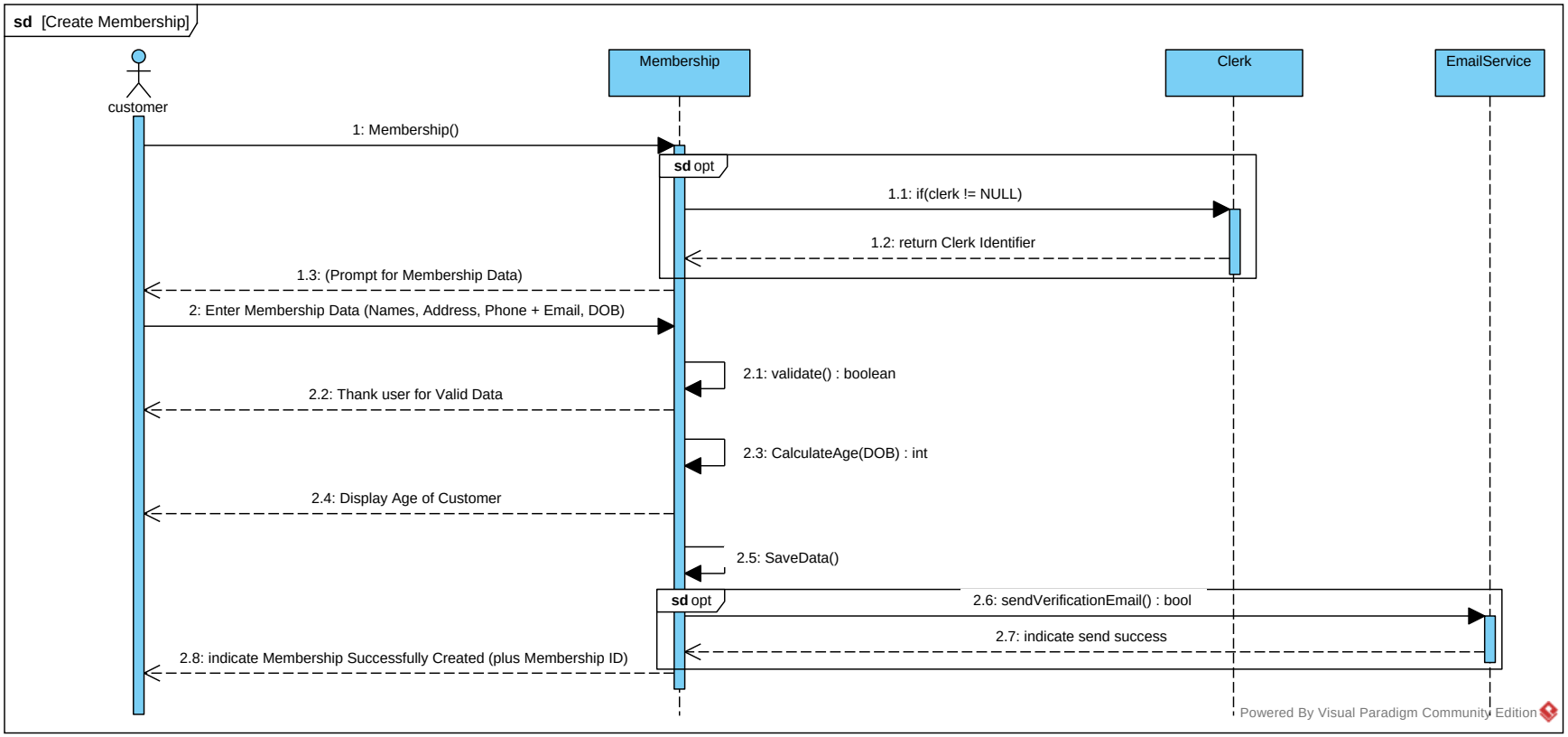
sd [Create Membership]
customer
Membership
Clerk
EmailService
1: Membership()
sd opt
1.1: if(clerk != NULL)
1.2: return Clerk Identifier
1.3: (Prompt for Membership Data)
2: Enter Membership Data (Names, Address, Phone + Email, DOB)
2.1: validate() : boolean
2.2: Thank user for Valid Data
2.3: CalculateAge(DOB) : int
2.4: Display Age of Customer
2.5: SaveData()
sd opt
2.6: sendVerificationEmail() : bool
2.7: indicate send success
2.8: indicate Membership Successfully Created (plus Membership ID)
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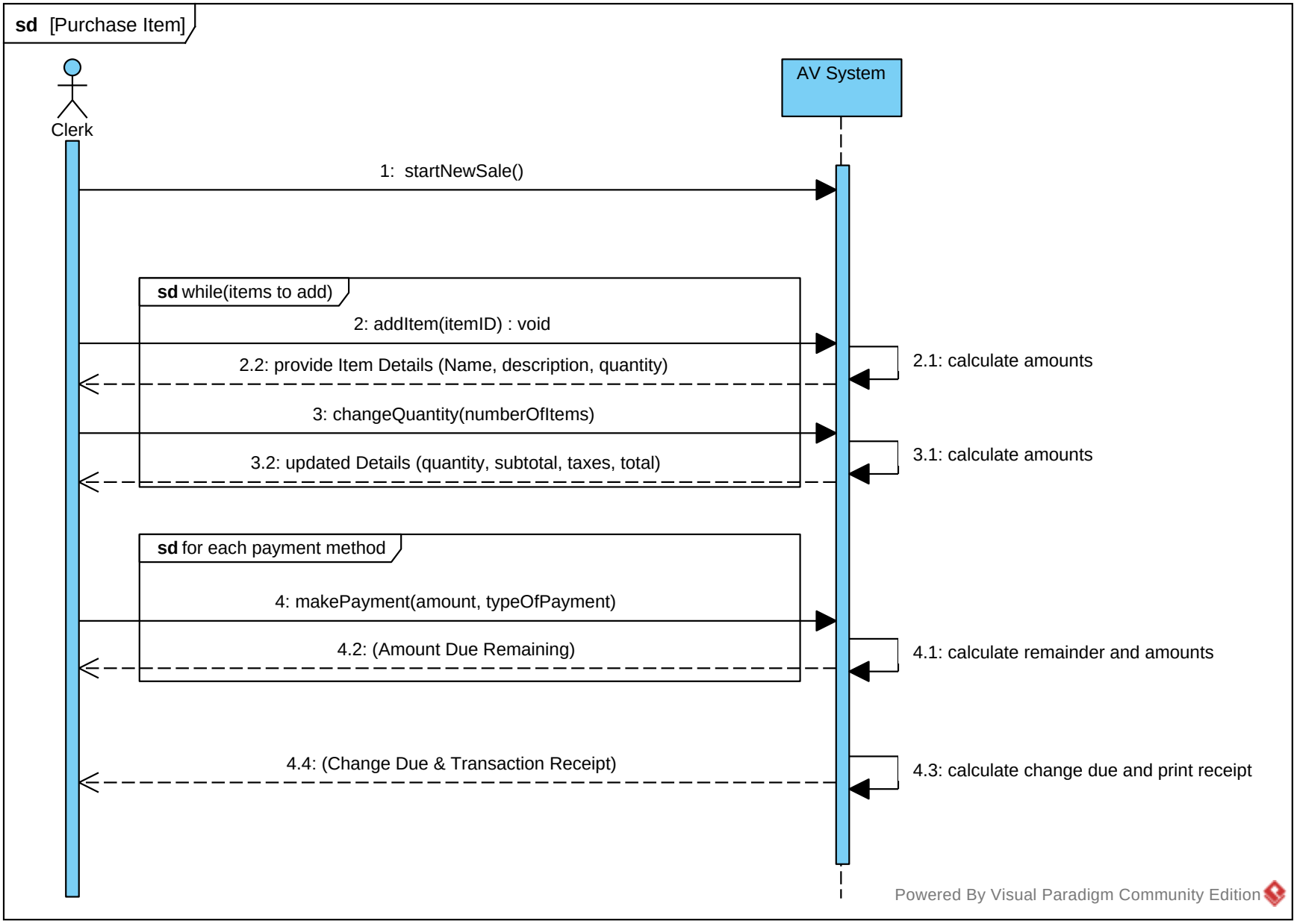
sd [Purchase Item]
Clerk
AV System
1: startNewSale()
sd while(items to add)
2: addItem(itemID) : void
2.2: provide Item Details (Name, description, quantity)
2.1: calculate amounts
3: changeQuantity(numberOfItems)
3.2: updated Details (quantity, subtotal, taxes, total)
3.1: calculate amounts
sd for each payment method
4: makePayment(amount, typeOfPayment)
4.2: (Amount Due Remaining)
4.1: calculate remainder and amounts
4.4: (Change Due & Transaction Receipt)
4.3: calculate change due and print receipt
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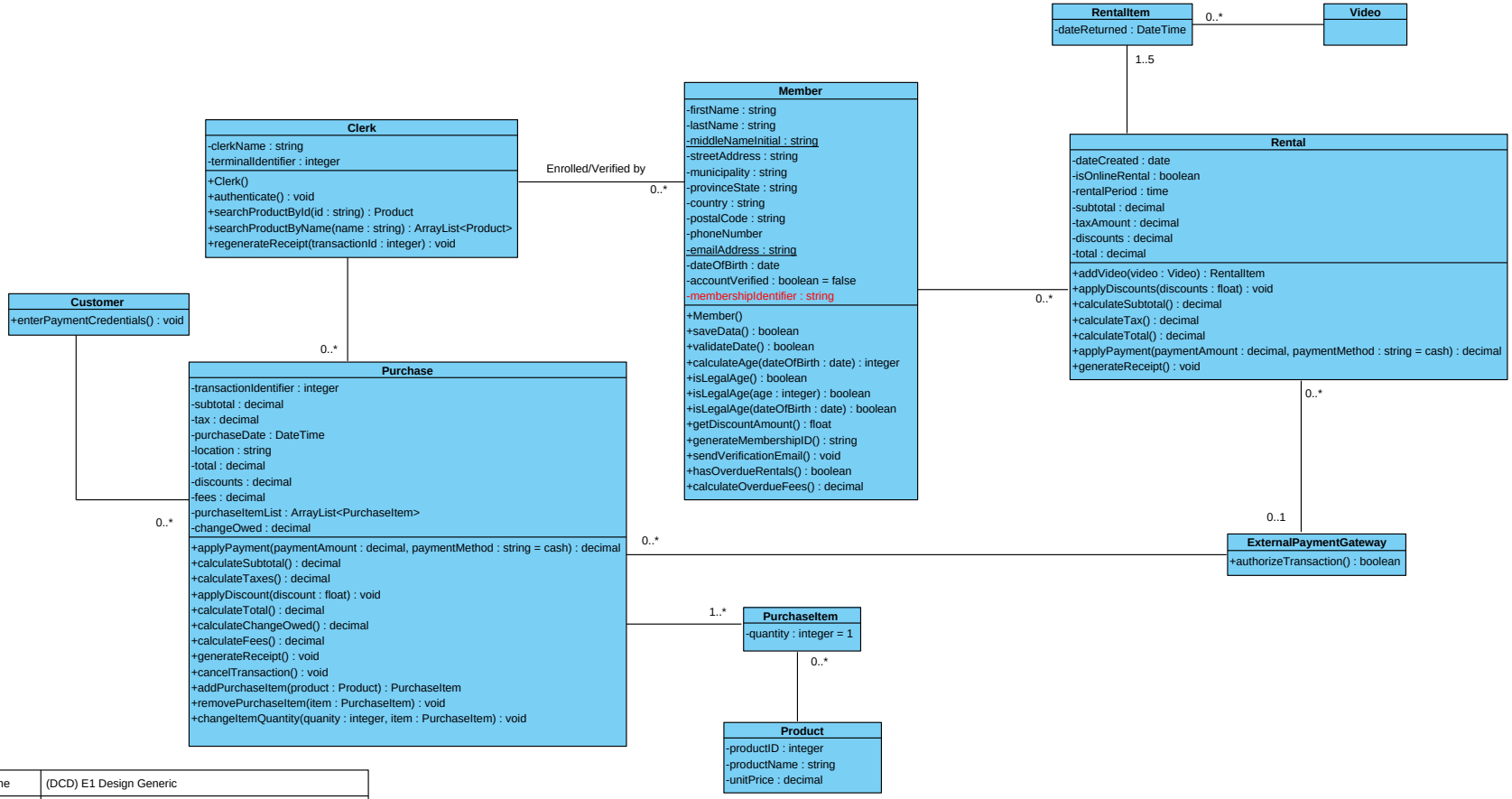
(DCD) E1 Design Generic



Name	(DCD) E1 Design Generic
Description	Overview of the Functionality for E1 Use cases and business rules (Create Membership, Purchase Item and Rent Video)

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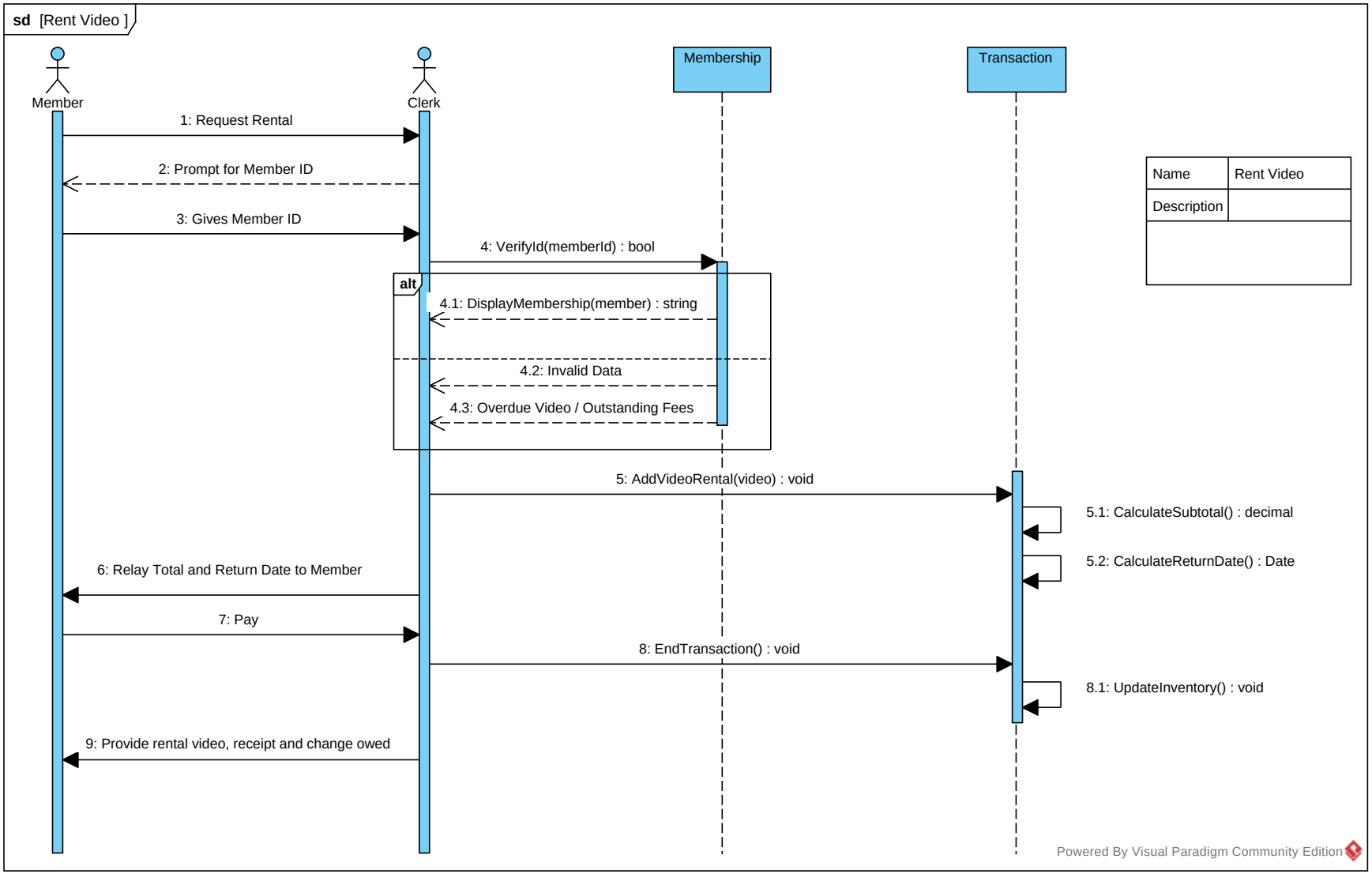
sd [Rent Video]
Member
Clerk
Membership
Transaction
1: Request Rental
2: Prompt for Member ID
3: Gives Member ID
4: VerifyId(memberId) : bool
alt
4.1: DisplayMembership(member) : string
4.2: Invalid Data
4.3: Overdue Video / Outstanding Fees
5: AddVideoRental(video) : void
5.1: CalculateSubtotal() : decimal
5.2: CalculateReturnDate() : Date
6: Relay Total and Return Date to Member
7: Pay
8: EndTransaction() : void
8.1: UpdateInventory() : void
9: Provide rental video, receipt and change owed
Name
Rent Video
Description
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