ARCHITECTURAL DESIGN PRESENTATION

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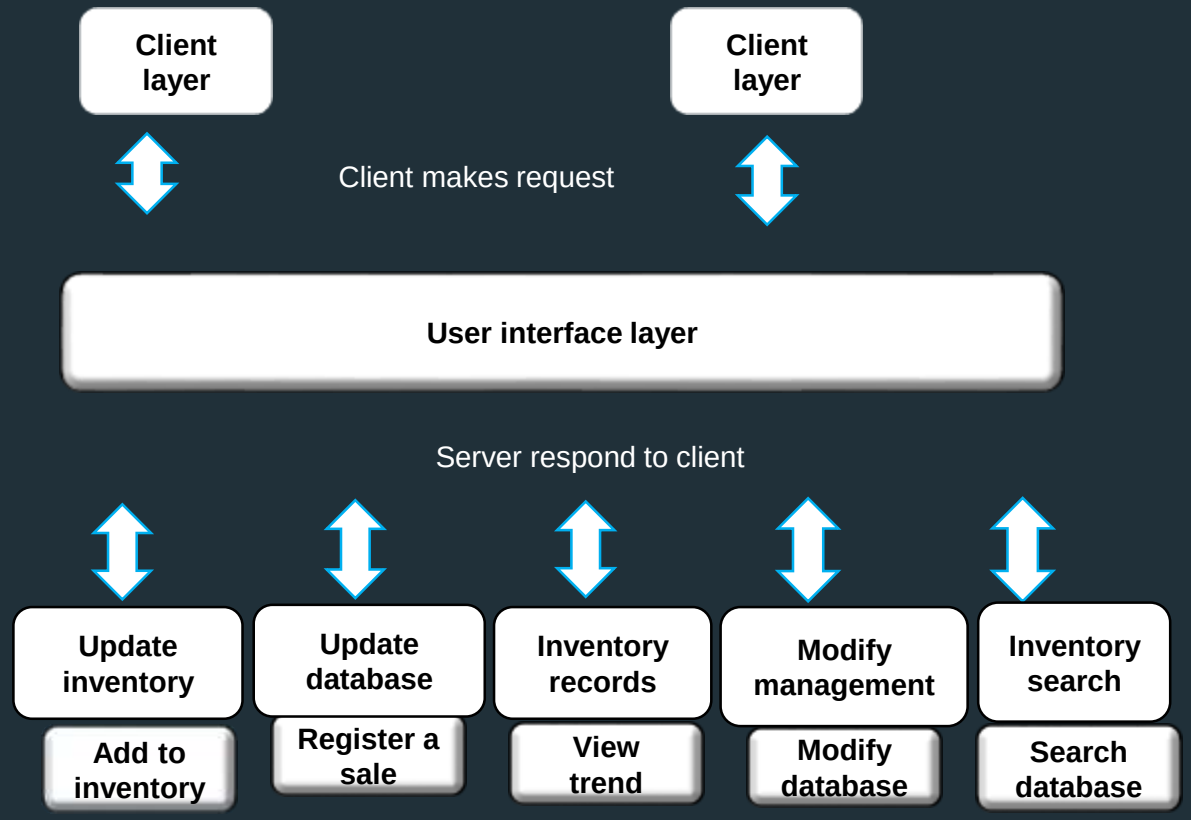
Design Architecture

Rationale

- This architecture was chosen primarily because it allows for services and servers to be changed without affecting other parts of the system.
- Allows availability to all clients without being implemented by all services.
- Its centralized architecture makes it easier to protect data by enforced security policies.



The client-server pattern

Client-Server Architectural Pattern Decomposition

Update inventory server

- Add inventory (ItemName, ItemCost, ItemQty)
- method: CalcExpenditure(), AddExpenditure(), AddItem()

Update database server

- Register sale (SaleItemName, SaleItemCost, SaleItemQty)
- method: CalcSale(), AddSale(), AddItemSale(), RemoveItem()

Client-Server Architectural Pattern Decomposition

Inventory records server

- Trend: CalcProfit(), SalesBreakdown()

Modify management server

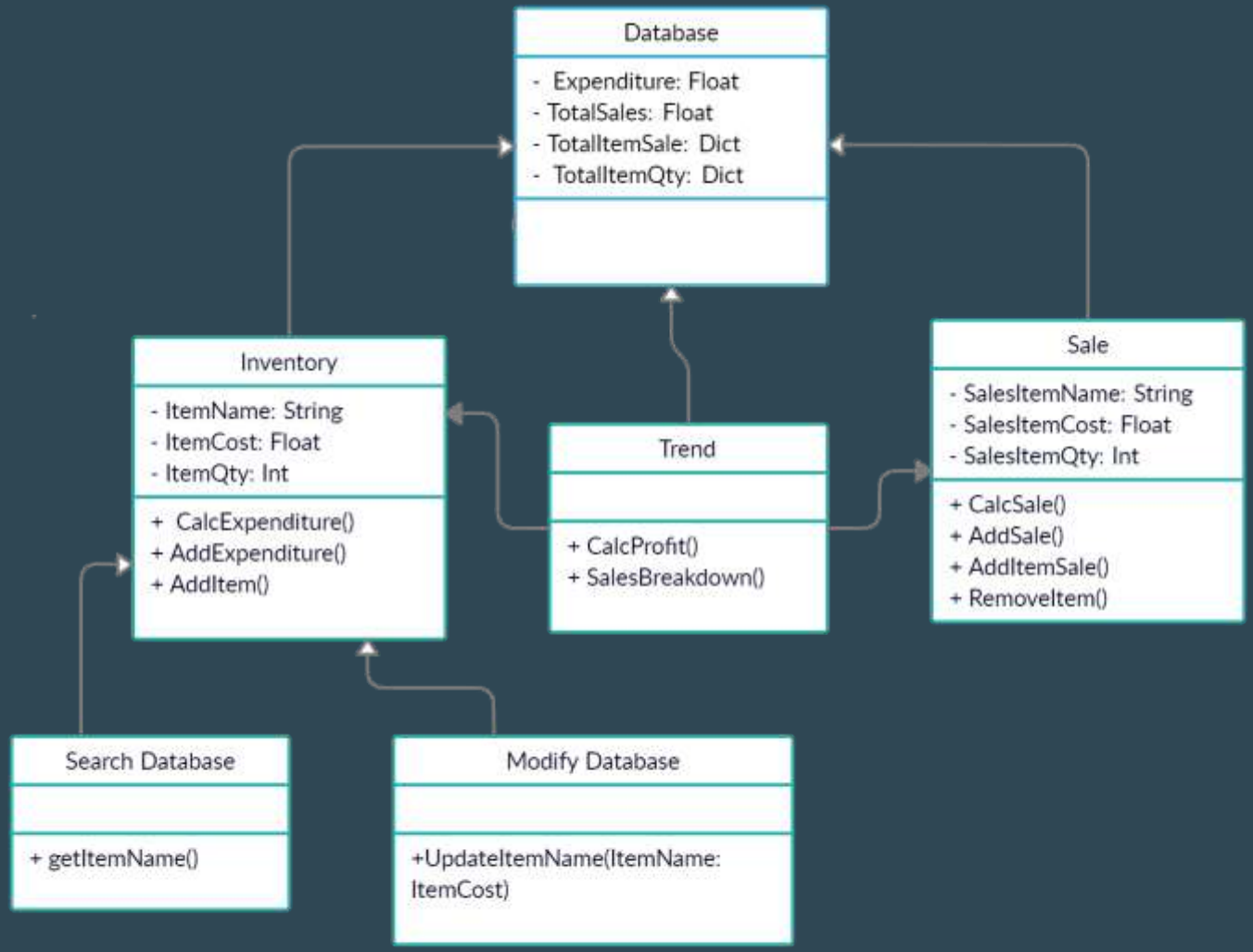
- Modify database: UpdateItem (ItemName, ItemCost)

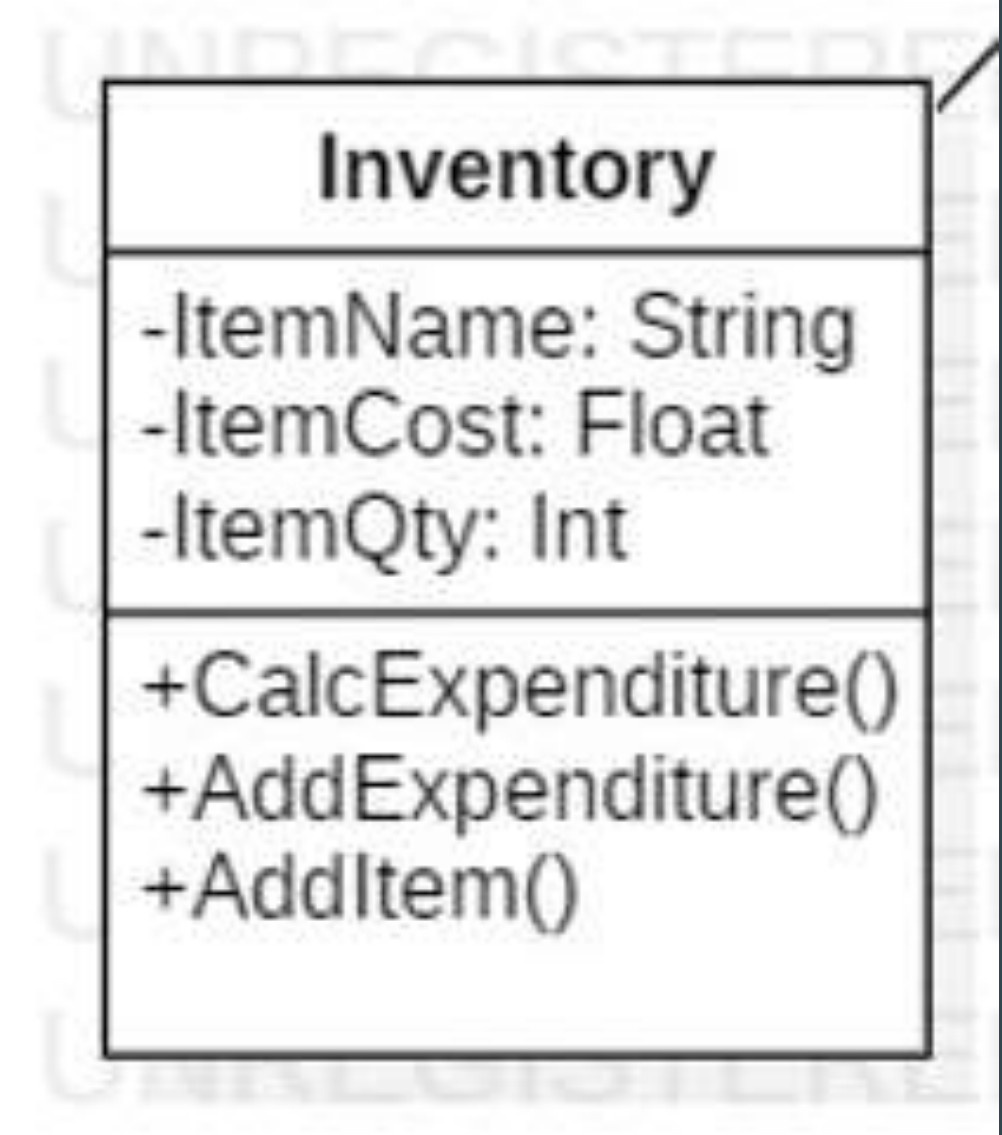
Client-Server Architectural Pattern Decomposition

Inventory search server

- Search database: getItemName()

Class Diagram





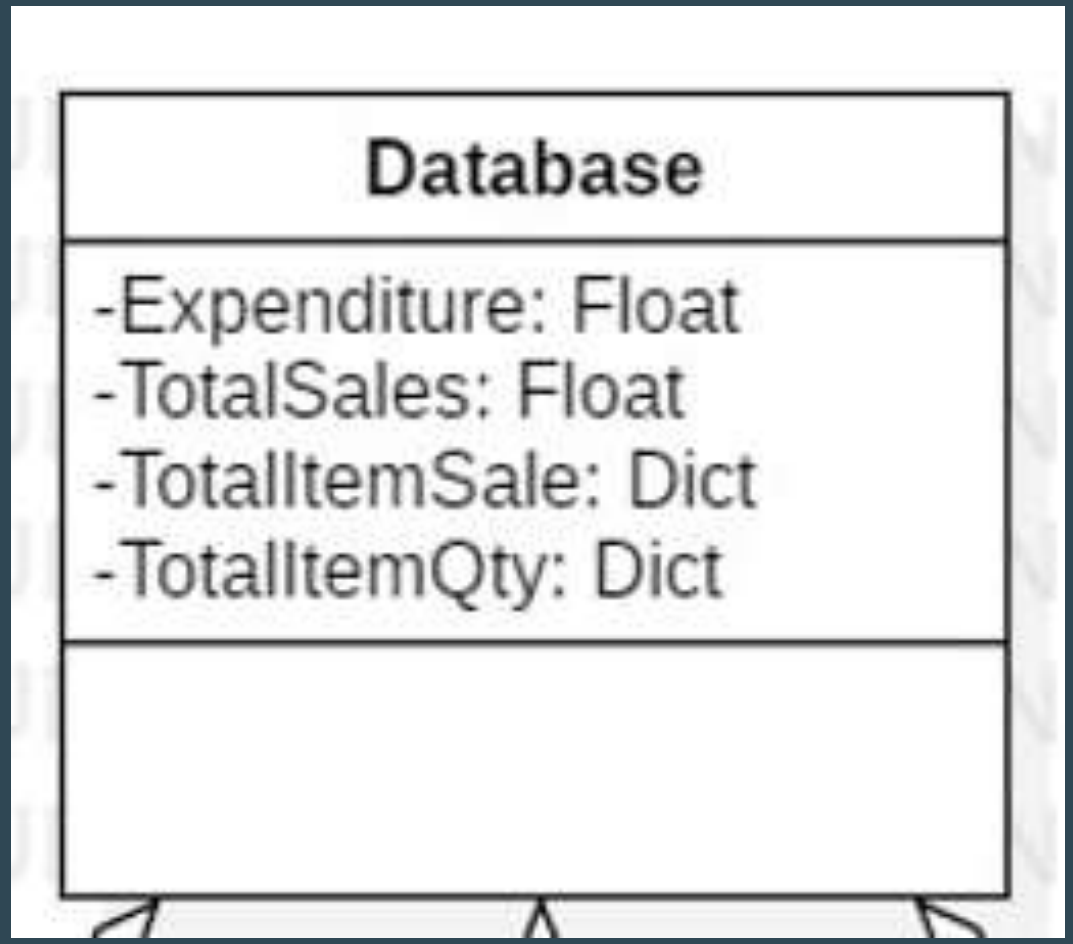
Classes

Attributes

1. ItemName
2. ItemCost
3. ItemQty

Operations

1. CalcExpenditure
2. AddExpenditure
3. AddItem



Classes

Attributes

1. Expenditure
2. Sales
3. TotalItemSales
4. TotalItemQty

Classes

Operations

1. CalcProfit
2. SalesBreakdown

Classes

Attributes

1. SaleItem
2. SaleItemCost
3. SaleItemQty

Operations

1. CalcSale
2. AddSale
3. AddItemSale
4. RemoveItem

Components of the Class Diagram

- Database- This is the parent class in which other classes make reference to.
- Inventory- Represents the system’s database recording of the inventory.
- Sale- Represents the system’s update in sale.
- Trend- Represents the breakdown of the business growth.
- Modify database- Represents modification of the database.
- Search database- Represents a search field for a specific item.

Thank you