IDE Introduction

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https://www.jetbrains.com/idea

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Cargo Tracker Demo Application

- cargotracker.java.net
- Getting started instructions
- NetBeans setup instructions
- Domain-driven design
- Maven project

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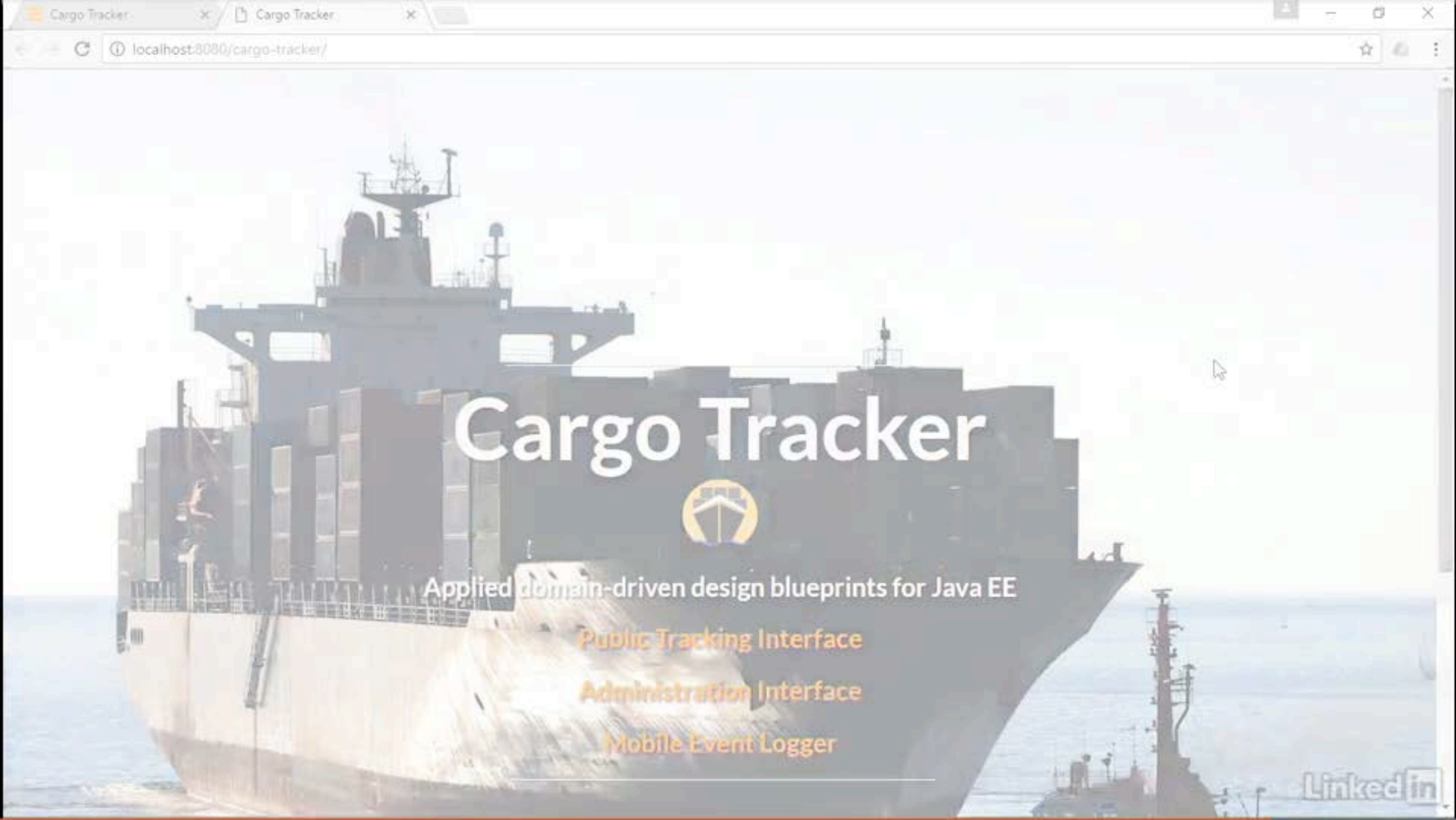
Cargo Tracker
Cargo Tracker
localhost:8080/cargo-tracker/
Cargo Tracker
Applied domain-driven design blueprints for Java EE
Public Tracking Interface
Administration Interface
Mobile Event Logger
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Server Products

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ORACLE
WebLogic

Apache TomEE

WebSphere
Liberty

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WildFly

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Server Introduction

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Batch	Dependency Injection	JACC	JAXR	JSTL	Management
Bean Validation	Deployment	JASPIC	JMS	JTA	Servlet
CDI	EJB	JAX-RPC	JSF	JPA	Web Services
Common Annotations	EL	JAX-RS	JSON-P	JavaMail	Web Services Metadata
Concurrency EE	Interceptors	JAX-WS	JSP	Managed Beans	WebSocket
Connector	JSP Debugging	JAXB			

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Basic Architecture

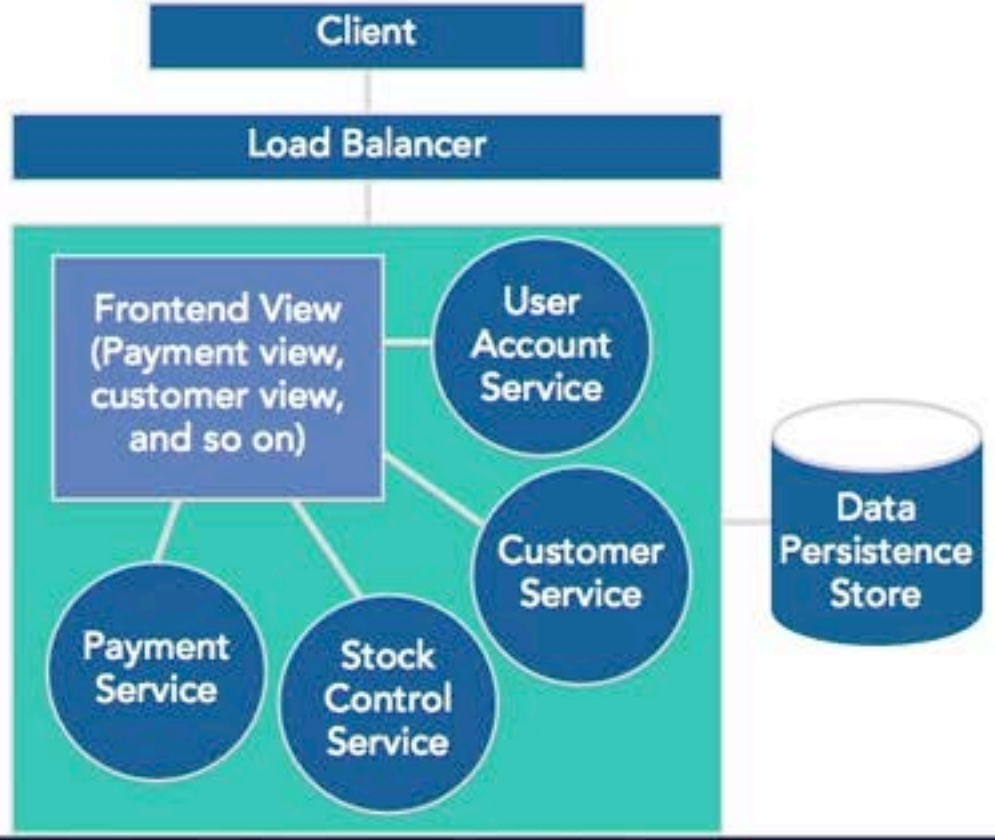
Monolithic architecture

Most common

Benefits

Simple, only one app to test

IDE designed for monoliths



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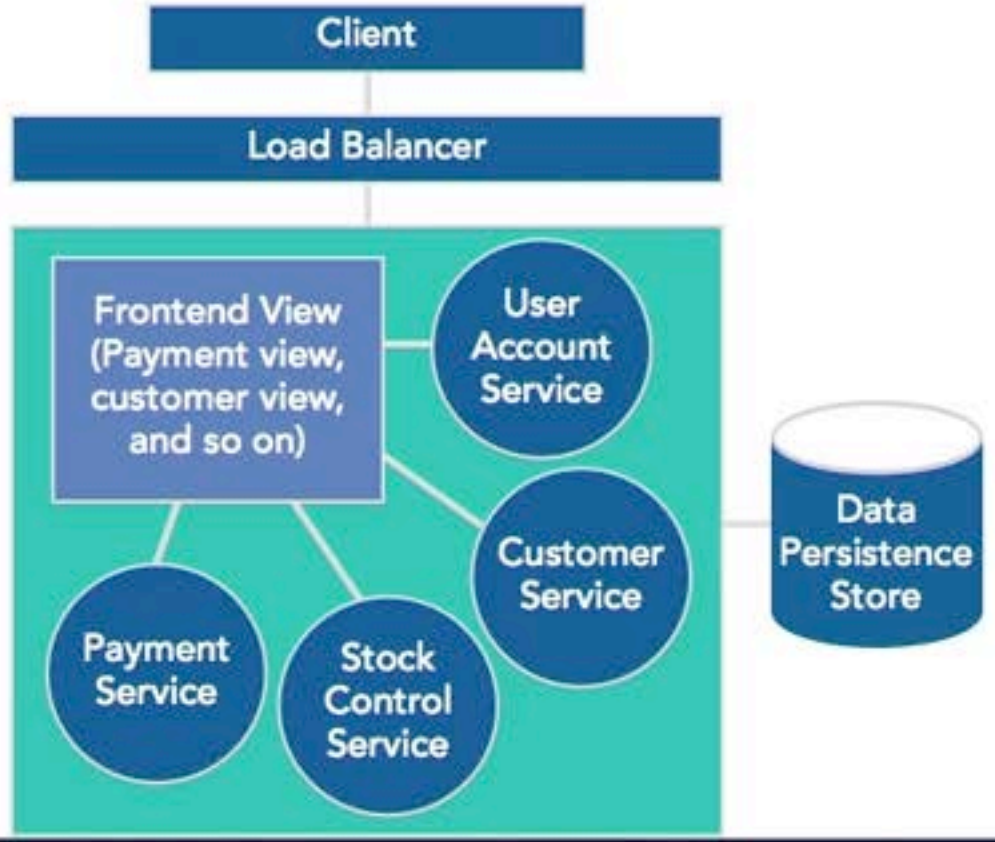
Basic Architecture

Drawbacks

- Steep learning curve for joiners
- Stuck with tech choices



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Basic Architecture

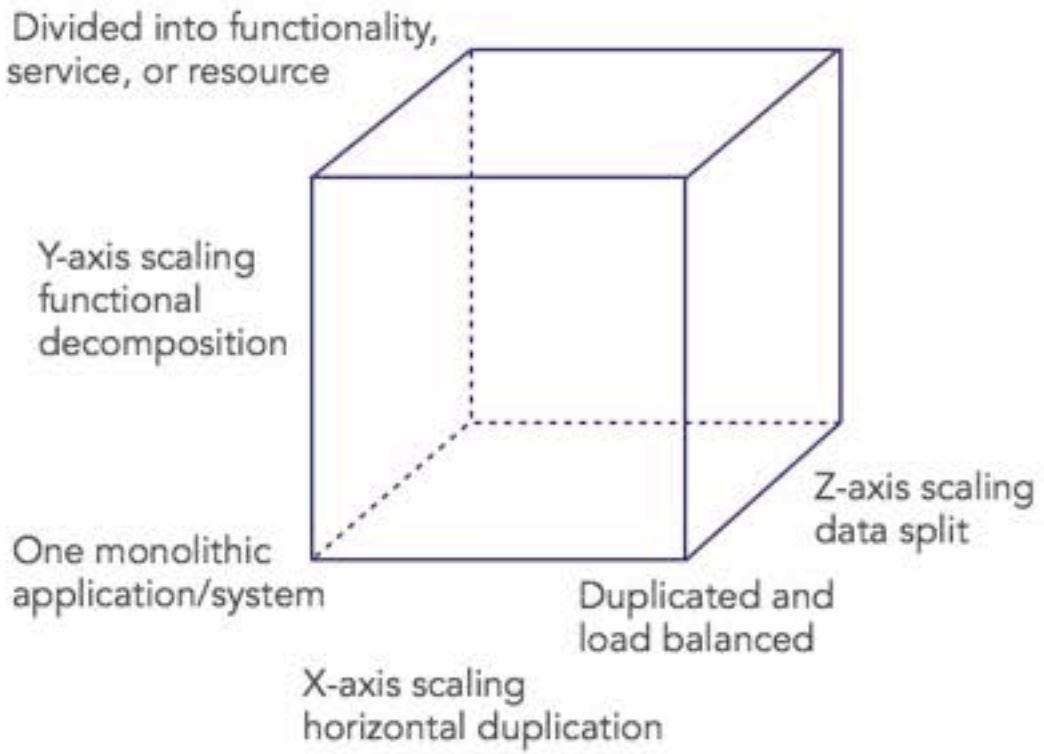
Scalability

Flex with demand

X-axis scaling

Improved capacity/availability

Increased hosting costs



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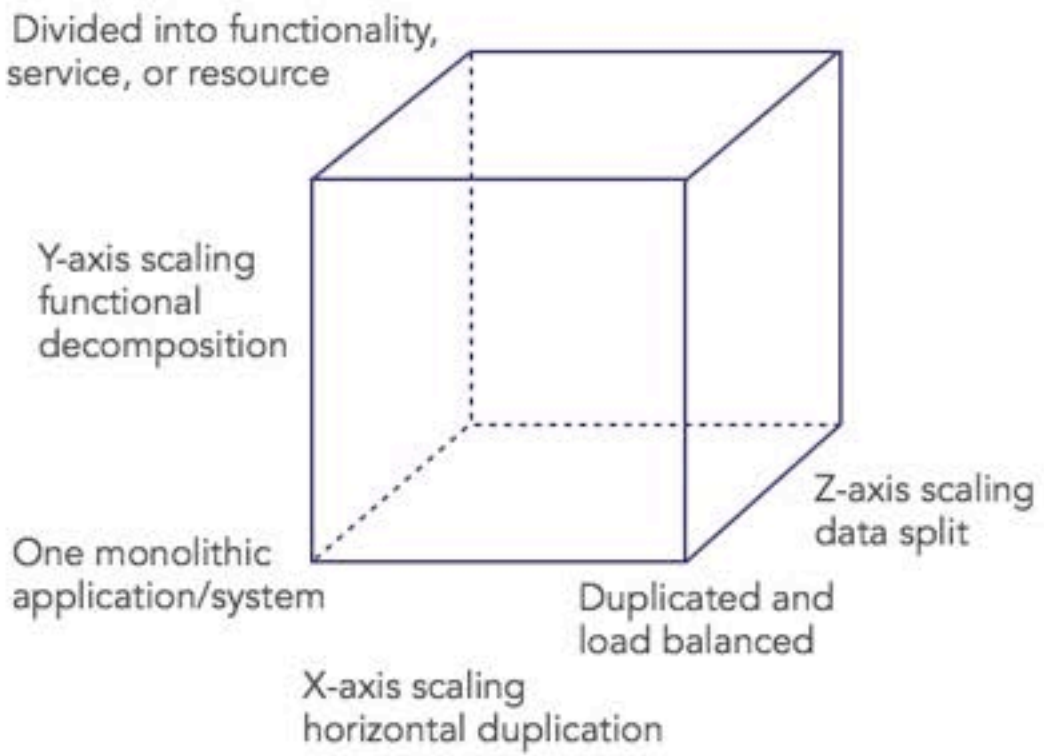
Basic Architecture

Z-axis scaling

- Duplicate code
- Data is split

Y-axis

- Decompose into services



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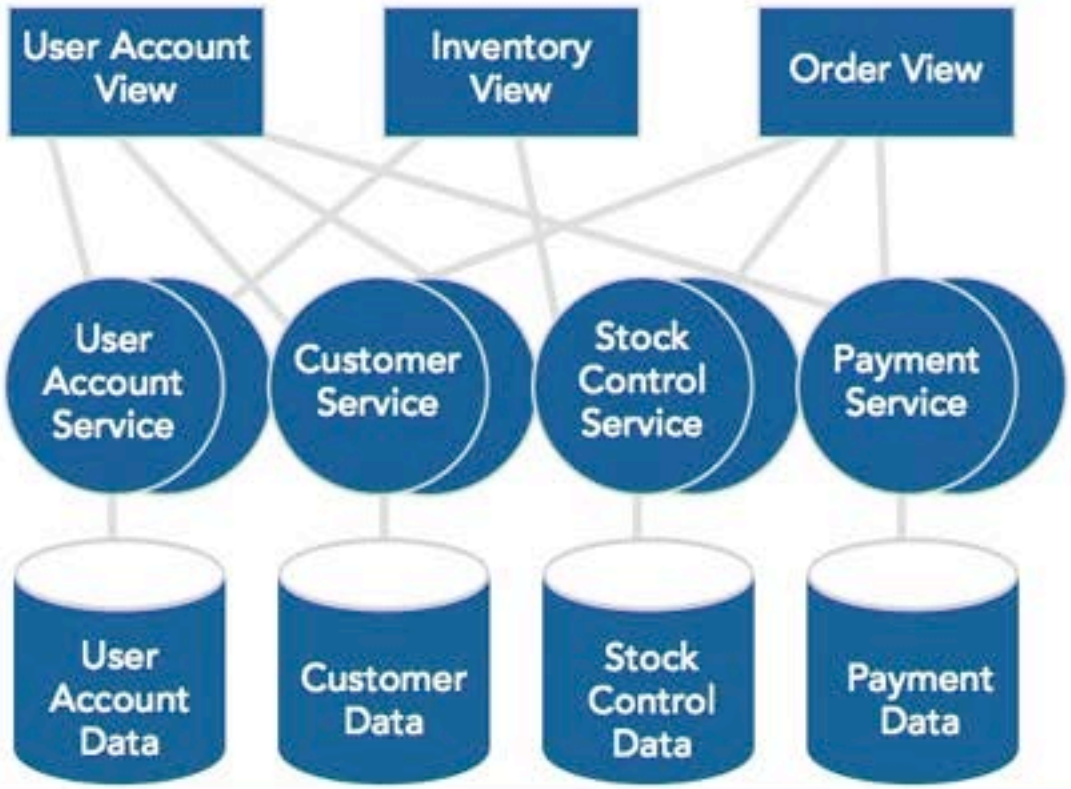
Basic Architecture

Microservice Architecture

- Decomposing into services
- Duplicated on several servers
- Data can be shared
- Frontend applications



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Typical Application Architecture

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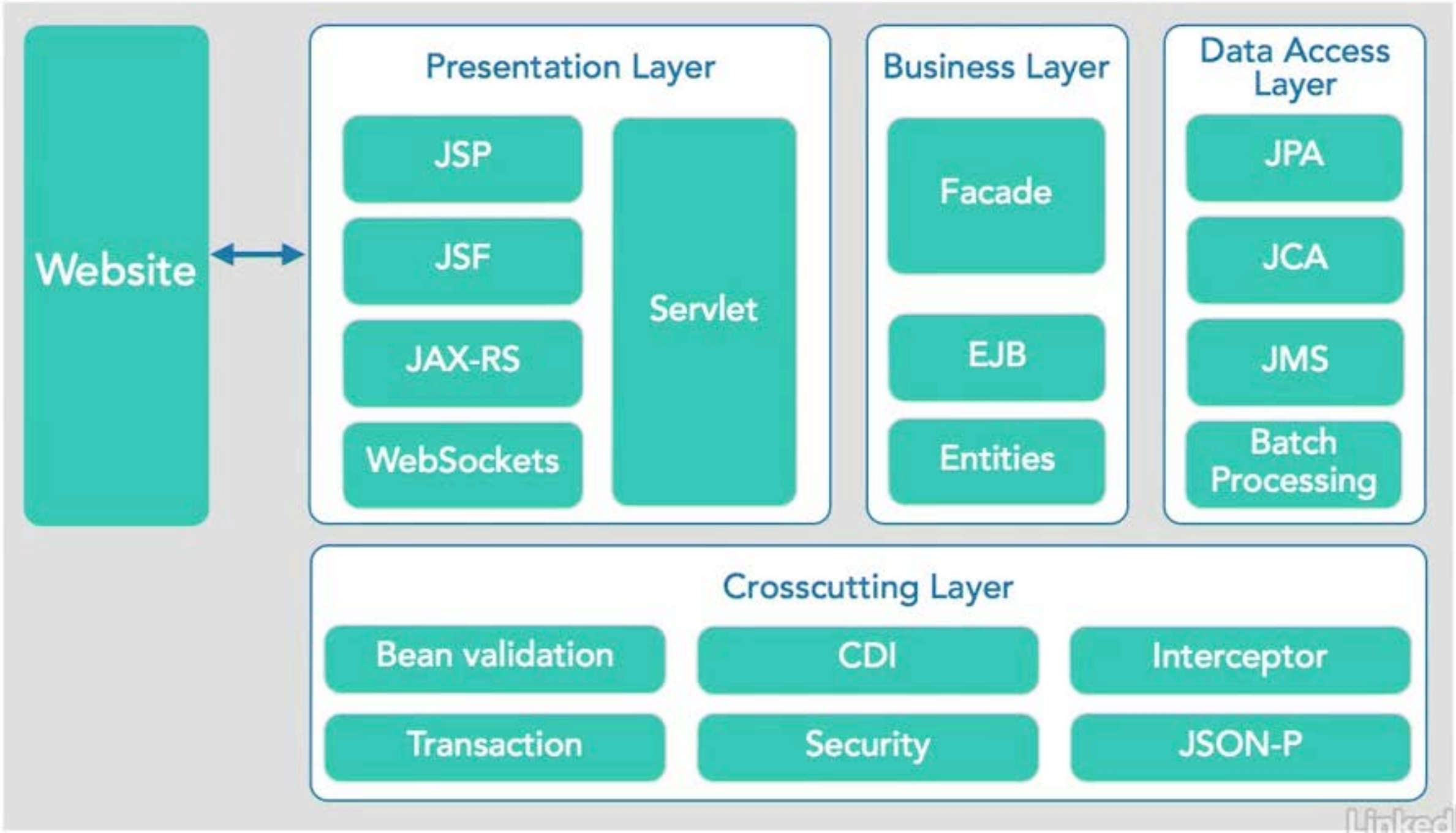
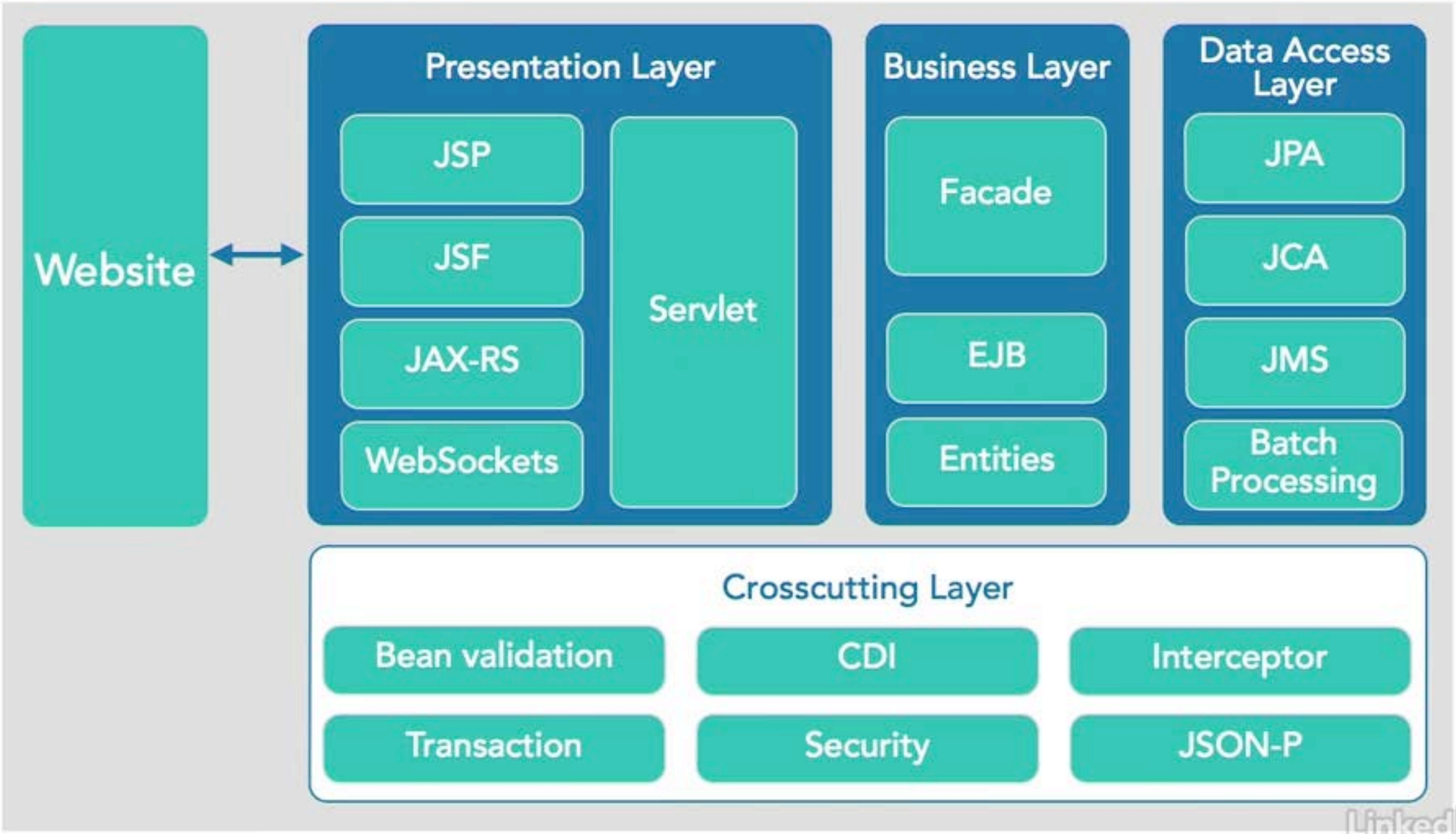

Website
Presentation Layer
JSP
JSF
JAX-RS
WebSockets
Servlet
Business Layer
Facade
EJB
Entities
Data Access Layer
JPA
JCA
JMS
Batch Processing
Crosscutting Layer
Bean validation
CDI
Interceptor
Transaction
Security
JSON-P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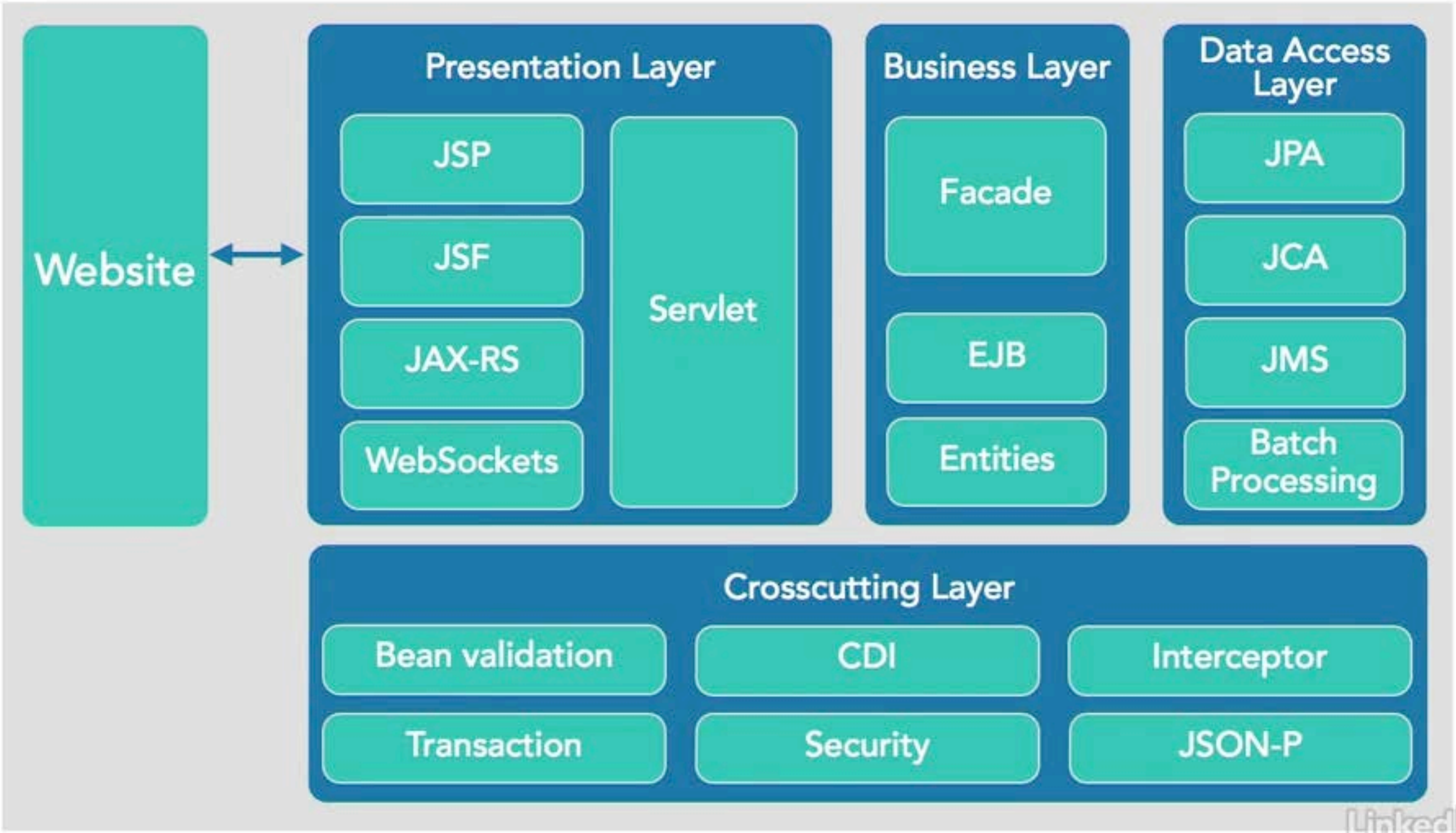
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