**Question no:2**

Read the given scenario and then perform structural partition. Identify important components and also elaborate the process of identification of these components.

**Scenario:**

Suppose, our client requires the development of an electronic storefront for an online mobile store. The e-store will cater to potential customers looking to explore and purchase mobile devices. It should provide features such as browsing mobile models, creating wish lists, placing orders, reading and giving reviews, registering complaints, and seeking assistance for any queries related to mobile devices. The website will only accept online payments through credit cards for seamless transactions. Additionally, the store owner needs access to sales reports, product inventory, order details, and other business insights. The administrator will be responsible for user management, as well as managing the product catalog on the website.

**Answer:**

**Structural partitioning** breaks down a system into fundamental components or layers, organizing them by their roles and interactions. Let’s start with **Vertical** **partitioning** which involves dividing the system into layers based on data flow.

1. **UI Layer**: This layer will handle the interaction between the user and the system. It will include components such as web pages, forms, and user input processing.
2. **Business Logic Layer**: This layer will contain the core business logic of the electronic storefront. It will handle tasks such as processing orders, managing inventory, handling payments, and managing user accounts.
3. **Data Layer**: This layer will be responsible for storing and retrieving data from the system. It will include components such as databases, data access objects, and data storage mechanisms.

# **Horizontal Partitioning:**

Now, let's identify the components within each layer:

# **UI Layer Components:**

* Homepage
* Mobile Model Browsing Interface
* Wishlist Interface
* Order Placement Interface
* Review Submission Interface
* Complaint Submission Interface
* Query Assistance Interface

# **Business Logic Layer Components:**

* User Account Management
* Product Management
* Order Management
* Inventory Management
* Payment Processing
* Review Management
* Complaint Handling
* Customer Support

# **Data Layer Components:**

* User Database
* Product Database
* Order Database
* Inventory Database
* Review Database
* Complaint Database

**Process of identification of the above components**

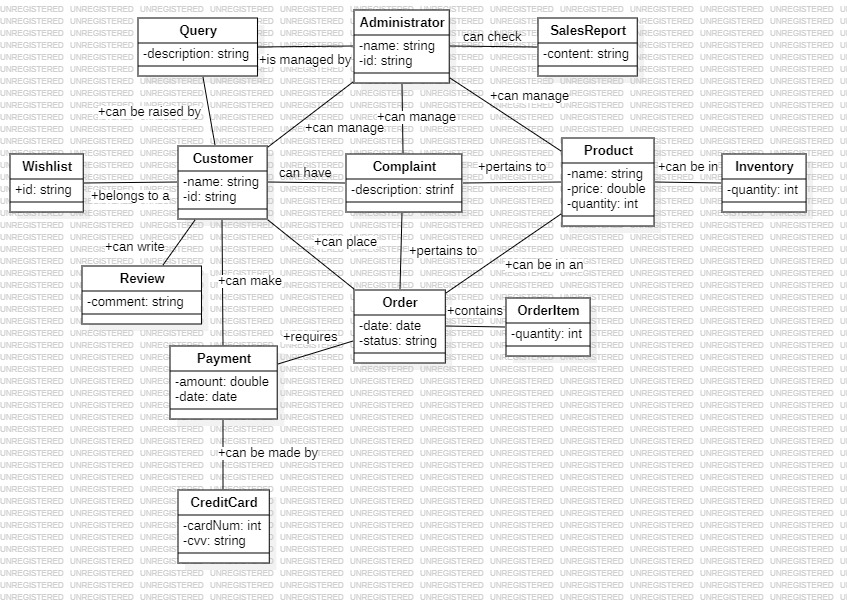
# **Identify Use Cases**: Understand user tasks (like browsing, ordering).

1. **Map to Features**: Connect tasks to system functions (like browsing mobiles).
2. **Derive Components:** Break down features into system parts (like homepage, browsing interface).
3. **Group into Layers**: Organize components into UI, Business Logic, Data layers.
4. **Assign Responsibilities**: Place components in layers based on their roles.
5. **Refine as Needed:** Adjust components based on system requirements.

Top of Form

Create a domain model for provided scenario.

**Domain Model:**

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