WEB DEVELOPMENT
QUIZ-3

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Q1) Differentiate between Relational and Non-relational Databases.

A) Relational databases store data in structured tables with rows and columns, where each table has a predefined schema. They use SQL (Structured Query Language) for managing and querying data and ensure data integrity and consistency through ACID (Atomicity, Consistency, Isolation, Durability) properties.

Non-relational databases store data in flexible, schema-less formats such as documents, key-value pairs, wide-column stores, or graphs. They are designed for scalability and high performance, handling large volumes of unstructured or semi-structured data, and prioritize availability and partition tolerance over immediate consistency (BASE properties).

Q2) Suppose you are developing an eCommerce web-based application then which one you will prefer Relational or Non-relational Database.

A) I would prefer regional database as this ensures high data consistency, which is crucial for handling transactions, payments and inventory management. It is also suitable for applications and software which require complex queries such as generating sales reports and managing customer orders.
It also provides a mature ecosystem with robust tools for data management, backup, recovery, and security, which are essential for a business-critical application like an eCommerce platform.

Q3) Explain major components of MongoDB that we discussed in the class.

A) A mangoDB is document-oriented database designed for scalability, flexibility, and high performance. It is particularly well-suited for web development due to its ability to handle unstructured or semi-structured data and its ease of integration with modern web frameworks. Here a a few major components of mangodb which include :

B) Database

C) Collection

D) Document

E) And indexing