

1. Why is Django popular among web developers?

- Django is a Python-based open-source framework used in backend web applications or web services. It has simple and easy syntax, provides the model-view-template design structure, offers a web server and authentication built in as well as other features. It is fast and simple, provides one of the best security systems among web development frameworks, and is SEO friendly.

2. What are 5 companies that use Django and what are their product or service?

- Instagram: Social media application for sharing photos and videos
- National Geographic: Television network and popular magazine
- Mozilla: Web browser
- Spotify: Audio streaming provider
- Pinterest: Social media platform, similar to Instagram

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

1. You need to develop a web application with multiple users:
 - YES
 - Because Django includes authentication for users out of the box and is very secure.
2. You need fast deployment and the ability to make changes as you proceed:
 - YES
 - Django is very scalable for both small and large projects, so as the site/application grows and changes, you can easily adjust and make those changes with Django. Since Django is MVT based, it is perfect for fast prototyping with a lot of changes.
3. You need to build a very basic application, which doesn't require any database access or file operations:
 - NO
 - If you are not planning on using a database with your site or application, it does not make sense to use Django for your development.
4. You want to build an application from scratch and want a lot of control over how it works:
 - NO
 - In a Django project, certain steps have to be taken in an exact manner. With its firm structure, you will lose some control over the internals of your system.
5. You're about to start working on a big project and are afraid of getting stuck and needing additional support:
 - YES
 - The community support around Django is massive and the documentation is well done. If you need any help or have any questions on how to solve a problem you are facing, reaching out to the community or diving into the documentation will be sure to produce an answer/solution.

4. Python Version:

```
(web-dev) jc@Jaydens-Mac-mini ~ % python --version
Python 3.11.6
(web-dev) jc@Jaydens-Mac-mini ~ %
```

5. Create and activate environment:

```
jc@Jaydens-Mac-mini Scripts % mkvirtualenv achievement2-practice
created virtual environment CPython3.11.6.final.0-64 in 144ms
creator CPython3MacOsBrew(dest=/Users/jc/.virtualenvs/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=/Users/jc/Library/Application Support/virtualenv)
added seed packages: pip==23.2.1, setuptools==68.2.2, wheel==0.41.2
activators BashActivator,CShellActivator,FishActivator,NushellActivator,PowerShellActivator,PythonActivator
virtualenvwrapper.user_scripts creating /Users/jc/.virtualenvs/achievement2-practice/bin/predeactivate
virtualenvwrapper.user_scripts creating /Users/jc/.virtualenvs/achievement2-practice/bin/postdeactivate
virtualenvwrapper.user_scripts creating /Users/jc/.virtualenvs/achievement2-practice/bin/preactivate
virtualenvwrapper.user_scripts creating /Users/jc/.virtualenvs/achievement2-practice/bin/postactivate
virtualenvwrapper.user_scripts creating /Users/jc/.virtualenvs/achievement2-practice/bin/get_env_details
(achievement2-practice) jc@Jaydens-Mac-mini Scripts %
```

6. Django Version

```
(achievement2-practice) jc@Jaydens-Mac-mini: Scripts % pip install django
Collecting django
  Obtaining dependency information for django from https://files.pythonhosted.org/packages/b9/45/707dfc56f381222c1c798583544cb390934ab246fc45b5051ef66e31099c/Django-4.2.6-py3-none-any.whl.metadata
  Using cached Django-4.2.6-py3-none-any.whl.metadata (4.1 kB)
Collecting asgiref<4,=>3.6.0 (from django)
  Obtaining dependency information for asgiref<4,=>3.6.0 from https://files.pythonhosted.org/packages/9b/80/b9051a4a07ad231558fcd8ffc09232711b4e618c15cb7a392a17384bbeef/asgiref-3.7.2-py3-none-any.whl.metadata
  Using cached asgiref-3.7.2-py3-none-any.whl.metadata (9.2 kB)
Collecting sqlparse<0.3.1 (from django)
  Using cached sqlparse-0.4.4-py3-none-any.whl (42 kB)
Using cached Django-4.2.6-py3-none-any.whl (6.6 MB)
Using cached asgiref-3.7.2-py3-none-any.whl (24 kB)
Installing collected packages: sqlparse, asgiref, django
Successfully installed asgiref-3.7.2 django-4.2.6 sqlparse-0.4.4

[notice] A new release of pip is available: 23.2.1 -> 23.3.1
[notice] To update, run: pip install --upgrade pip
(achievement2-practice) jc@Jaydens-Mac-mini: Scripts % django-admin --version
4.2.6
(achievement2-practice) jc@Jaydens-Mac-mini: Scripts %
```