

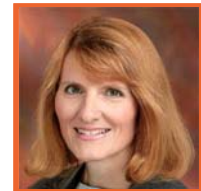
Establishing Relationships

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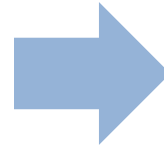


pluralsight
hardcore dev and IT training



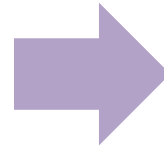
Object-Oriented Programming (OOP)

Identifying
Classes



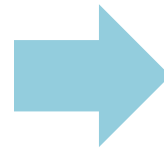
- Represents business entities
- Defines properties (data)
- Defines methods (actions/behavior)

Separating
Responsibilities



- Maximizes cohesion
- Minimizes coupling
- Simplifies Maintenance
- Improves Testability

Establishing
Relationships



- Defines how objects work together to perform the operations of the application

Leveraging
Reuse

Working Together

Application

User Interface Component

Order Summary
Form

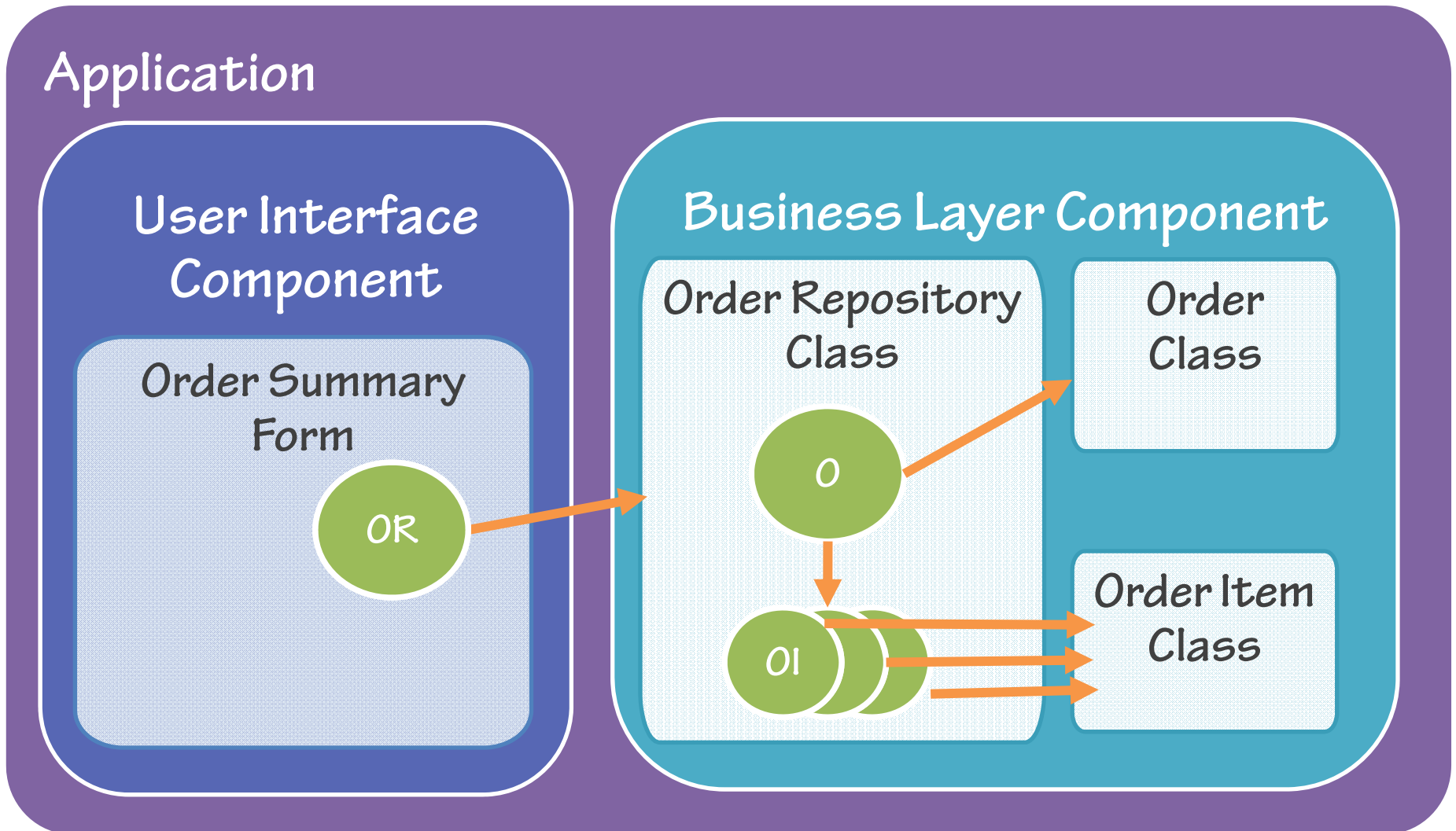
Business Layer Component

Order Repository
Class

Order
Class

Order Item
Class

Working Together



Working Together

Application

User Interface Component

Order Summary Form



Business Layer Component

Order Repository Class



Order Class



Order Item Class

Module Outline

**Defining the
Relationships**

**Types of
Relationships**

Collaboration

Composition

**Composition:
References**

**Composition:
Ids**

Inheritance

Defining the Relationships

Customer

- Name
- Email address
- Home address
- Work address
- Validate()

Product

- Product name
- Description
- Current price
- Validate()

Order

- Customer
- Order date
- Shipping address
- Validate()

Order Item

- Product
- Quantity
- Purchase price
- Validate()
- Retrieve()
- Save()

Customer Repository

- Retrieve()
- Save()

Product Repository

- Retrieve()
- Save()

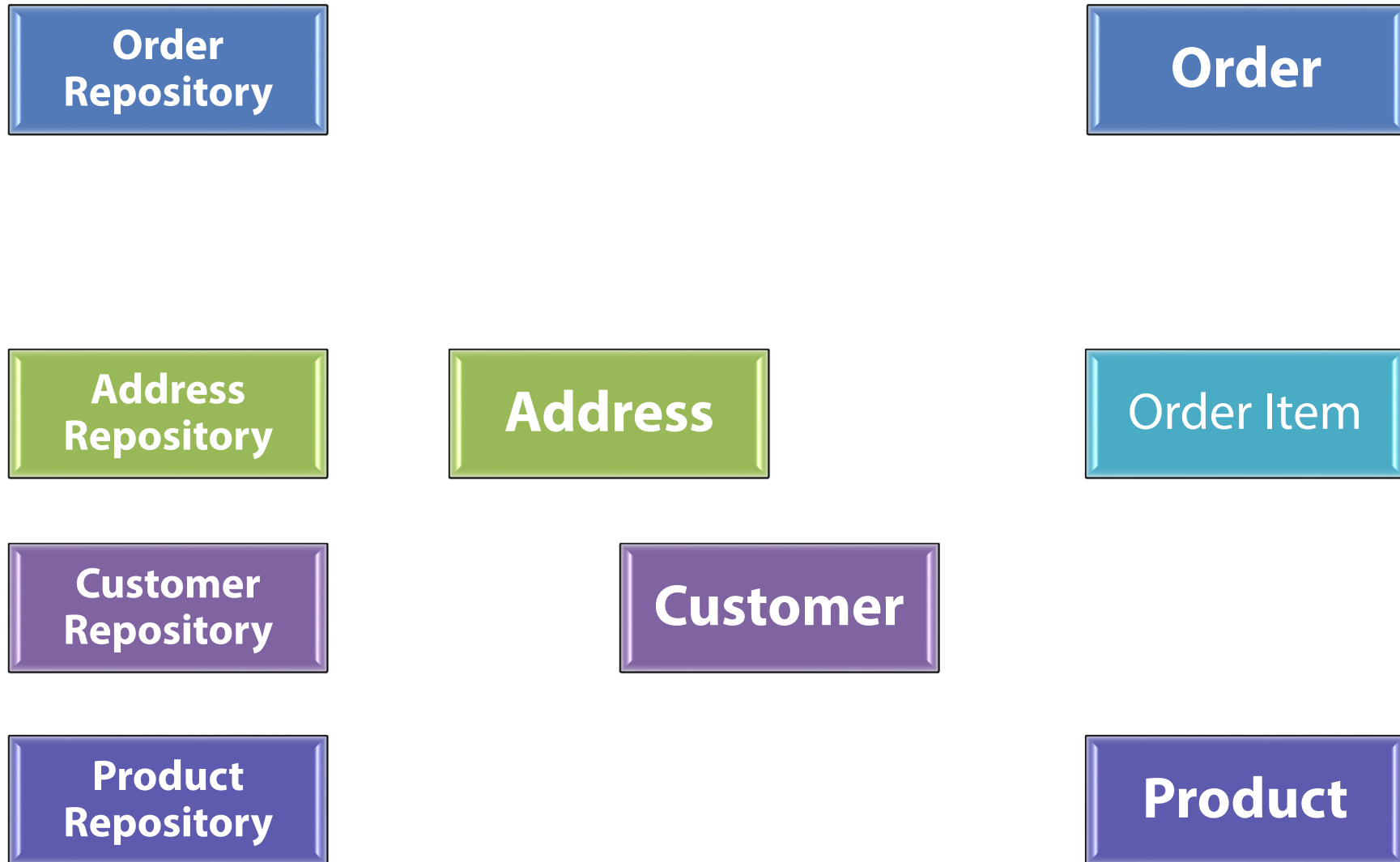
Order Repository

- Retrieve()
- Save()

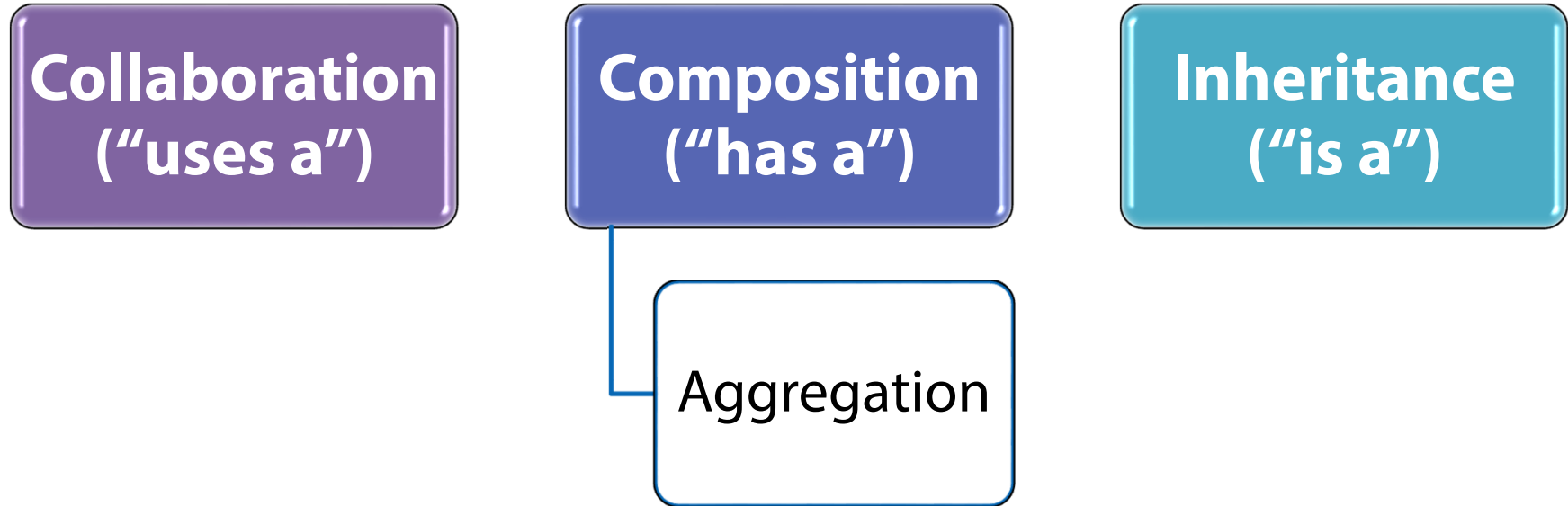
Address

- Street Line 1
- Street Line 2
- City
- State/Prov.
- Postal Code
- Country ...

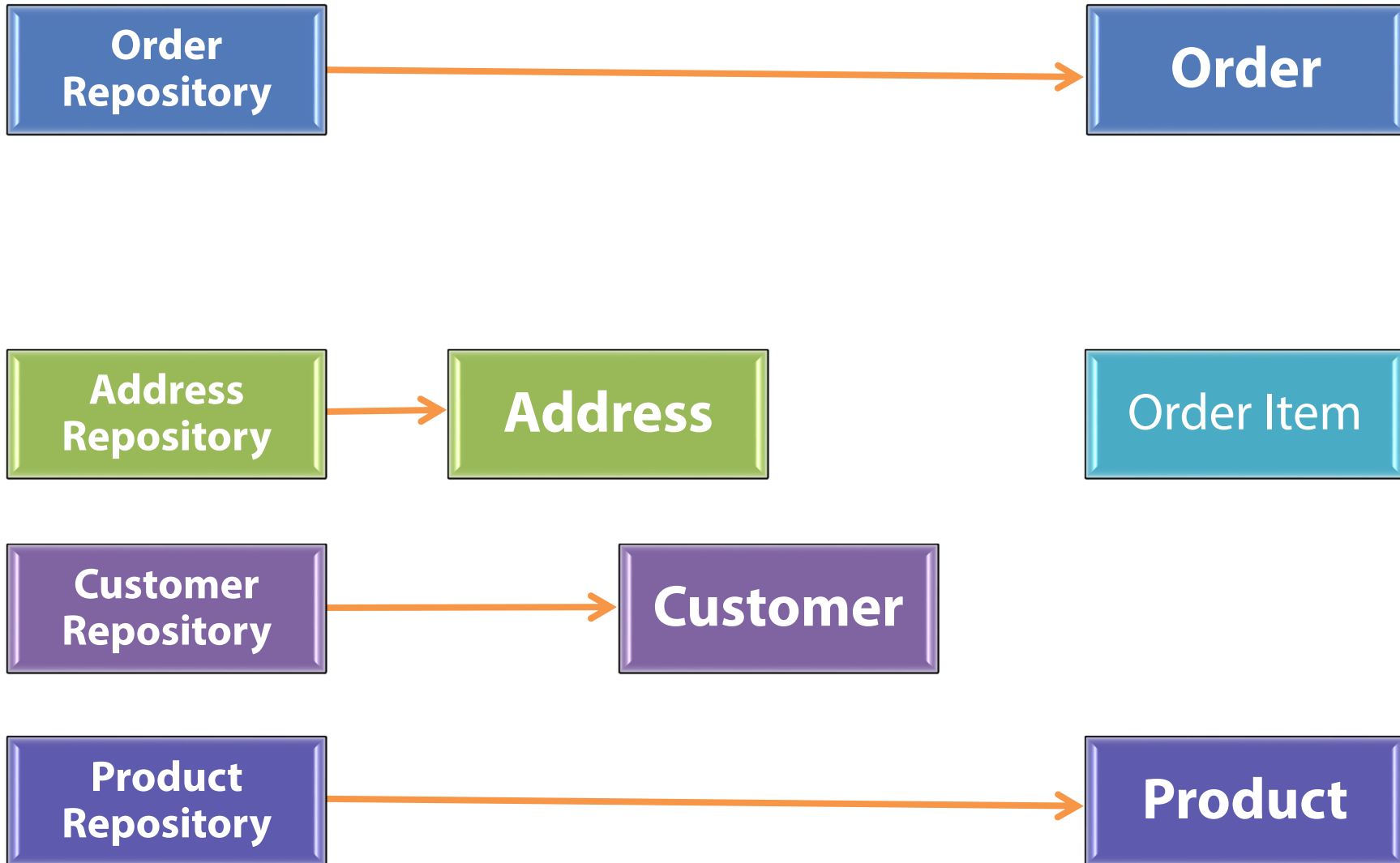
Defining the Relationships



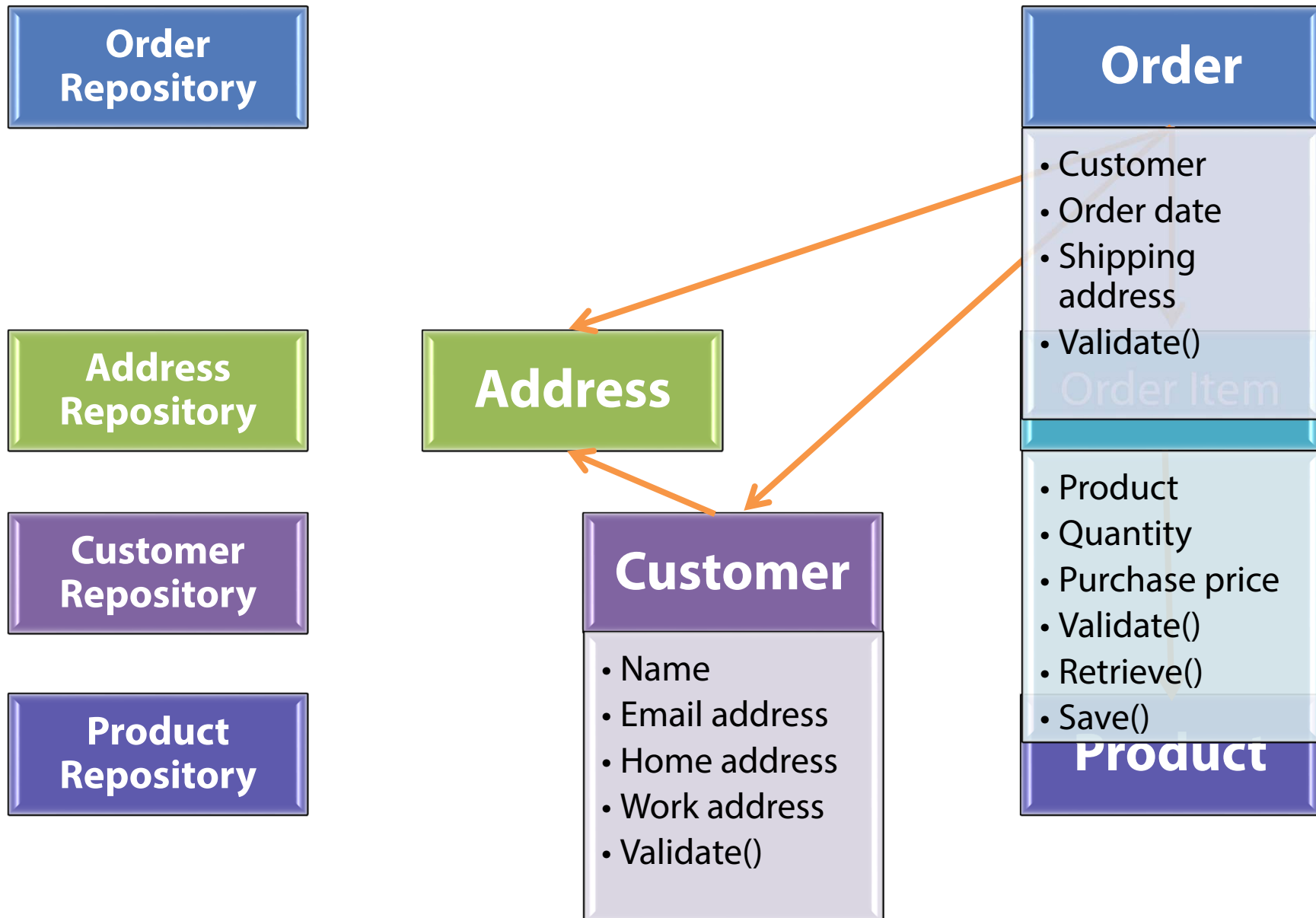
Object Relationships



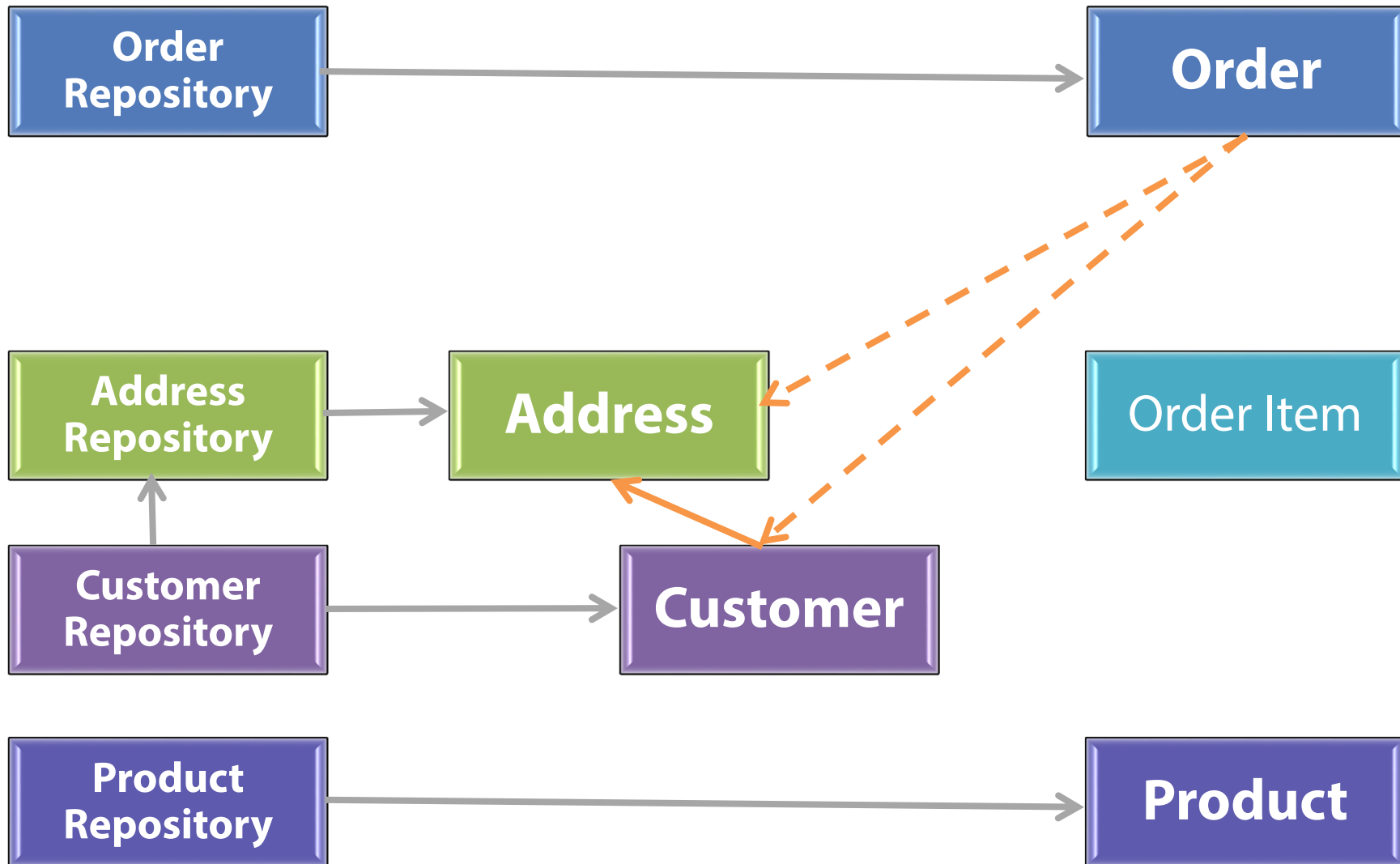
Collaboration (“uses a”)



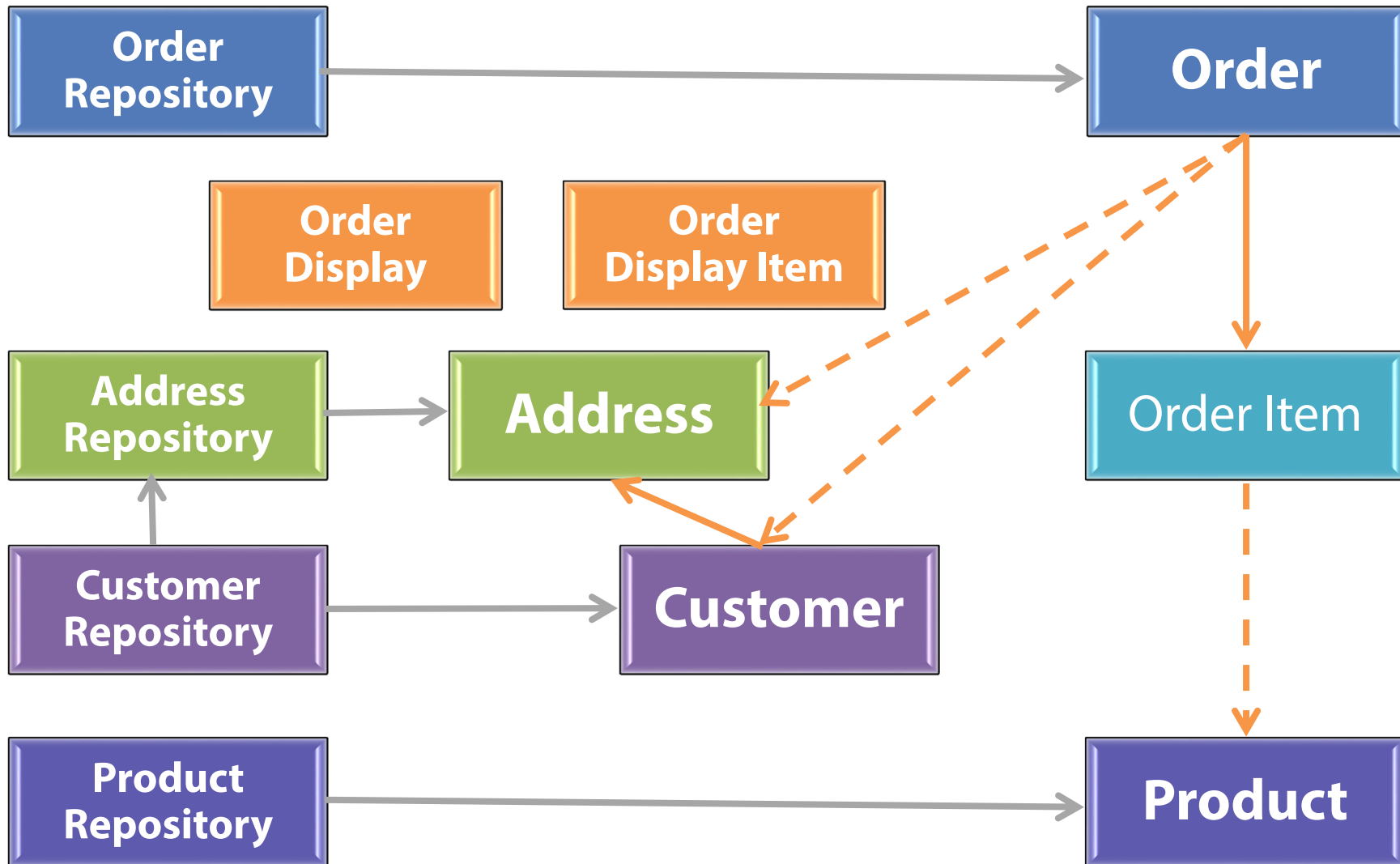
Composition (“has a”)



Relationships



Relationships

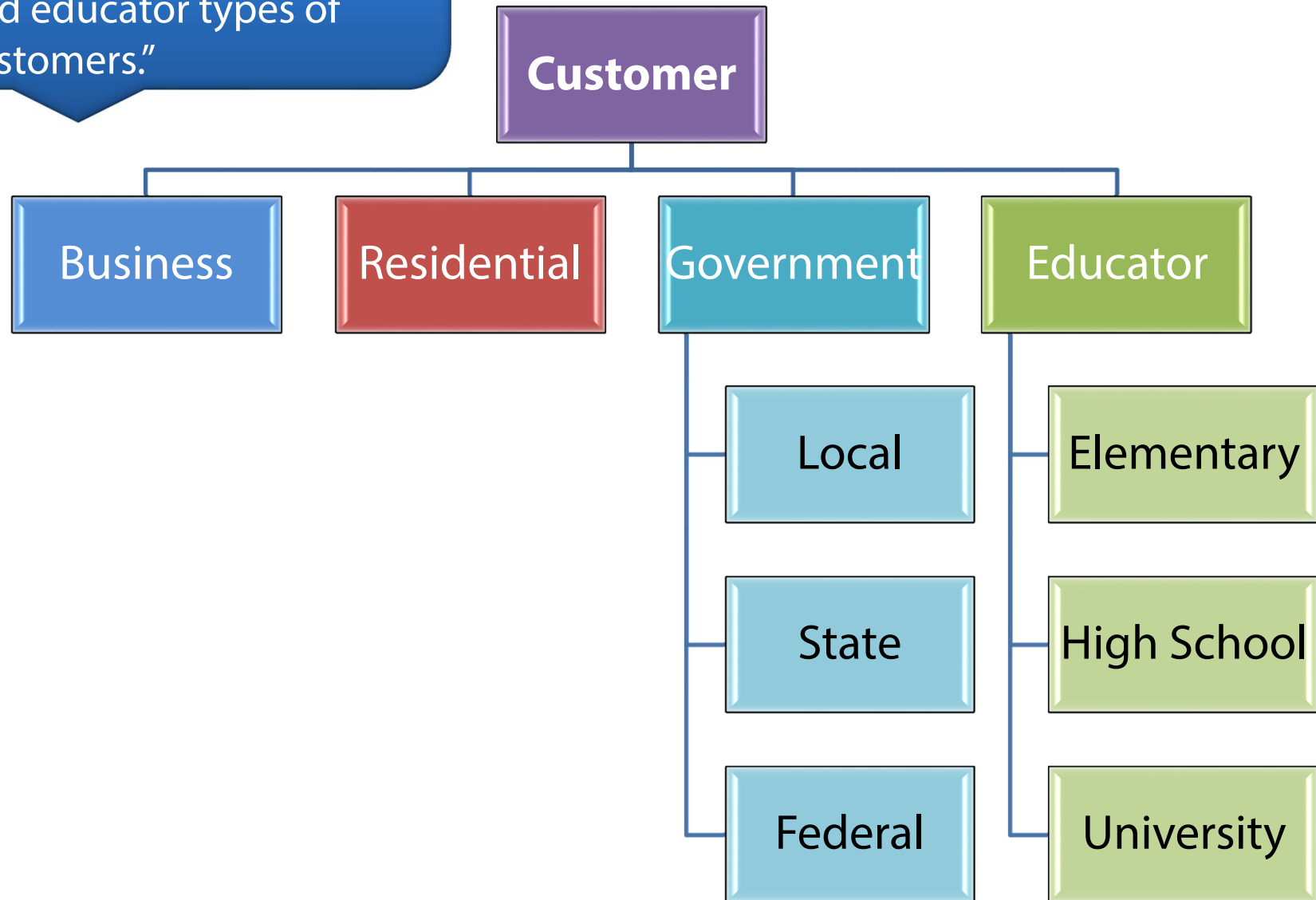


From the Requirements

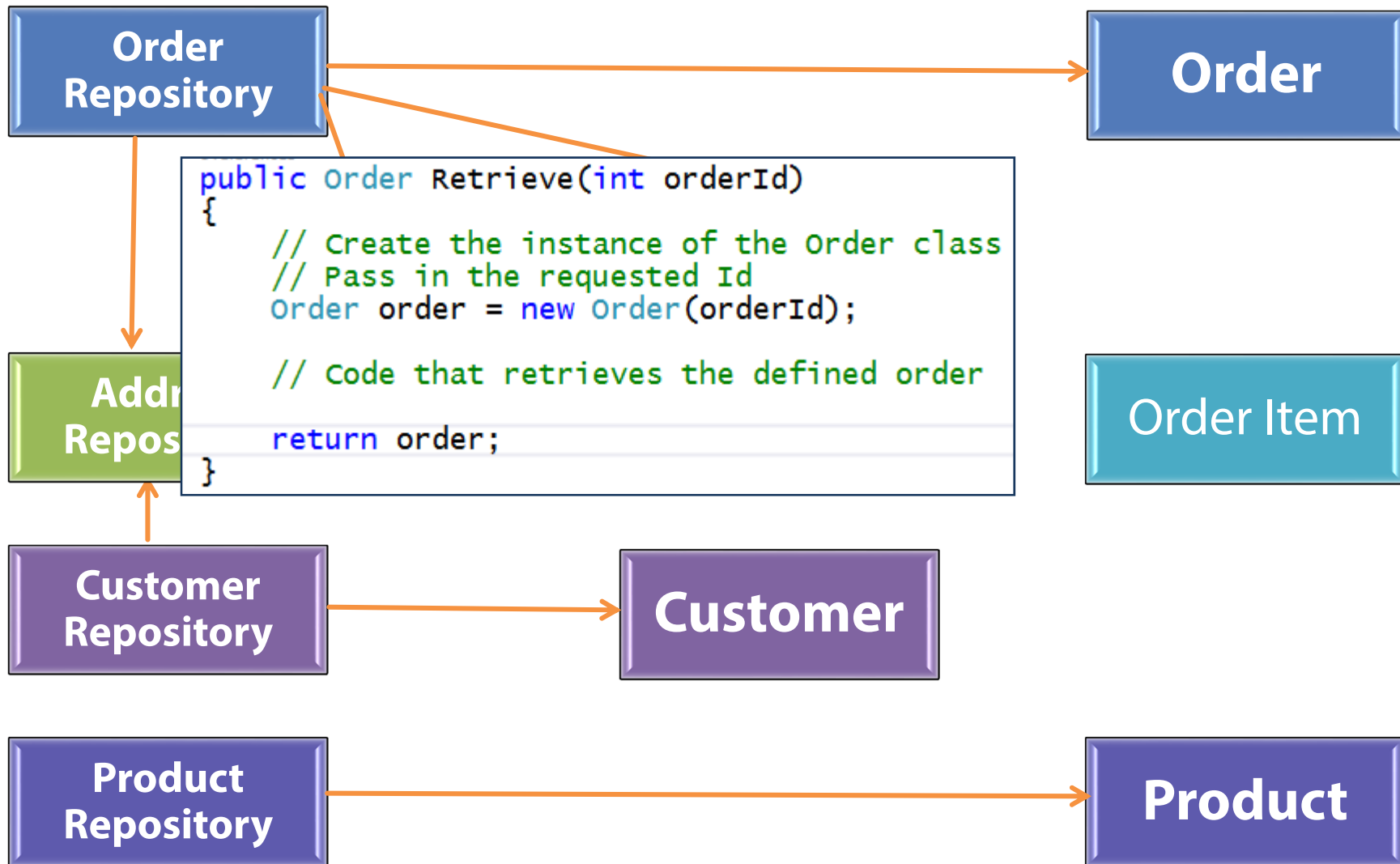
“The new system must manage business, residential, government, and educator types of customers.”

"The new system must manage business, residential, government, and educator types of customers."

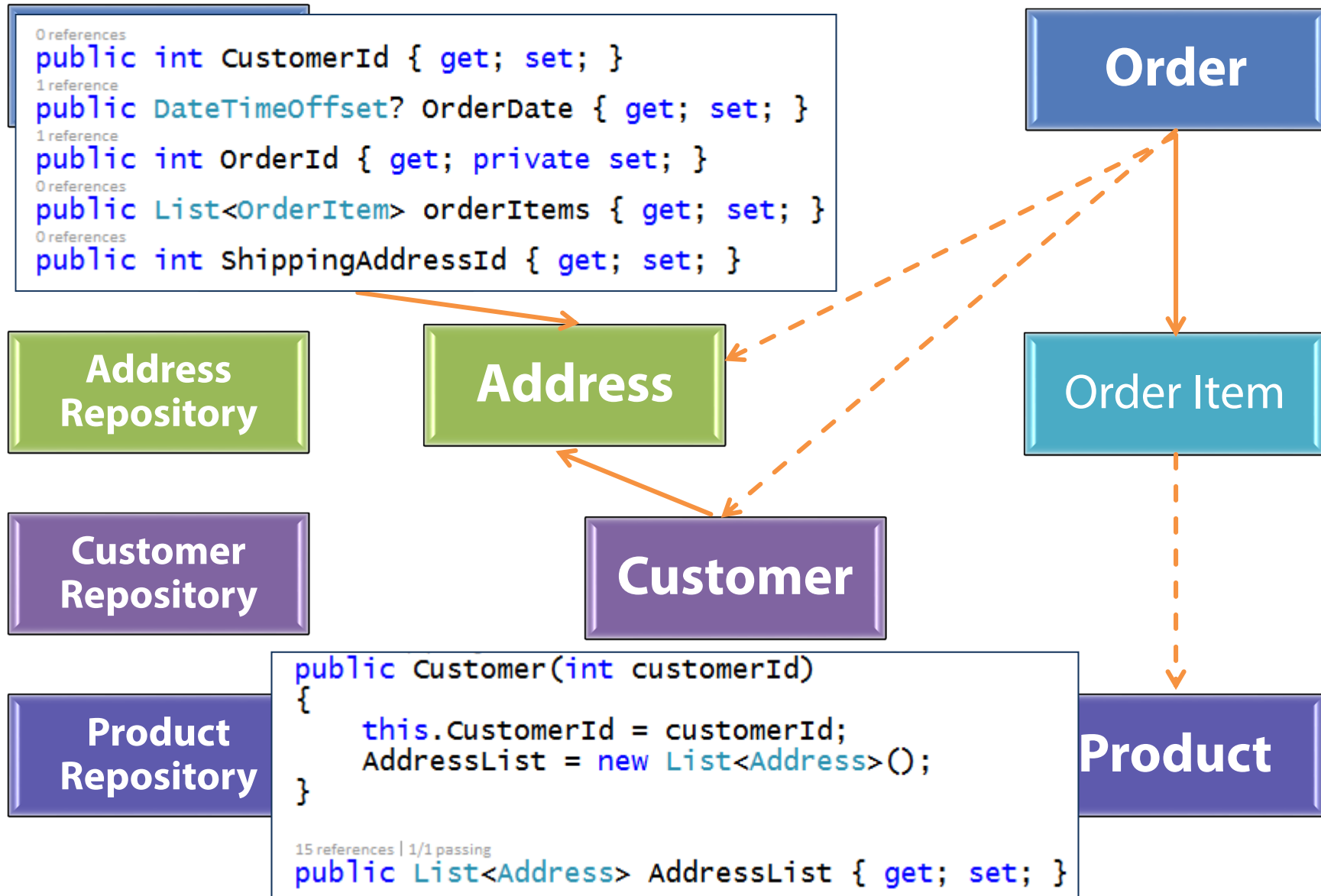
Inheritance



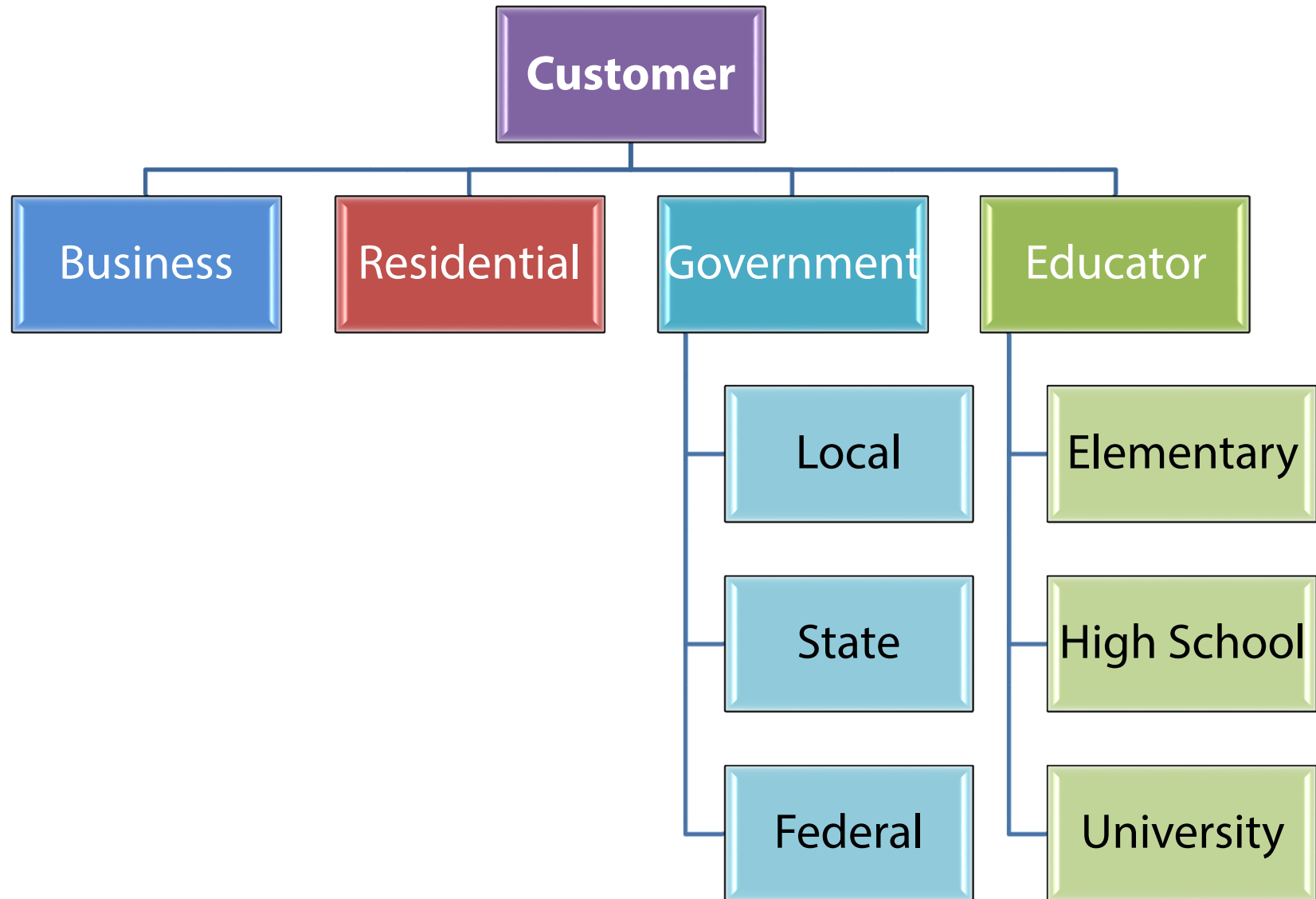
Collaboration (“uses a”)



Composition ("has a")



Inheritance (“is a”)



Four Pillars of OOP

