

# Shared Database or Database by Service

in Microservices Architecture

# Shared Database

## Prós

Strong Consistency

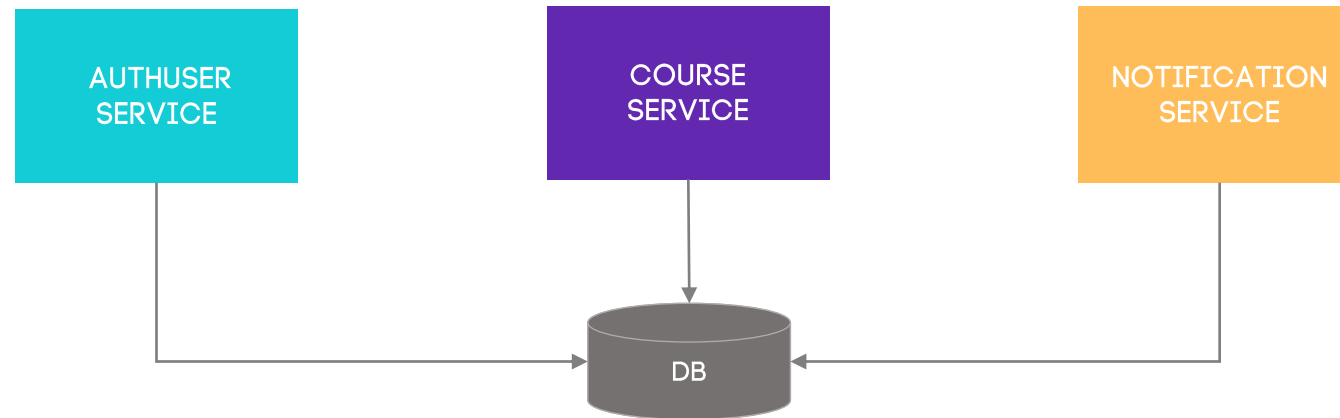
ACID Transactions  
locally

## Contras

Strong Coupling

Impaired performance

No data modeling  
isolation



# Database by Service

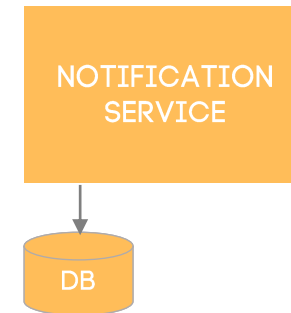
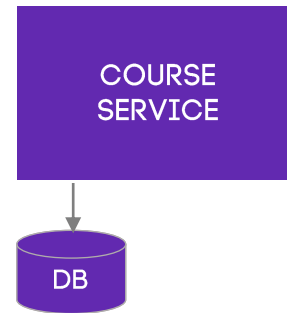
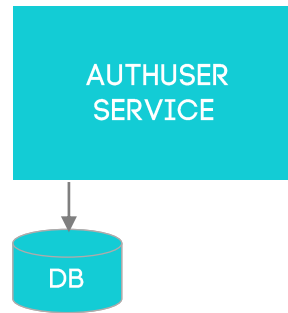
## Prós

Loose Coupling

Isolated Data modeling

flexibility in choosing the  
Database by Microservice

Less dependency  
between teams



## Contras

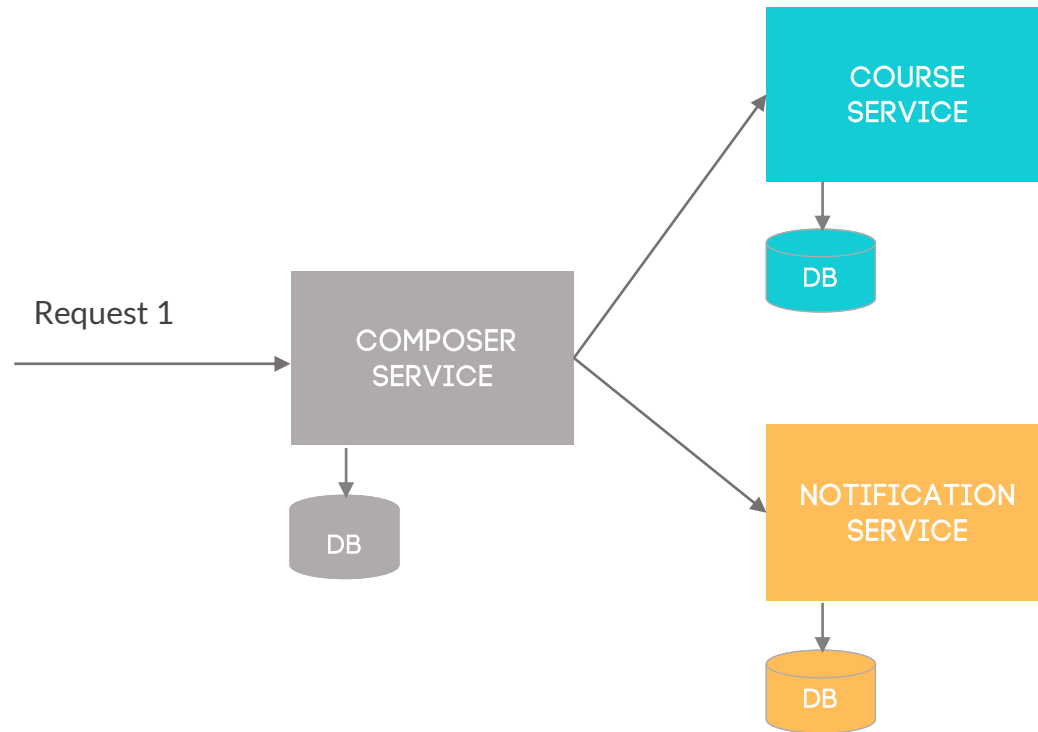
Data Synchronization

Distributed Transactions

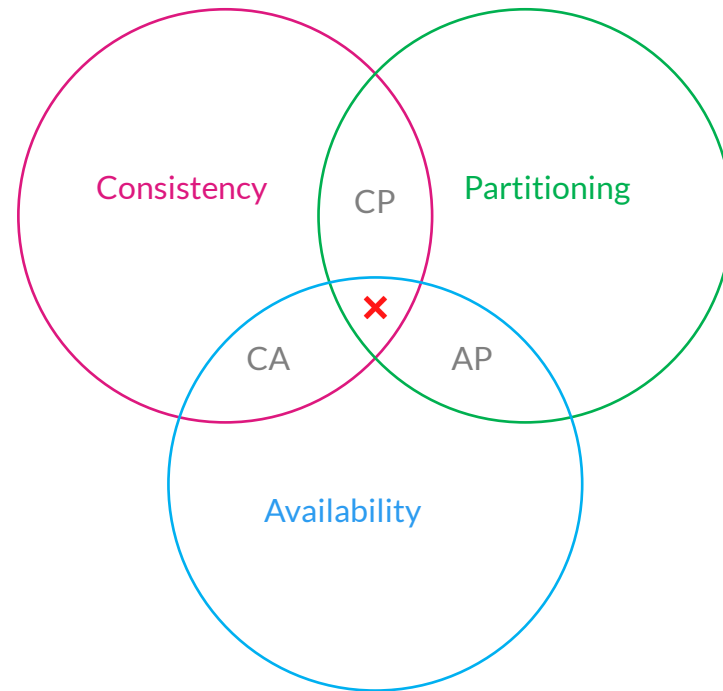
CAP Theorem and  
Eventual Consistency

Data Replication

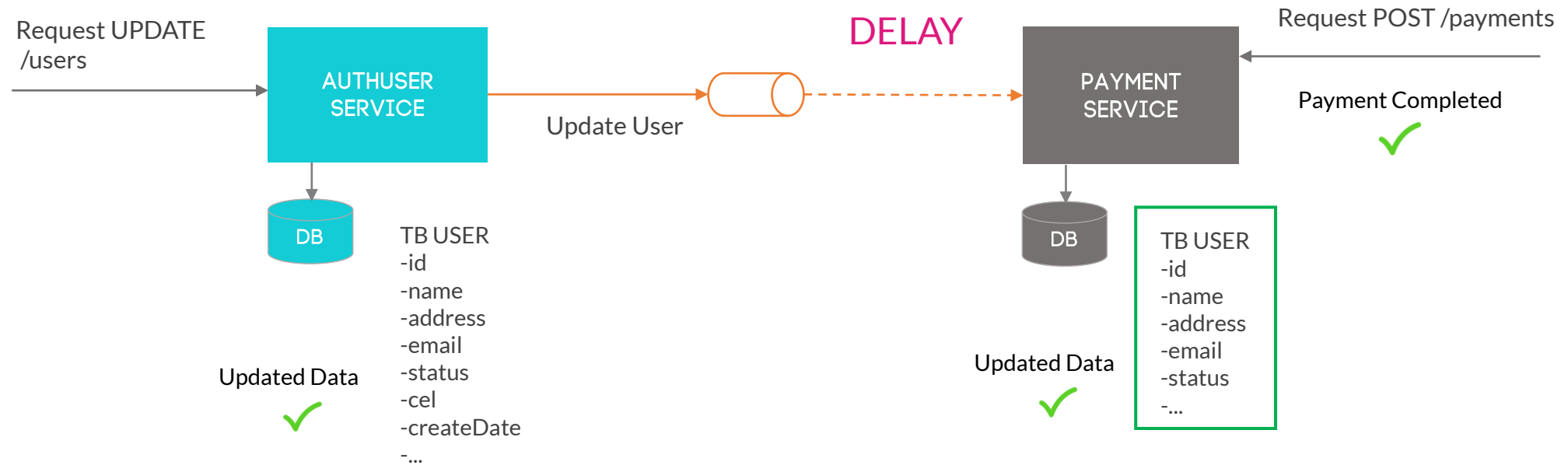
# API Composition



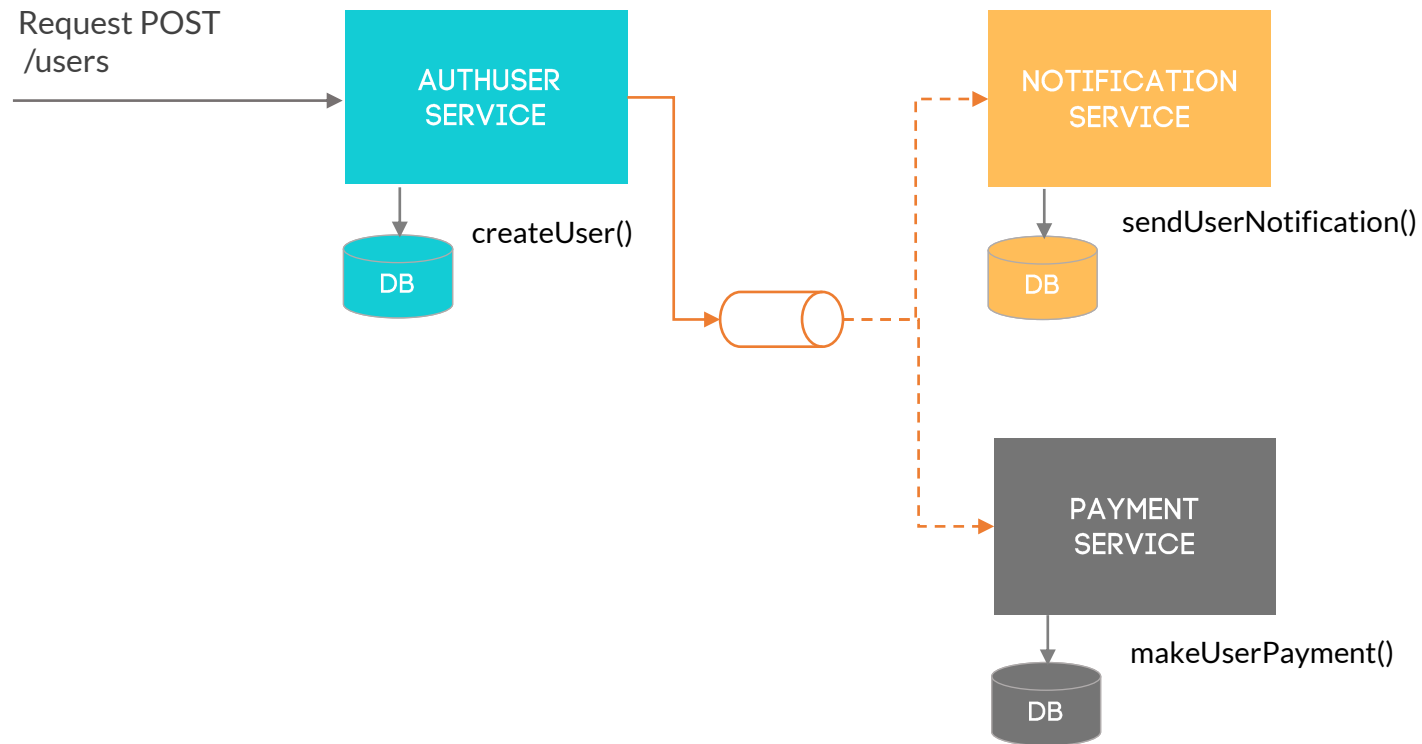
# CAP Theorem or Brewer's Theorem



# Occasional Consistency and Data Replication



# Distributed Transactions



# Data Compensation

