

Building a GraphQL Server with Spring Boot



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Overview



Query language for APIs

Overview

Schema

GraphQL server

Resolvers, queries, and mutations

Exception Handling

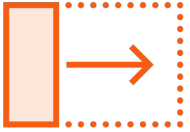
GraphiQL



GraphQL Overview



Overview



REST is a popular way to expose data



REST is very rigid



GraphQL offers greater flexibility

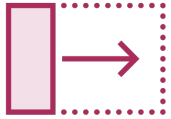


GraphQL

GraphQL is a query language for APIs or a syntax that describes how to ask for data.



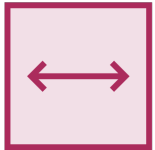
Features



Allows client to specify the exact data needed



Aggregation of data from multiple sources



No longer required to call multiple APIs for needed data



GraphQL offers maximum efficiency and flexibility



Sample Query

```
{  
  findAllApplications  
    {  
      id  
    }  
}  
  
{  
  "data":  
    {  
      "findAllApplications":  
        [ { "id": "1"},  
          { "id": "2"} ]  
    }  
}
```



Sample Query

```
{
  findAllApplications
    {
      id
      owner
    }
}

{
  "data":
  {
    "findAllApplications":
    [ { "id": "1" ,
      "owner": "Kesha"},
      { "id": "2",
        "owner": "Jane" } ]
  }
}
```



Dependencies



Dependencies

`<dependency>`

`<groupId>com.graphql-java</groupId>`

`<artifactId>graphql-spring-boot-starter</artifactId>`

`<version>5.0.2</version>`

`</dependency>`

`<dependency>`

`<groupId>com.graphql-java</groupId>`

`<artifactId>graphql-java-tools</artifactId>`

`<version>5.2.4</version>`

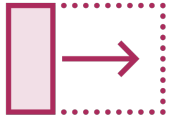
`</dependency>`



GraphQL Schemas



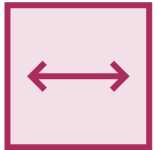
Schema



Defines data points offered via an API



Data types and relationships



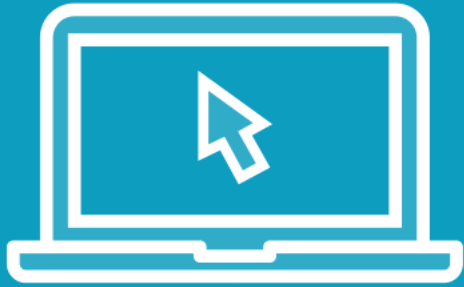
Operations available



graphql-java-tools parses schemas ending in “.graphqls”



Demo



Schema



Query Operations



Demo



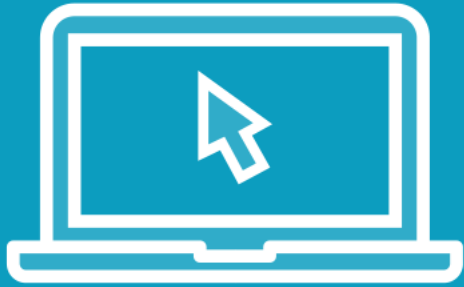
Query



Mutations



Demo



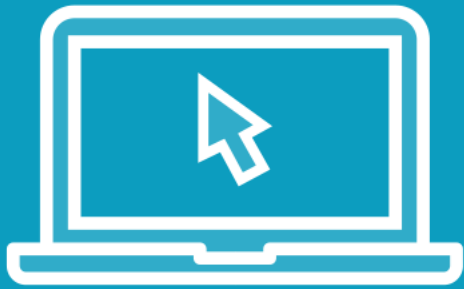
Mutators



Error Handling



Demo



GraphQL server

Testing GraphQL API

GraphiQL

Queries

Mutations



Summary



GraphQL

GraphQL Schema

Data types and relationships

Operations available

Resolvers

GraphiQL

