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EE3350

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## Q1.

(i) CRUD stands for Create, Read, Update, and Delete — these are the four basic functions used in persistent storage operations on databases.

(ii) A primary key helps find each record differently but it may not always be needed in small tables.

(iii) A foreign key is a field that links one table to the primary key of another, ensuring referential integrity between the two tables.

(iv) One-to-One, One-to-Many, Many-to-One, Many-to-Many, and Self-referencing relationships are the most common types.

(v) Good schema design ensures scalability and performance by using normalization, indexing, naming conventions, and access control practices.

## Q2.

(i) Sequelize lets Node.js connect with databases without SQL, kind of like using models.

(ii) JWTs are secure tokens issued after login containing encoded user data that allow stateless authentication in web apps.

(iii) Middleware is some functions that do things in the middle of request and response.

(iv) [Answer could not be generated]

(v) Authentication verifies identity, typically via credentials, and issues a JWT. Authorization uses roles in JWT to permit or deny access.