Figure 1: Domai Model Diagram
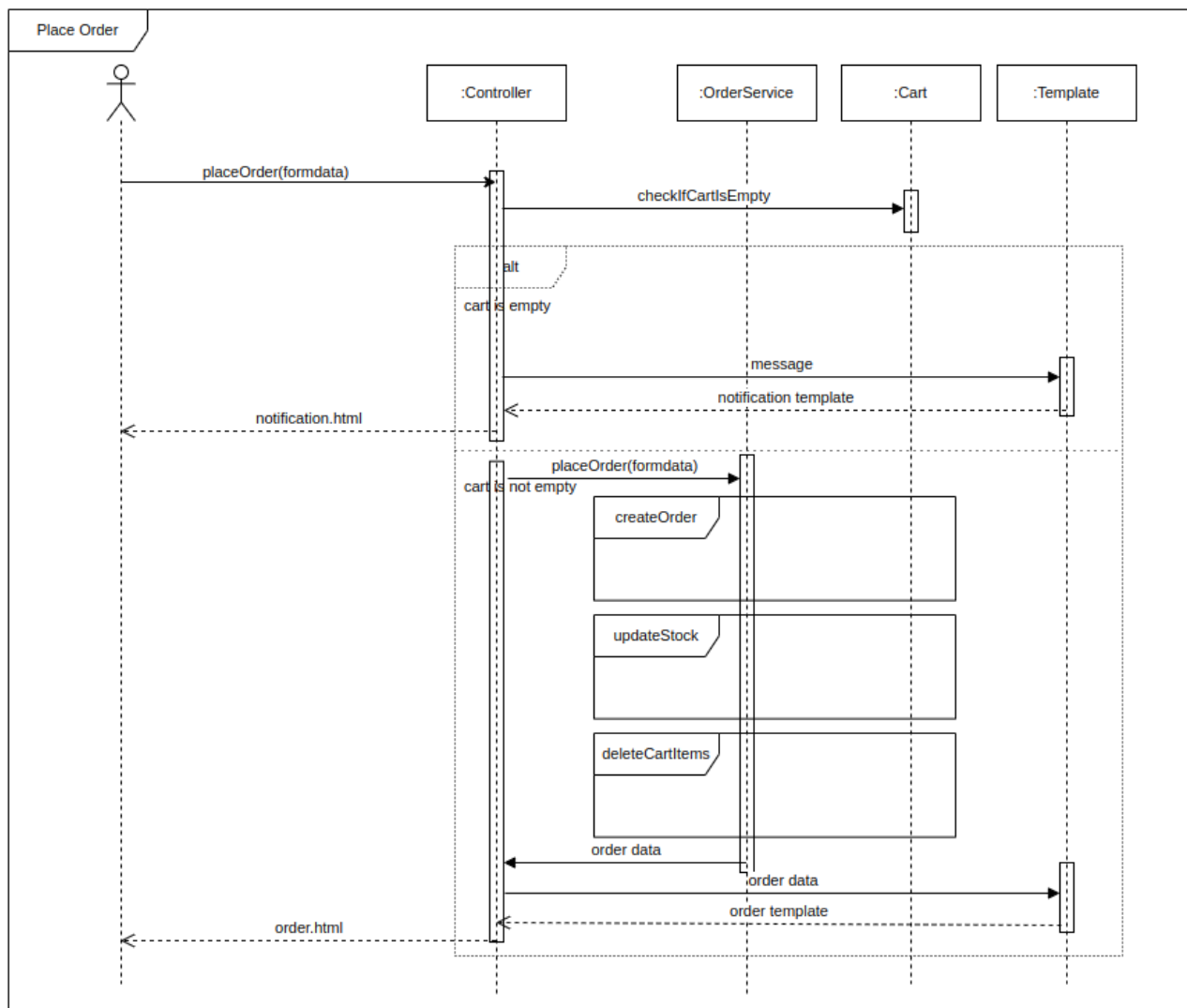
Figure 2: Sequence diagram for Place Order use case
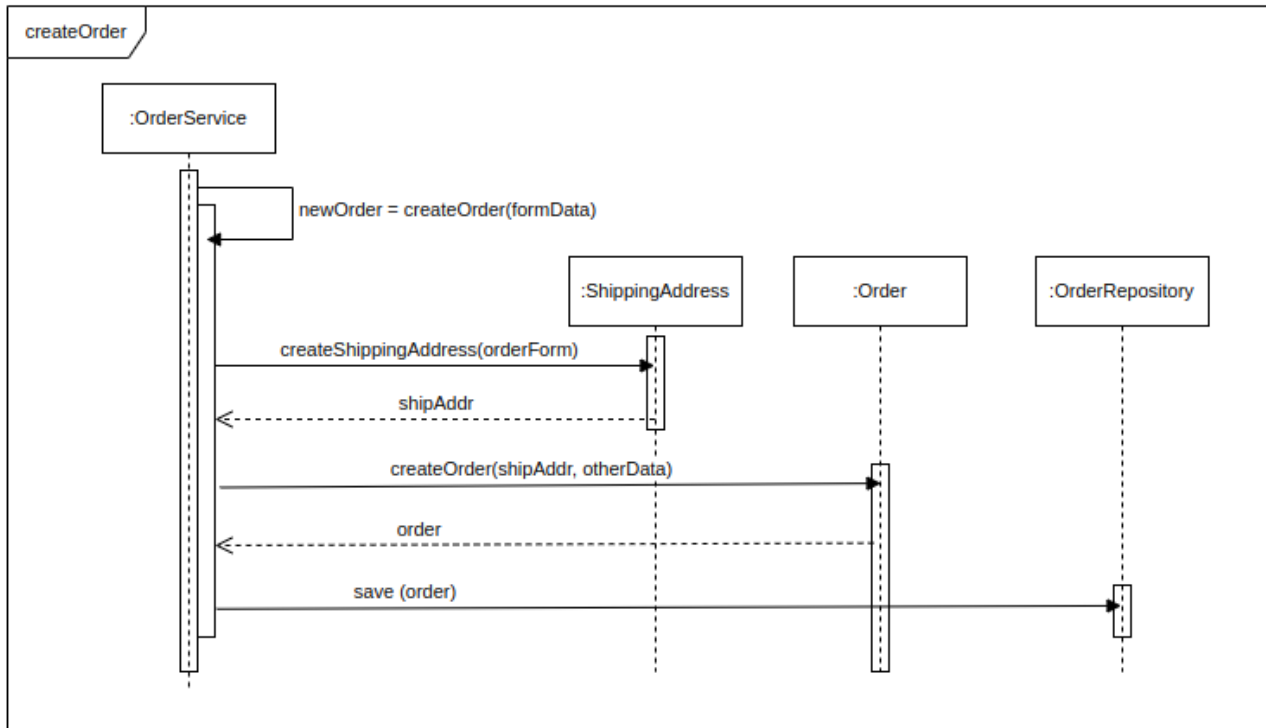
Figure 3: Sequence Diagram for create Order fragment
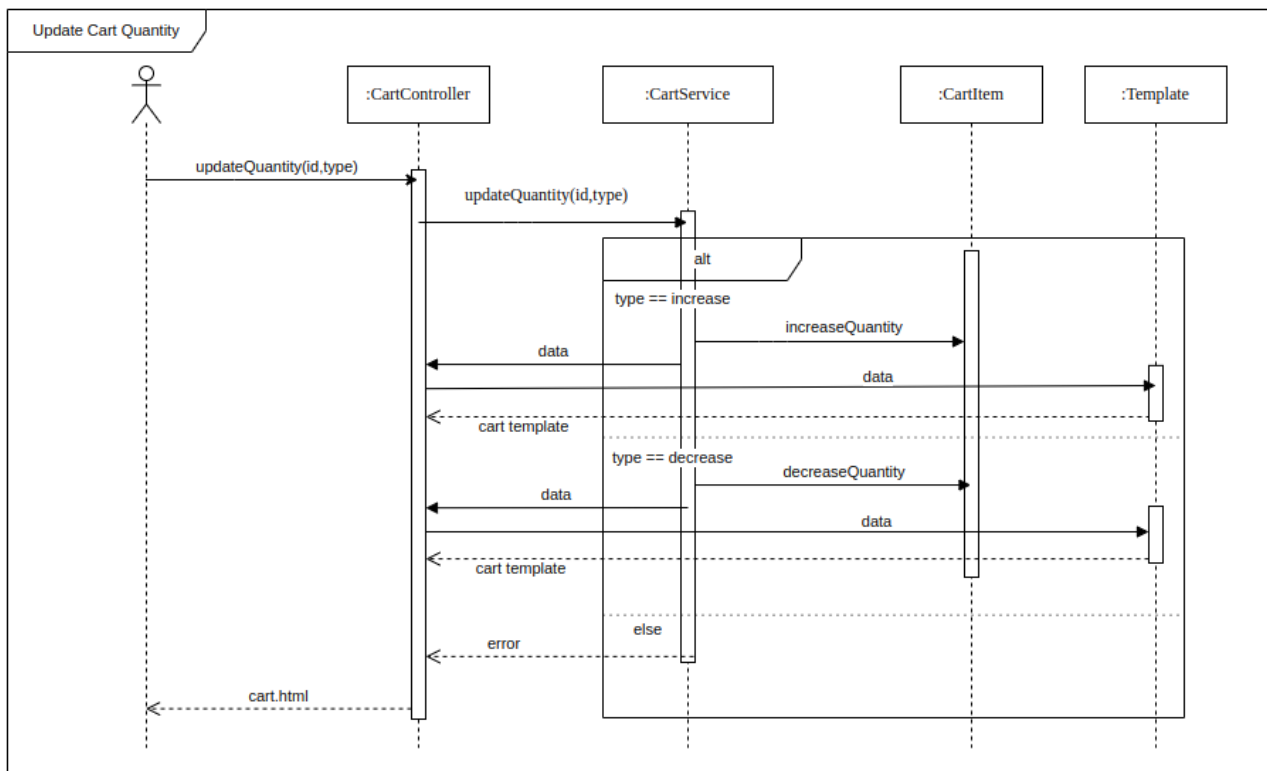

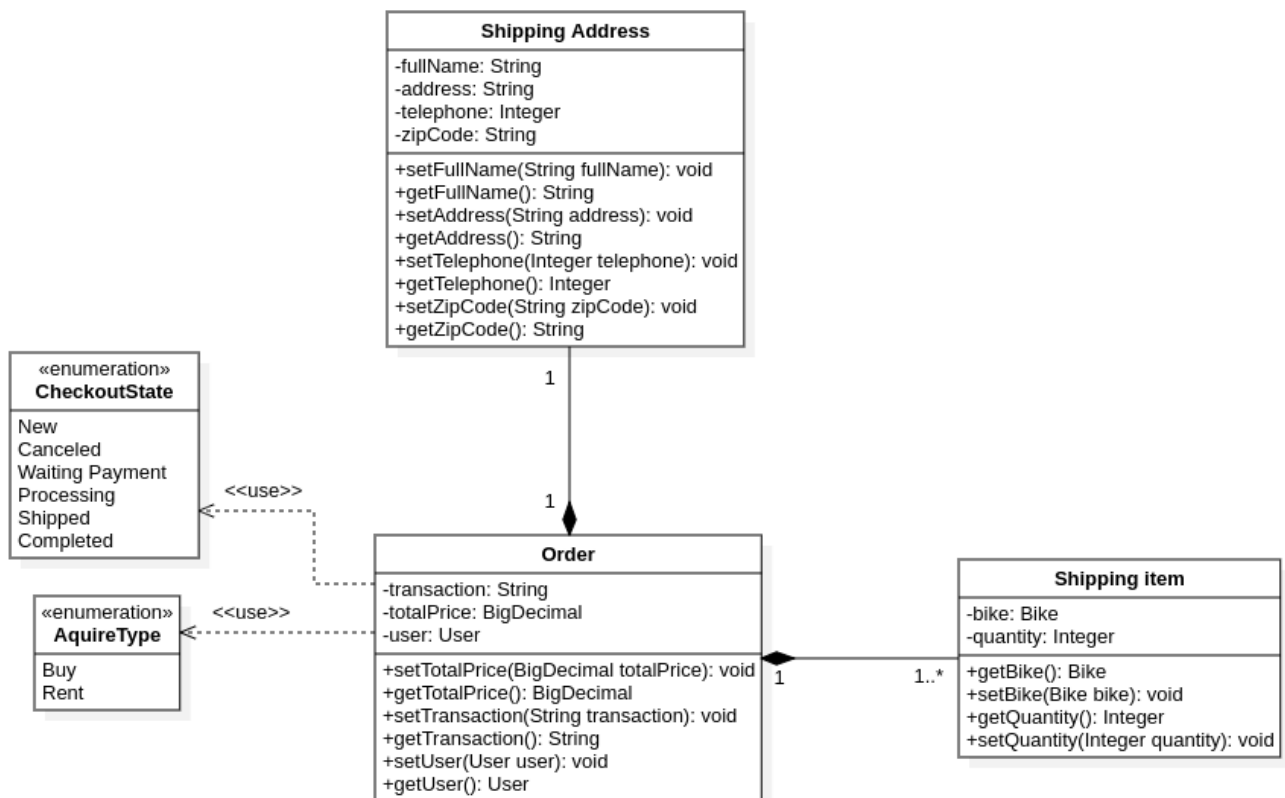*Figure 4: Sequence diagram for update cart quantity use case*

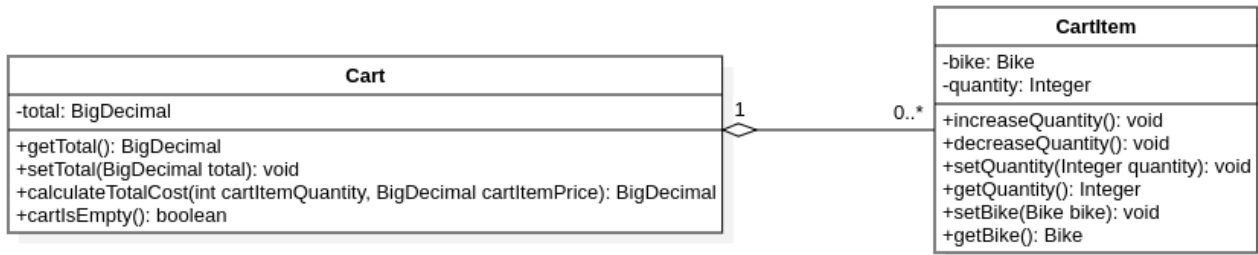*Figure 5: Class Diagram for Place Order use case*

Cart

-total: BigDecimal

+getTotal(): BigDecimal
+setTotal(BigDecimal total): void
+calculateTotalCost(int cartItemQuantity, BigDecimal cartItemPrice): BigDecimal
+cartIsEmpty(): boolean

CartItem

-bike: Bike
-quantity: Integer

+increaseQuantity(): void
+decreaseQuantity(): void
+setQuantity(Integer quantity): void
+getQuantity(): Integer
+setBike(Bike bike): void
+getBike(): Bike

1   0..*

Figure 6: Class Diagram for Update Quantity use case

package shop (Composite Structure)

Order

user : User

shippingItem : Shippingitem

shippingAddress : ShippingAddress

User

cart : Cart
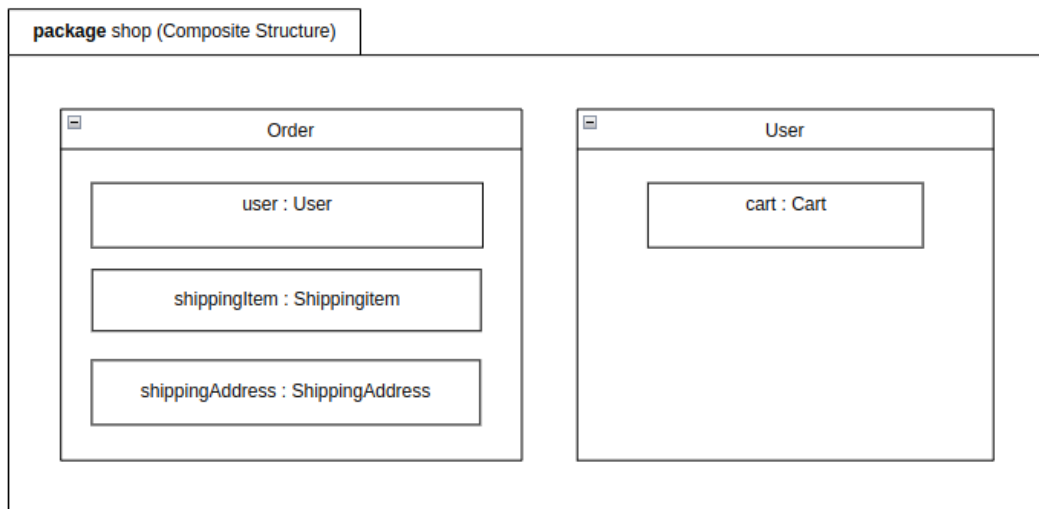
Figure 7: Composite structure for Place Order use case

package shop (Composite Structure)

Cart

cartItem: CartItem

CartItem

bike: Bike
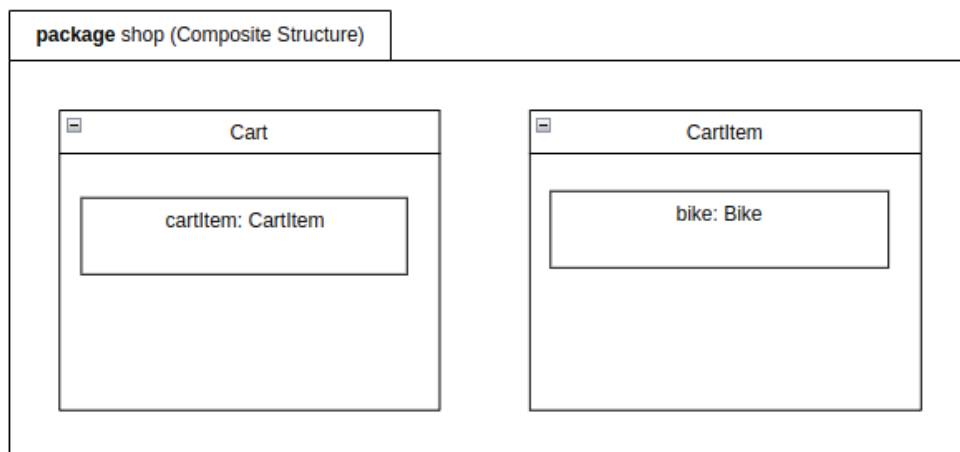
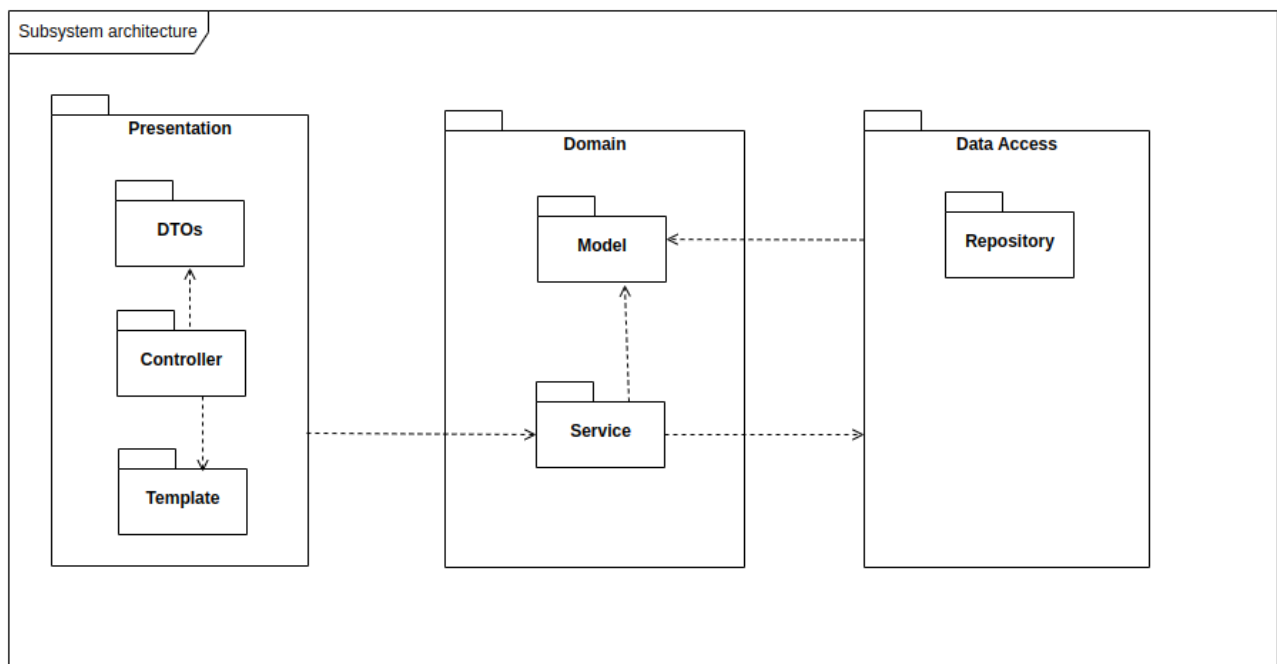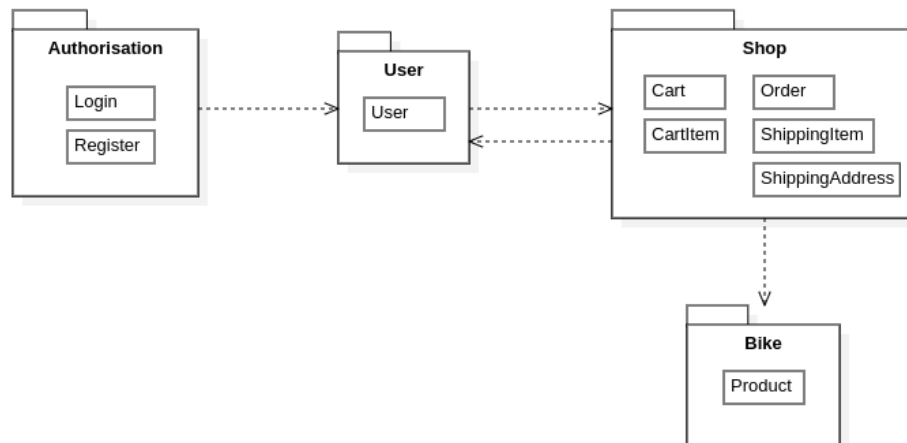*Figure 8: Composite structure of Update Quantity use case*

Figure 9: Subsystem architecture

Figure 10: Package structure