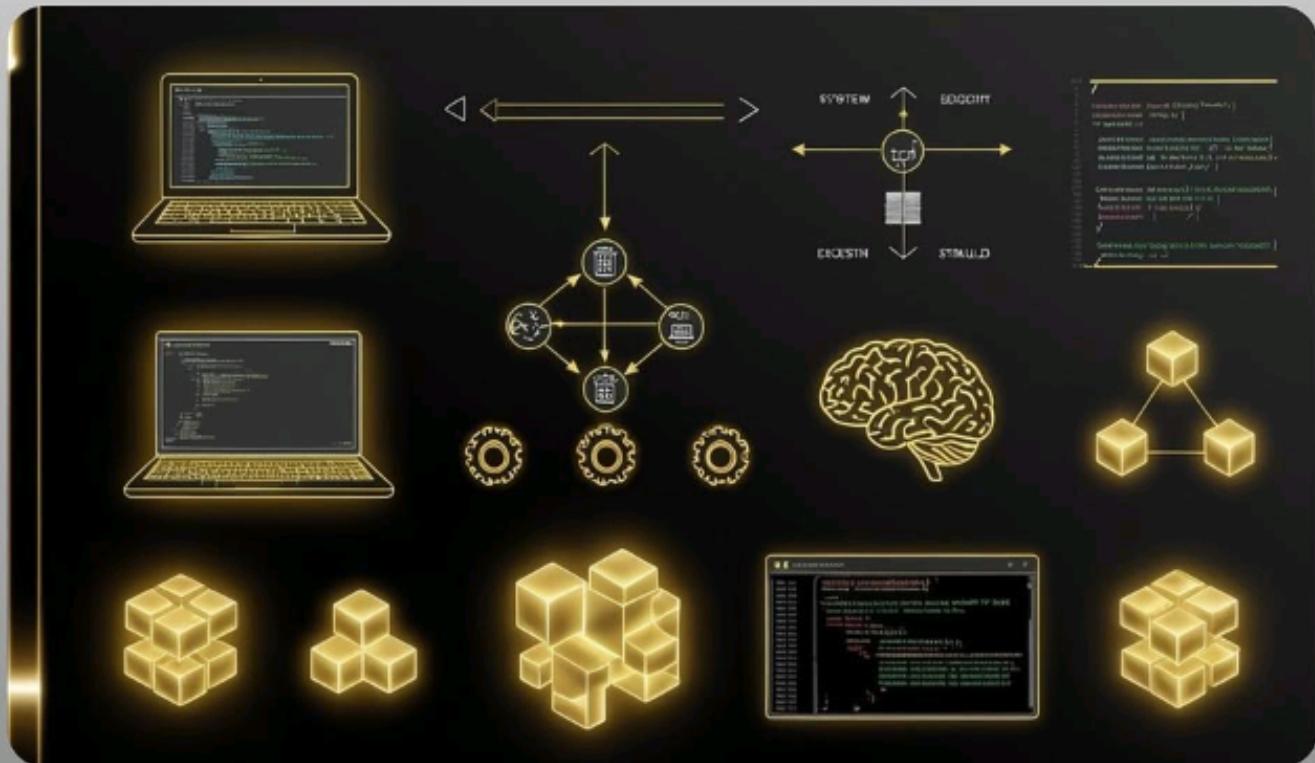




# DESIGN PATTERNS IN MICROSERVICES

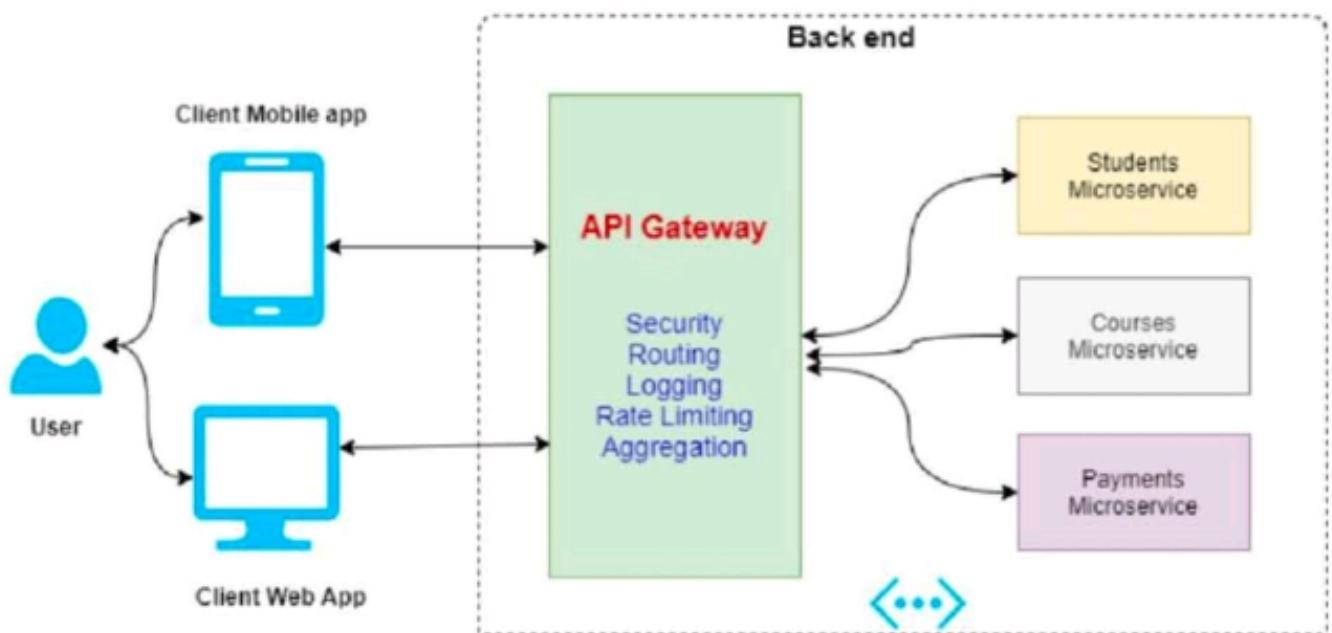
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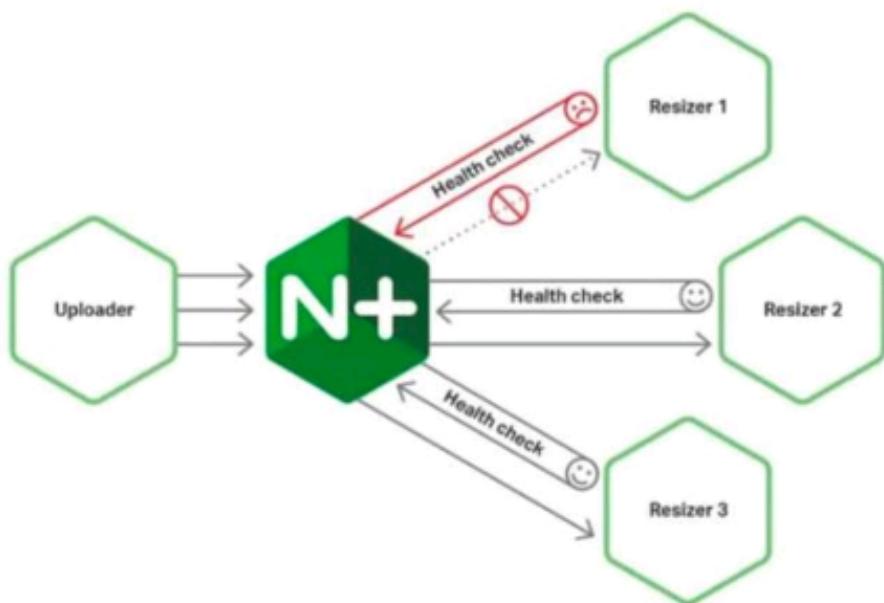
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# GATEWAY PATTERN



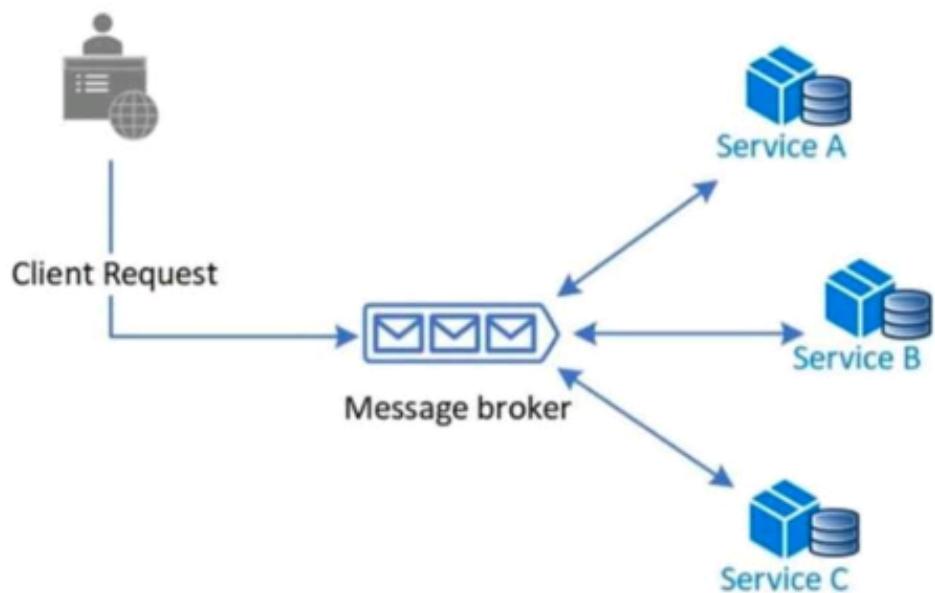
Use an API Gateway to handle client requests and route them to the appropriate microservices. This centralized authentication, load balancing, and routing logic.

# CIRCUIT BREAKER PATTERN



Prevent cascading failures by using a circuit breaker that can temporarily stop requests to a failing service and provide fallback mechanisms.

# SAGA PATTERN



Manage long-lived transactions across multiple microservices by breaking them down into a sequence of smaller, local transactions.

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## You Get:

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- ✓ Spring Security & JPA/Hibernate
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- ✓ Distributed systems & scalability



1. Spring Core Framework FAQs



2. Spring Boot Q & A Final



3. Spring Security FAQs



4. Spring & Spring Boot Scenario-Based FAQs, Annotations & Code Snippets



5. JPA & Hibernate Interview



6. REST APIs Q & A



7. Microservices Q & A

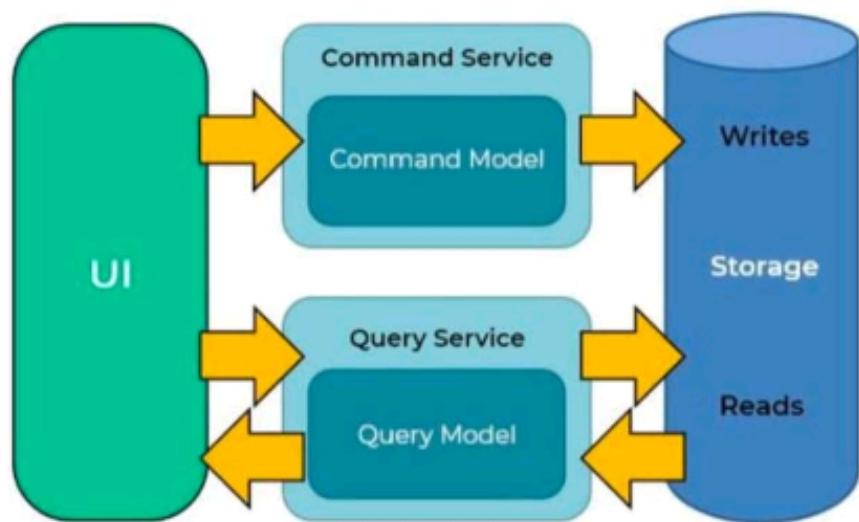


8. Design Patterns Q & A

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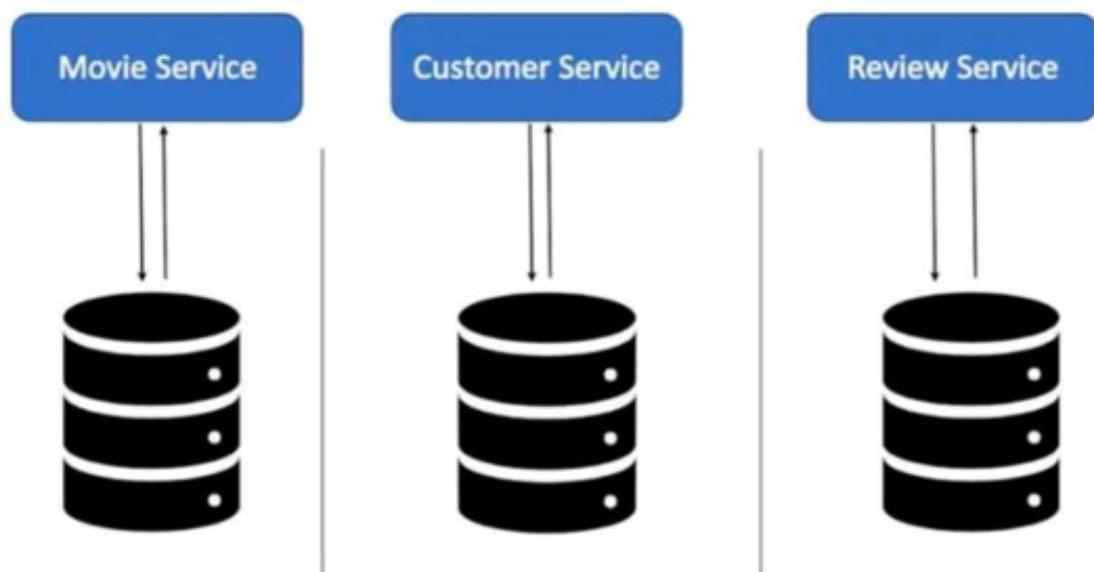
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# CQRS PATTERN



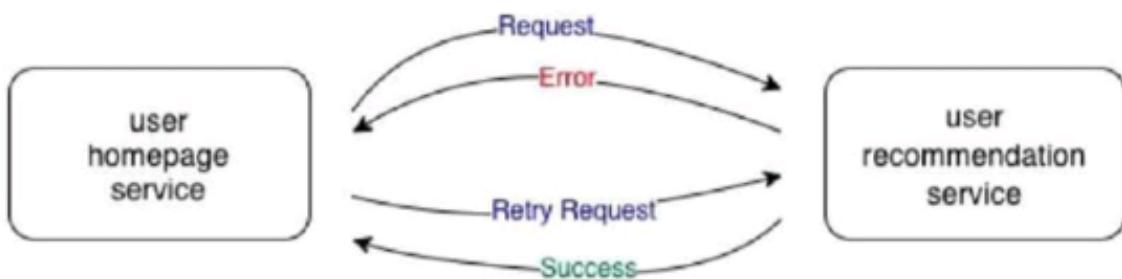
Separate the read and write responsibilities of a system, allowing for optimized performance and scalability.

## DATABASE PER SERVICE PATTERN



Each microservice has its own dedicated database to ensure loose coupling and autonomy.

## RETRY PATTERN



Automatically retry failed operations to improve the chances of success.

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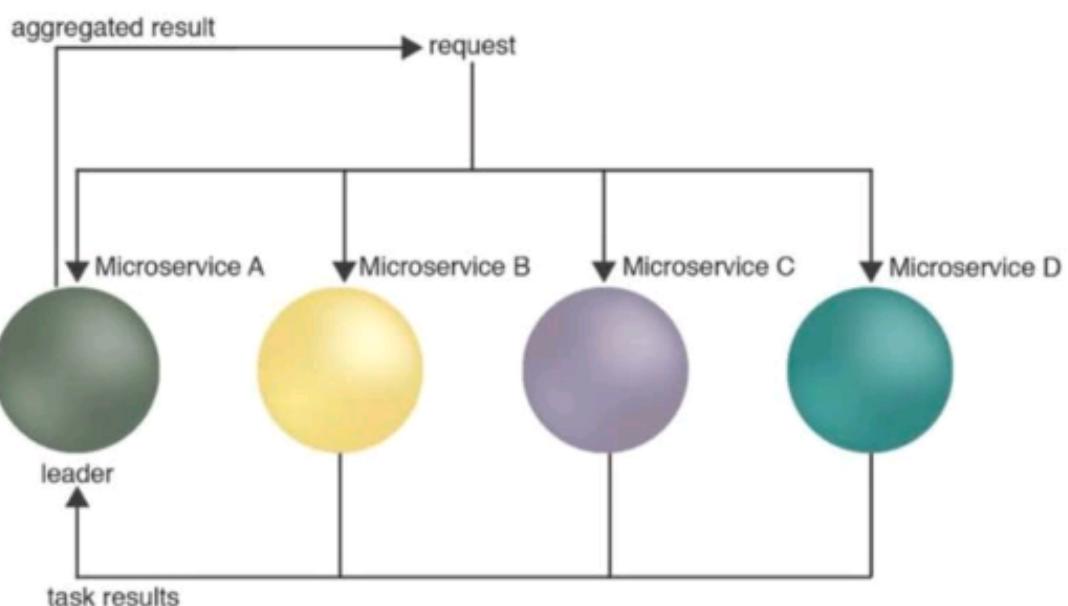


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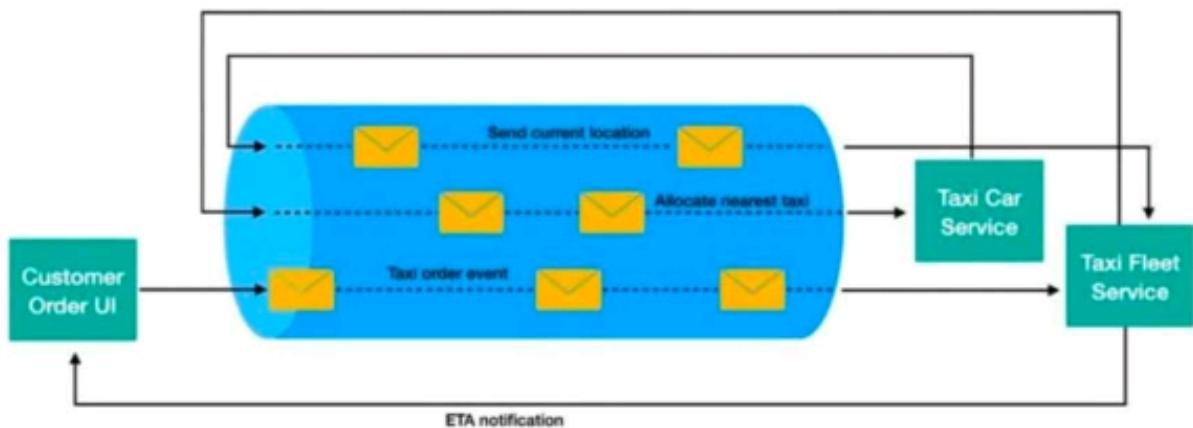
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# LEADER ELECTION PATTERN



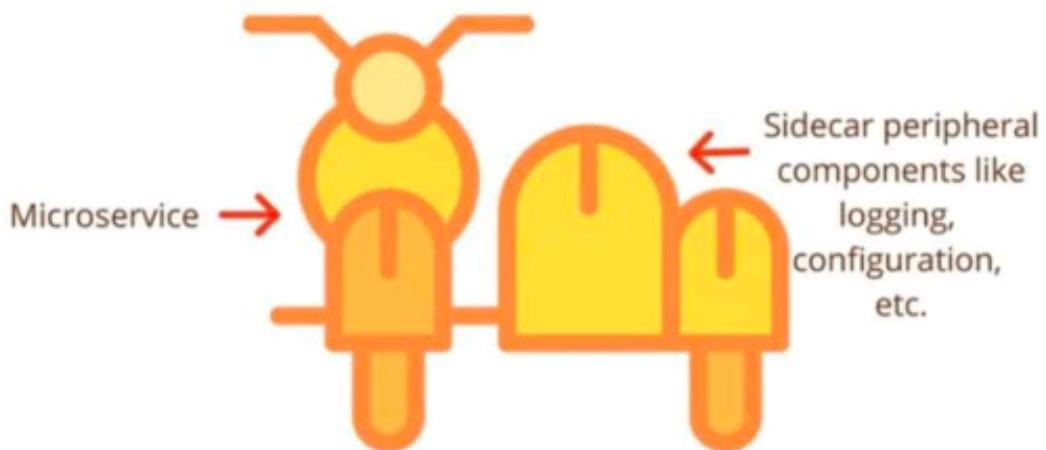
Designate a leader among instances of a microservice for tasks like coordination and decision-making.

# EVENT-DRIVEN ARCHITECTURE PATTERN



Communicate between microservices through events, enabling loose coupling and scalability.

# SIDECAR PATTERN



Attach a separate microservice (sidecar) to handle specific tasks like monitoring, logging, or authentication.

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