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Introduction to GraphQL APIs

Unlocking Data Flexibility with GraphQL APIs

DEFINITION

GraphQL APIs allow clients to request specific data from a server, improving efficiency and flexibility. Unlike REST, GraphQL enables clients to define the structure of the response.

KEY CONCEPTS

Queries

Queries are requests for data, allowing clients to specify exactly what they need.

Schemas

Schemas define the types and structure of data available in a GraphQL API.

Subscriptions

Subscriptions enable real-time updates by allowing clients to listen for changes in data.

Mutations

Mutations are used to modify data on the server, such as creating or updating records.

Resolvers

Resolvers are functions that handle the logic for fetching data for queries and mutations.

EXAMPLES

- Querying user data with specific fields like name and email.
- Mutating a post to change its title and content.
- Subscribing to real-time notifications for new messages.

MEMORY TIPS

- ★ Remember 'Q' for Query and 'M' for Mutation to differentiate data requests.
- ★ Think of Schemas as blueprints for your data structure.
- ★ Use 'R' for Resolvers to recall they resolve data fetching.

COMMON MISTAKES

- ✗ Confusing queries with mutations and their purposes.
- ✗ Neglecting to define schemas properly, leading to data errors.
- ✗ Over-fetching data by not specifying fields in queries.

QUICK RECAP

GraphQL APIs provide a flexible way to request and manipulate data. Understanding queries, mutations, and schemas is essential for effective API development. Avoid common mistakes like over-fetching and confusing query types.