UserAuthentication (from shoppingapp) -connection: Connection -currentUserId: int -currentUserRole: String «constructor»+UserAuthentication() +login(username: String, password: String): boolean +logout(): void +register(username: String, password: String, role: String): boolean +getCurrentUserId(): int +getCurrentUserRole(): String

CustomLogger (from shoppingapp)

-logger: Logger {readOnly}

+log(level: Level, message: String): void

+log(level: Level, message: String, thrown: Throwable): void

ProductCatalog (from shoppingapp)

-connection: Connection -logger: Logger {readOnly}

«constructor»+ProductCatalog()

+addProduct(product: Product): void +removeProduct(productId: int): void

+getProductById(productId: int): Product

+listProducts(): Product[\*]

+addProductUsingFactory(type: String, id: int, name: String, price: double, description: String, additionalAttributes: String): void

ProductFactory (from shoppingapp) -logger: Logger {readOnly} +createProduct(type: String, id: int, name: String, price: double, description: String, additionalAttributes: String): Product

{collection="List"

Electronics (from shoppingapp)

-brand: String -model: String -warrantyPeriod: int

+getBrand(): String +setBrand(brand: String): void +getModel(): String

+setModel(model: String): void

+getWarrantyPeriod(): int

+setWarrantyPeriod(warrantyPeriod: int): void

+toString(): String

+getId(): int

#name: String

#price: double #description: String

#id: int

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+setId(id: int): void

+getName(): String

+setName(name: String): void

Product

(from shoppingapp)

+getPrice(): double

+setPrice(price: double): void

+getDescription(): String

+setDescription(description: String): void

+toString(): String

-paymentProcessor PaymentProcessor (from shoppingapp) -logger: Logger {readOnly} +processPayment(amount: double): boolean

Clothing (from shoppingapp)

-size: String -color: String -material: String

+getSize(): String +setSize(size: String): void +getColor(): String

+toString(): String

+setColor(color: String): void +getMaterial(): String +setMaterial(material: String): void

-orderld: int -userld: int -totalPrice: double -connection: Connection -logger: Logger {readOnly}

OrderProcessing

(from shoppingapp)

«constructor»+OrderProcessing() +getInstance(): OrderProcessing

+placeOrder(order: Order): void

+cancelOrder(orderId: int): void

«constructor»+Order(userId: int, productCatalog: ProductCatalog)

+addProduct(product: Product): void

+removeProduct(productId: int): void

-calculateTotal(): void

+getOrderId(): int

+setOrderId(orderId: int): void

+getUserId(): int

+setUserId(userId; int); void

+getProductList(): Product[\*] +setProductList(productList: Product[\*]): void

+getTotalPrice(): double

+setTotalPrice(totalPrice: double): void

+saveOrder(): void

-saveOrderProducts(): void

+getOrderById(orderId: int, productCatalog: ProductCatalog): Order

-getProductsByOrderId(orderId: int, connection: Connection, productCatalog: ProductCatalog): Product[\*]

Order (from shoppingapp)

+clearCart(): void +deleteOrder(): void