

1. Service Component

ProductCatalogService

- lists products
- depends on: ProductDAO

SupplierService

- manages suppliers
- depends on: SupplierDAO

ShoppingService

- `checkoutCart()`
- depends on: ShoppingCartDAO

OrderService

- `createOrder(ShoppingCart)`
- `setShippingAddress()`
- `setBillingAddress()`
- `setPayment()`
- depends on:
 - OrderDAO
 - EmailSender

CustomerService

- `getLoggedInCustomer()`
 - depends on: CustomerDAO
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2. Domain Component (Entities + Value Objects)

Entity: Product

- productNumber
- description
- price
- relationships: Supplier (1), Stock (1), Review (), *OrderLine* ()

Value Object: Stock

- inStock
- locationCode

Value Object: Review

- title
- description
- score

Entity: Supplier

- supplierNumber
- name
- phone
- email

Entity: ShoppingCart

- shoppingcartNumber
- operations:
 - addToCart()
 - removeFromCart()
 - changeQuantity()
 - checkout()

Value Object: CartLine

- quantity
- Product (1)

Entity: Order

- orderNumber
- date
- status
- confirm()
- relationships:
 - OrderLine (*)
 - ShippingOption (1)
 - Address (shipping)
 - CreditCard (billing)
 - Customer (1)

Value Object: OrderLine

- quantity
- Product (1)

Value Object: Address

- street
- city
- zip
- country

Value Object: CreditCard

- number
- validationDate

Value Object: ShippingOption

- name
- price
- shipper

Entity: Customer

- customerNumber
- firstName
- lastName
- email
- phone
- Address (1)
- Account (1)

Value Object: Account

- accountNumber
- username
- password

3. Data Access Component (DAO Layer)

ProductDAO

- CRUD for Product

SupplierDAO

- CRUD for Supplier

ShoppingCartDAO

- CRUD for ShoppingCart

OrderDAO

- CRUD for Order

CustomerDAO

- CRUD for Customer

4. Integration Component

EmailSender

- `send()`