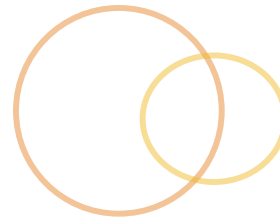
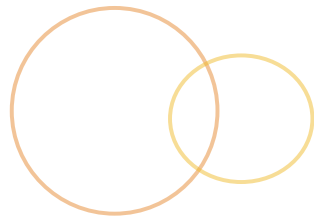


Java EE Patterns

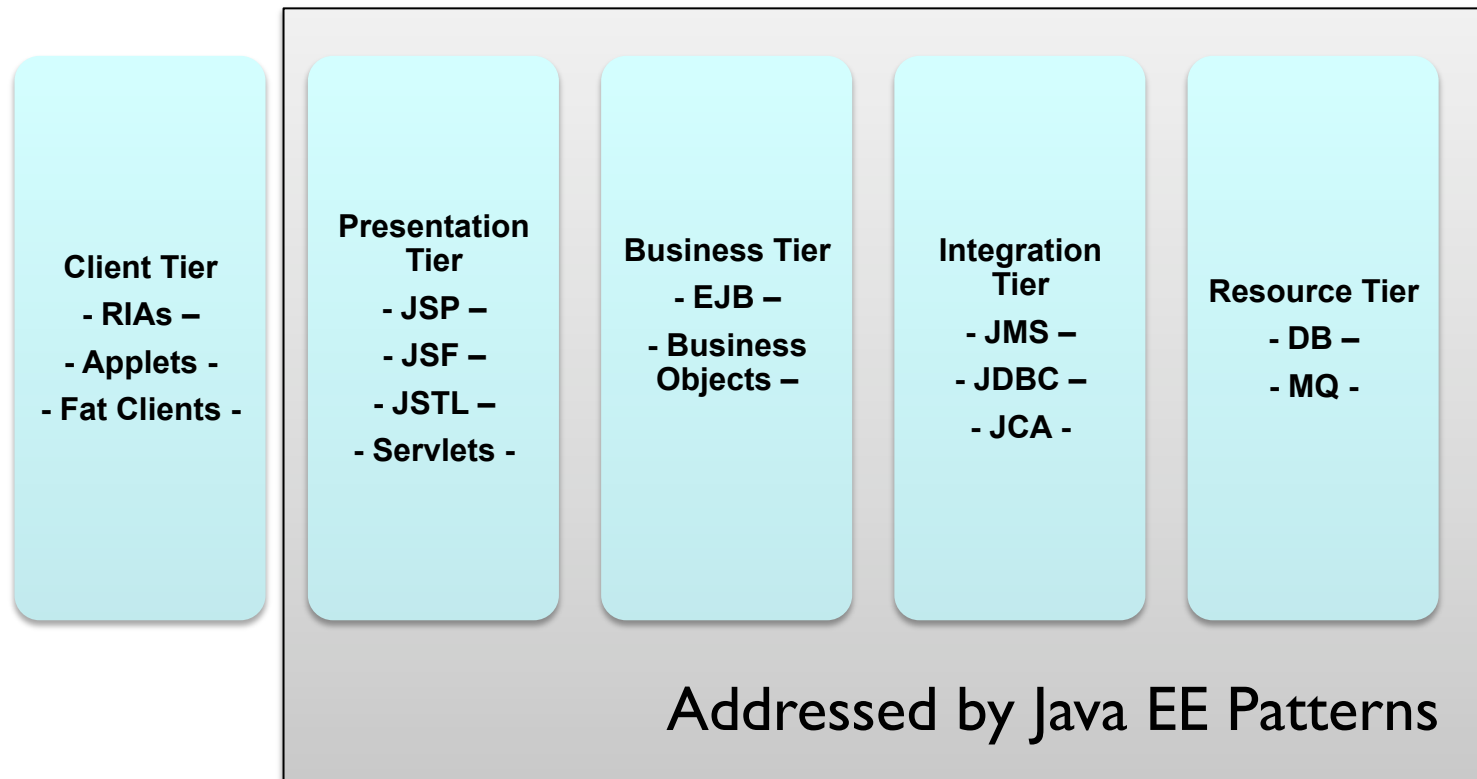


What are Java EE Patterns?

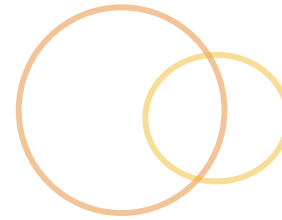


- 🕒 A collection of Java EE based solutions to common problems
 - 🕒 Address reoccurring problems found in enterprise class systems
 - 🕒 Intended to meet quality of service characteristics ('ilities)
 - 🕒 Could be considered best-practices
- 🕒 Solution architecture and technology focused
 - 🕒 Focused on Java EE based solutions
 - 🕒 Built using a layered or tiered approach to software
 - 🕒 Not all apply in every situation

Tiered Software Solutions



Tier Definitions



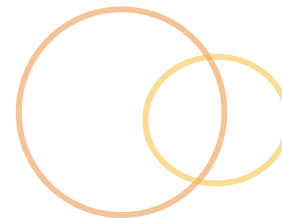
Tier	Description
Client	Represents all device or system clients access the system
Presentation	Encapsulates all the presentation logic requires to service clients accessing system; primarily will generate HTML
Business	Encapsulates the business services which provide the business logic required to perform client requests
Integration	Responsible for communicating with external resources that provide things like persistence
Resource	Represents the external resources

Presentation Tier Patterns



Pattern Name	Description
Intercepting Filter	Provides decoupled pre and post processing (proxy)
Front Controller	Centralized controller for managing the handling of a request (mediator)
Context Object	Encapsulates state in a protocol-independent manner shared within the application
Application Controller	Centralizes and modularizes actions and views (controller)
View Helper	Encapsulates non-presentation logic into helper objects (Java Bean)
Composite View	Creates an aggregate view
Service to Worker	Combines Dispatcher component with a front controller and view helper
Dispatcher View	Combines Dispatcher component with front controller and view helper; delegating activities to view processing

Business Tier Patterns



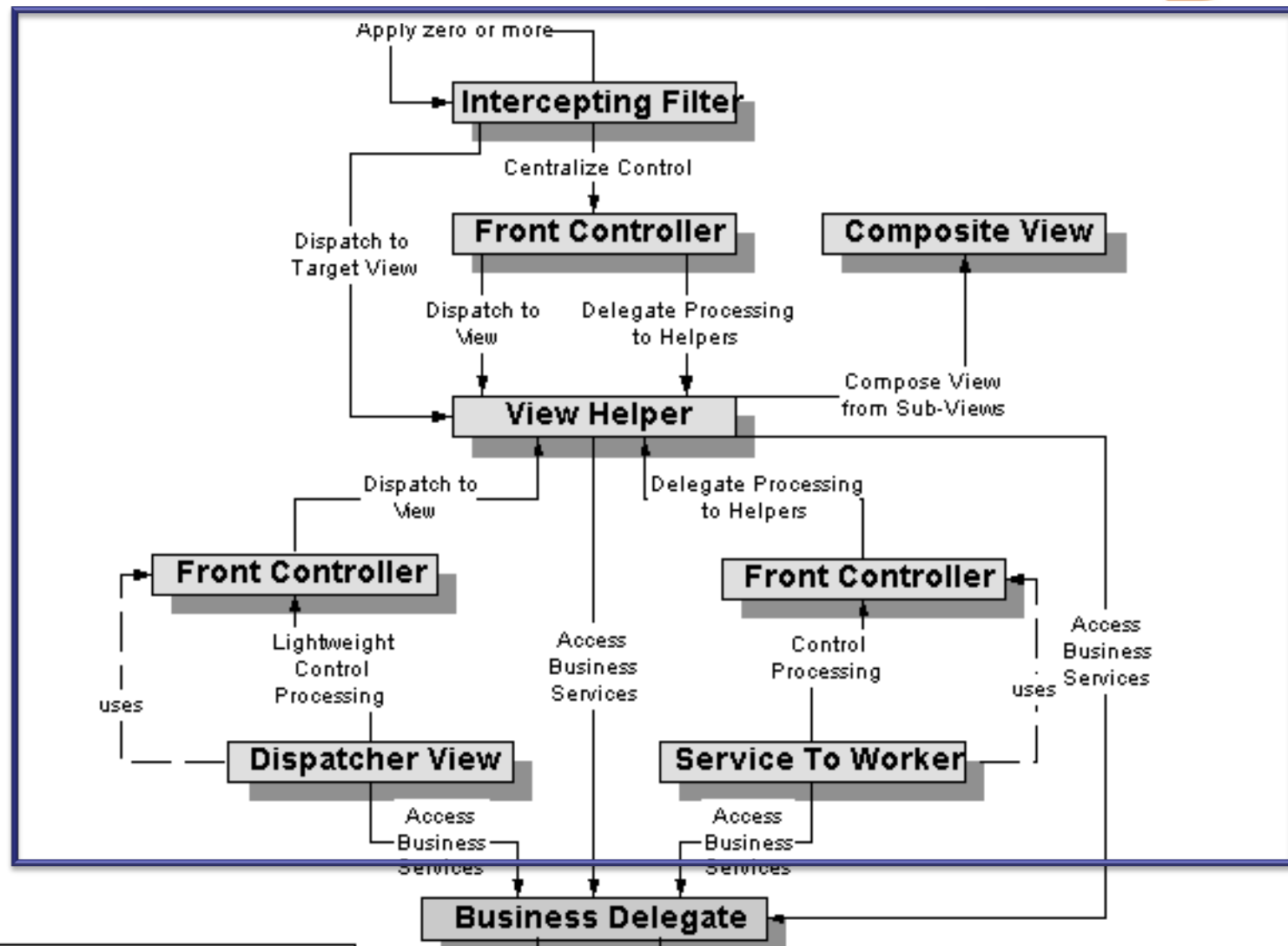
Pattern Name	Description
Business Delegate	Encapsulates access to a business service
Service Locator	Encapsulates service and component lookups
Session Façade	Encapsulates business-tier components (façade implemented as a session bean)
Application Service	Creates a uniform service layer (service façade)
Business Object	Seperates business data and logic using an object model
Composite Entity	Persistent pattern for Business Objects using EJBs
Transfer Object	Data transfer object
Transfer Object Assembler	Assembles transfer objects from multiple sources
Value List Handler	Handles searches, caching in list fashion

Integration Tier Patterns

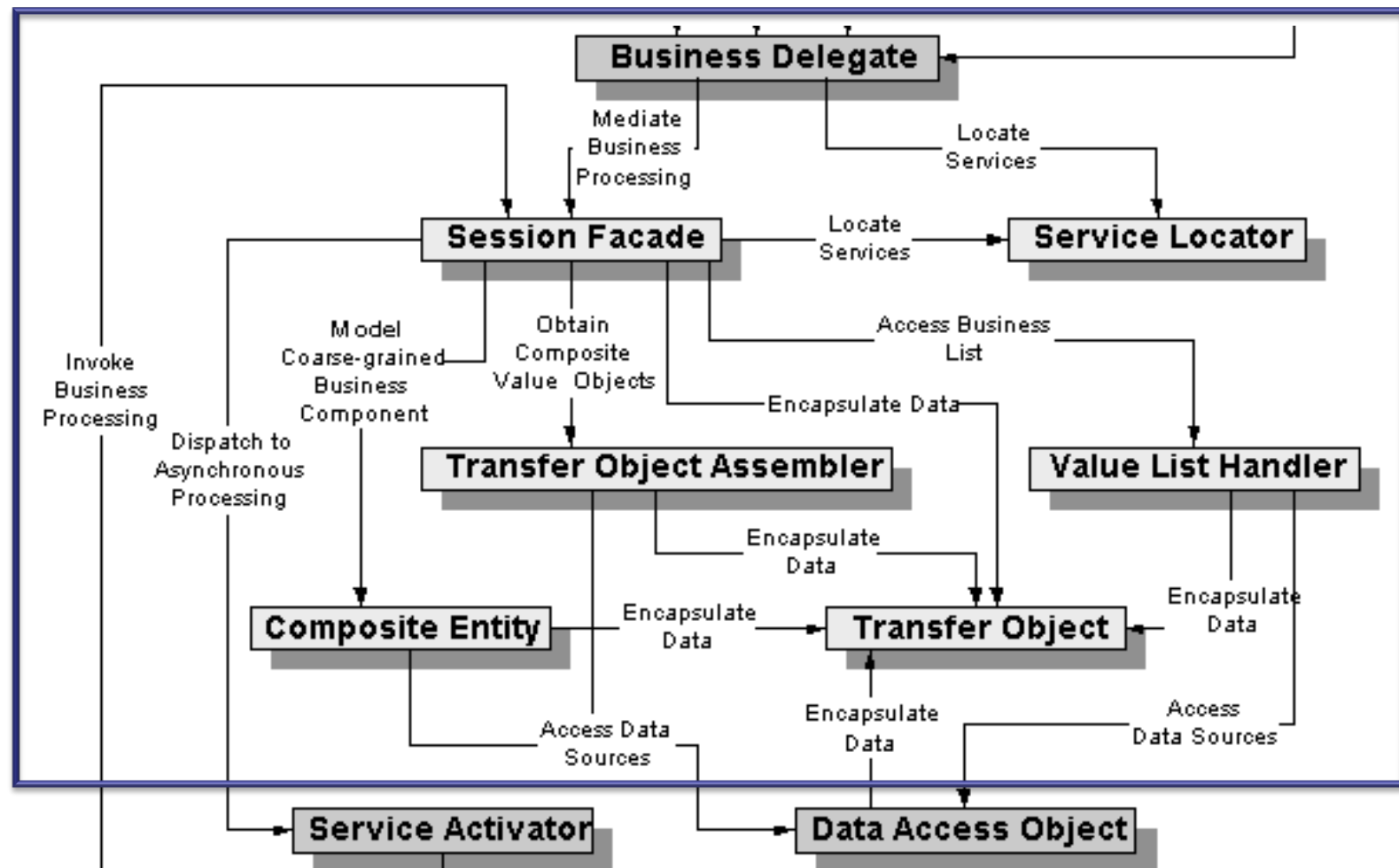


Pattern Name	Description
Data Access Object	Abstracts and encapsulates access to persistent store
Service Activator	Receives messages and invokes processing asynchronously
Domain Store	Provides transparent persistence mechanism for business objects
Web Service Broker	Exposes one or more services using XML and web protocols

Presentation and Business Tier



Business and Integration Tier



Java EE Pattern Issues



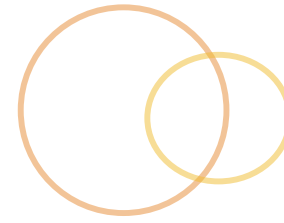
- 🕒 Based on early Java EE technology
 - 🕒 Things have matured and progressed since Java EE was released as J2EE in 1998
 - 🕒 Application servers have been optimized
 - 🕒 Trend is to “flatten” tiers to increase performance
- 🕒 Following the letter of the law can . . .
 - 🕒 Create a bloated system
 - 🕒 Cause undue development costs
 - 🕒 Hinder performance
- 🕒 However, they are still useful
 - 🕒 Provide insight into how to solve distributed enterprise applications
 - 🕒 Many are still applicable

About DevelopIntelligence



- ◎ Founded in 2003
- ◎ Provides outsourced services to learning organizations in area of software development
- ◎ Represents over 35 years of combined experience, enabling software development community through educational and performance services
- ◎ Represents over 50 years of combined software development experience
- ◎ Delivered training to over 40,000 developers worldwide

Areas of Expertise



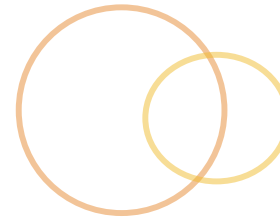
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