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Introduction to GraphQL APIs

Unlock data flexibility with GraphQL APIs!

DEFINITION

> GraphQL APIs allow clients to request specific data from a server, reducing over-fetching. They provide a more efficient and flexible alternative to traditional REST APIs.

KEY CONCEPTS

Queries

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

Mutations

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

Schemas

Schemas define the structure of the API, specifying types and relationships between data.

Resolvers

Resolvers are functions that handle the logic for fetching data for a specific query.

Subscriptions

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

EXAMPLES

→ Query for user data: { user(id: 1) { name, email } }

→ Mutation to add a post: mutation { addPost(title: 'New Post') { id } }

→ Subscription for new messages: subscription { messageAdded { content } }

MEMORY TIPS

★ Think of GraphQL as a menu: you order exactly what you want.

★ Remember CRUD: Create, Read, Update, Delete for mutations.

★ Visualize schemas as blueprints that outline data relationships.

COMMON MISTAKES

✗ Over-fetching data by not specifying fields in queries.

✗ Ignoring error handling in resolvers.

✗ Confusing mutations with queries; remember mutations change data.

QUICK RECAP

GraphQL APIs provide a flexible way to interact with data through specific queries and mutations. Understanding key concepts like schemas and resolvers is crucial for effective API development.