of its system, particularly in handling its internal management tools. While much of the core YouTube platform runs on other systems, Django is used for creating dashboards, managing administrative processes, and building internal data analytics tools that help YouTube manage content and monitor its infrastructure.

## Source:

- <https://python.plainenglish.io/top-19-websites-built-with-django-web-framework-5e7c9715d129>
- <https://intellisoft.io/15-famous-sites-built-with-django-that-you-probably-know/>

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. > **Django - as it may provide additional features to code this easily.**
- You need fast deployment and the ability to make changes as you proceed. > **Django - it is quite flexible and the view and the model are loosely coupled, therefore its changes are easy to make. Also due to a lot of predefined components and standardized structure, deployment is very fast.**
- You need to build a very basic application, which doesn't require any database access or file operations. > **Not Django - there wouldn't be much use of Django's extensive features and the enforced structure and boilerplate code may be a burden for such an app.**
- You want to build an application from scratch and want a lot of control over how it works. > **Not Django - Django enforces its own rules and structure without the ability to control the internals much.**
- You're about to start working on a big project and are afraid of getting stuck and needing additional support. > **Django - here it's a good choice as Django's support and documentation is excellent.**

4. Download and install Python (if you haven't done so already).

A terminal window with a dark blue background. The prompt is ".7/1.7-Task\$". The command "python3 --version" has been entered, and the output "Python 3.8.7" is displayed on the next line.

```
.7/1.7-Task$ python3 --version
Python 3.8.7
```

5. Open a new terminal window and go to the folder where you want to create your projects. If you haven't done so already, set up and create a virtual environment and name it **achievement2-practice**. Then activate the virtual environment.

```

@V-Mac-Pro ~/Documents/Web Development Course/C3
- Specialization/python-spec/Achievement 2$ mkvirtualenv achievement2-practice
created virtual environment CPython3.8.19.final.0-64 in 778ms
  creator CPython3macOsBrew(dest=/Users/[REDACTED]/.virtual
envs/achievement2-practice, clear=False, no_vcs_ignore=False, glob
al=False)
  seeder FromAppData(download=False, pip=bundle, setuptools=bundle
, wheel=bundle, via=copy, app_data_dir=/Users/[REDACTED]/Li
brary/Application Support/virtualenv)
  added seed packages: pip==24.2, setuptools==74.1.3, wheel==0.4
4.0
  activators BashActivator,CShellActivator,FishActivator,NushellAc
tivator,PowerShellActivator,PythonActivator
virtualenvwrapper.user_scripts creating /Users/[REDACTED]/.
virtualenvs/achievement2-practice/bin/predeactivate
virtualenvwrapper.user_scripts creating /Users/[REDACTED]/.
virtualenvs/achievement2-practice/bin/postdeactivate
virtualenvwrapper.user_scripts creating /Users/[REDACTED]/.
virtualenvs/achievement2-practice/bin/preactivate
virtualenvwrapper.user_scripts creating /Users/[REDACTED]/.
virtualenvs/achievement2-practice/bin/postactivate
virtualenvwrapper.user_scripts creating /Users/[REDACTED]/.
virtualenvs/achievement2-practice/bin/get_env_details
(achievement2-practice) [REDACTED]@V-Mac-Pro ~/Documents/We
b Development Course/C3 - Specialization/python-spec/Achievement 2
$ _
main

```

6. Install Django and verify the installation by checking the version.

```

(achievement2-practice) [REDACTED]@V-Mac
b Development Course/C3 - Specialization/python
$ django-admin --version
4.2.16

```