**Table Schema: Product Table**

Let's create a new table called **Product** to perform various CRUD and query operations.

**Product Table Structure:**

| **ProductID (PK)** | **ProductName** | **Category** | **Price** | **StockQuantity** | **Supplier** |
| --- | --- | --- | --- | --- | --- |
| 1 | Laptop | Electronics | 70000 | 50 | TechMart |
| 2 | Office Chair | Furniture | 5000 | 100 | HomeComfort |
| 3 | Smartwatch | Electronics | 15000 | 200 | GadgetHub |
| 4 | Desk Lamp | Lighting | 1200 | 300 | BrightLife |
| 5 | Wireless Mouse | Electronics | 1500 | 250 | GadgetHub |

**Tasks:**

**1. CRUD Operations:**

1. **Add a new product:**
   * Insert a product named **"Gaming Keyboard"** under the **"Electronics"** category, priced at **3500**, with **150** units in stock, supplied by **"TechMart"**.
2. **Update product price:**
   * Increase the price of all **Electronics** products by **10%**.
3. **Delete a product:**
   * Remove the product with the **ProductID = 4** (Desk Lamp).
4. **Read all products:**
   * Display all products sorted by **Price** in **descending order**.

**2. Sorting and Filtering:**

1. **Sort products by stock quantity:**
   * Display the list of products sorted by **StockQuantity** in **ascending order**.
2. **Filter products by category:**
   * List all products belonging to the **Electronics** category.
3. **Filter products with AND condition:**
   * Retrieve all **Electronics** products priced **above 5000**.
4. **Filter products with OR condition:**
   * List all products that are either **Electronics** or priced **below 2000**.

**3. Aggregation and Grouping:**

1. **Calculate total stock value:**
   * Find the **total stock value** (Price \* StockQuantity) for all products.
2. **Average price of each category:**
   * Calculate the **average price** of products grouped by **Category**.
3. **Total number of products by supplier:**
   * Count the total number of products supplied by **GadgetHub**.

**4. Conditional and Pattern Matching:**

1. **Find products with a specific keyword:**

* Display all products whose **ProductName** contains the word **"Wireless"**.

1. **Search for products from multiple suppliers:**

* Retrieve all products supplied by either **TechMart** or **GadgetHub**.

1. **Filter using BETWEEN operator:**

* List all products with a **price between 1000 and 20000**.

**5. Advanced Queries:**

1. **Products with high stock:**
   * Find products where **StockQuantity** is greater than the **average stock quantity**.
2. **Get top 3 expensive products:**
   * Display the **top 3 most expensive products** in the table.
3. **Find duplicate supplier names:**
   * Identify any duplicate supplier names in the table.
4. **Product summary:**
   * Generate a summary that shows each **Category** with the **number of products** and the **total stock value**.

**6. Join and Subqueries (if related tables are present):**

1. **Supplier with most products:**
   * Find the **supplier** who provides the **maximum number of products**.
2. **Most expensive product per category:**
   * List the **most expensive product** in each category.