Task 2.1:

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

Django is popular amongst web developers because it lets developers focus more on the project logic and user experience while using their site. It comes with most of the essentials for effective development along with key features such as fast development, fast processing, DRY (don't repeat yourself) principles, CDN support, secure deployment, and scalability.

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.

1. **Instagram:**
   Instagram's entire backend was initially built using Python's Django from the get go. As Instagram grew and gained a massive audience, scalability became an issue for their engineering team, hence why they invested heavily in optimizing the performance of their Django based backend. With Django, as they grow they are able to easily add new hardware and components.

2. **Spotify:**
   Spotify uses Django to increase functionality. Django has been used for some of their backend services which helps with their need for rapid development and scaling of services. Spotify also has a service named "Luwak" which is a web based tool built using Django. It is used internally for monitoring and managing the lifecycle of datasets.

3. **Eventbrite**
   Eventbrite is an event management and ticketing service where users can find local and nonlocal events to attend and buy tickets for them. Eventbrite relies heavily on Django for its platform. Their core platform that powers event creation, ticket sales, and event discovery is all built using Django. As eventbrite faced large amounts of scaling they benefited from Django in that they were able to optimize their database, caching layers, and more easily thanks to Django.

4. **Mozilla**
   Mozilla uses Django for many of its different products and websites.
   One being MDN (Mozilla Delivery Network), which is an essential resource for web developers that has documentation, guides, and references for web technologies. The platform that powers MDN is built using Django. The official website for Firefox extensions and themes is also powered by Django.

5. **The Washington Post**
   The Django framework has played a role in several aspects of The Washington Post's website. Such as their digital platform "Arc Publishing" which is designed to provide a suite of tools for publishers. It is not entirely built from Django, but some of its

components and tools within do use Django.They also use it for data driven journalism projects as Django and its extension Django Rest Framework provides an easier way to handle such projects.

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.

    - **I would use Django for this as it would help for quick prototyping, deployment, and it would help with future scalability of the app.**

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

    - **I would use Django for this as Django is popular due to its fast deployment and ease with scalability / changes.**

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

    - **I would not use Django if I don't need any database access or file management operations at all as that would just be a waste of time. Django is built to optimize developers' work when they need database access, if you don't need a database or file management then you don't need Django.**

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

    - **I would not use Django for this since more control is wanted. With Django you have to follow 'The Django Way' aka follow their rules or your app won't work. If you want more control over the fine details of your project then Django is not suitable for the project.**

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

    - **I would use Django here as it is well suited for large projects and if I end up needing help, Django is backed by a large supportive community of web developers. It also has well written documentation.**

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(achievement2-practice) C:\Users\13474\Envs\achievement2-practice\Scripts>python --version
Python 3.8.7
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(achievement2-practice) C:\Users\13474\Envs\achievement2-practice\Scripts>activate.bat

(achievement2-practice) C:\Users\13474\Envs\achievement2-practice\Scripts>if defined _OLD_VIRTUAL_PYTHONPATH (set "PYTHONPATH=" ) else (set "_OLD_VIRTUAL_PY
THONPATH=" )

(achievement2-practice) C:\Users\13474\Envs\achievement2-practice\Scripts>django-admin --version
4.2.6
```