Assignment 1

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Question One

Examples of applications that use databases include:

✓ **Health information system**

- Medical history

- Test results and medications

✓ **Library management systems**

- Availability of a book/article

- Author's information

✓ **Online shopping systems** – Amazon and eBay

- Price, details, and availability of a product

Question Two

Possible application in domain projects:

✓ **Disease monitoring system**: Track and control the spread of infectious disease.

✓ **Immunization system:** Monitor vaccination of people globally.

- Allow easy retrieval of immunization records

- Allow individuals to update their immunization details

✓ **Publication archive:** Store data relating to publications such as research papers, journals, books, and articles.

- Act a central system for all publications

Question Four

- NoSQL were developed to facilitate scalability and support specialized data types

Traditional Databases	NoSQL
Follows the ACID properties (Atomic, consistent, isolated, durable)	Follows CAP/BASE properties (Basically Available, Soft State, Eventually Consistent)
Table-based	Column, graph, and document based
Fixed/predefined schema	Dynamic schema/Schema free
Suitable for financial applications	Suitable for big web applications like social media sites

Question 5

What current databases cannot do:

Question Six

Tables used to store information in social media system

- ✓ **Profile table**: Contains user's information including account name, age, location, preferences, and official name.

- ✓ **Posts table**: Contains content shared by a users including images, videos, and photos.

- ✓ **Analytics tables**: Records statistics and data of content shared. For example, likes or comments on a post.

- ✓ **Friends table**: Contain information of friends' or followers' activities like posts shared

The End