**Q: 3**

**L1: Mongo Aggregations – E-Commerce Sales Data Analysis**

**Instructions:**

* Insert the provided dataset into your MongoDB collection.
* Solve the aggregation queries and write your answers in **query.txt**.
* Submit your **query.txt** file after completing all tasks.

**Dataset: orders Collection**

[

{

"username": "alice",

"productName": "iPhone 14",

"category": "Electronics",

"quantity": 2,

"totalPrice": 2000,

"orderDate": "2024-11-12T10:30:00Z",

"status": "Delivered"

},

{

"username": "bob",

"productName": "T-shirt",

"category": "Clothing",

"quantity": 5,

"totalPrice": 100,

"orderDate": "2024-11-15T13:45:00Z",

"status": "Delivered"

},

{

"username": "charlie",

"productName": "iPhone 14",

"category": "Electronics",

"quantity": 1,

"totalPrice": 1000,

"orderDate": "2024-12-01T09:00:00Z",

"status": "Cancelled"

},

{

"username": "daisy",

"productName": "T-shirt",

"category": "Clothing",

"quantity": 2,

"totalPrice": 40,

"orderDate": "2024-12-10T14:00:00Z",

"status": "Pending"

},

{

"username": "edward",

"productName": "Coffee Maker",

"category": "Home Appliances",

"quantity": 1,

"totalPrice": 150,

"orderDate": "2025-01-05T16:30:00Z",

"status": "Shipped"

},

{

"username": "fatima",

"productName": "Blender",

"category": "Home Appliances",

"quantity": 1,

"totalPrice": 120,

"orderDate": "2025-01-15T12:10:00Z",

"status": "Delivered"

},

{

"username": "george",

"productName": "iPhone 14",

"category": "Electronics",

"quantity": 1,

"totalPrice": 1000,

"orderDate": "2025-02-01T10:00:00Z",

"status": "Delivered"

},

{

"username": "harry",

"productName": "Shoes",

"category": "Clothing",

"quantity": 3,

"totalPrice": 210,

"orderDate": "2025-02-10T17:20:00Z",

"status": "Delivered"

},

{

"username": "isla",

"productName": "T-shirt",

"category": "Clothing",

"quantity": 4,

"totalPrice": 80,

"orderDate": "2025-03-01T09:30:00Z",

"status": "Shipped"

},

{

"username": "jake",

"productName": "AirPods",

"category": "Electronics",

"quantity": 2,

"totalPrice": 300,

"orderDate": "2025-03-12T14:45:00Z",

"status": "Delivered"

},

{

"username": "keira",

"productName": "Microwave",

"category": "Home Appliances",

"quantity": 1,

"totalPrice": 220,

"orderDate": "2025-03-25T11:00:00Z",

"status": "Delivered"

},

{

"username": "liam",

"productName": "AirPods",

"category": "Electronics",

"quantity": 1,

"totalPrice": 150,

"orderDate": "2025-04-01T08:15:00Z",

"status": "Cancelled"

},

{

"username": "mona",

"productName": "Shoes",

"category": "Clothing",

"quantity": 2,

"totalPrice": 140,

"orderDate": "2025-04-10T15:25:00Z",

"status": "Delivered"

},

{

"username": "nathan",

"productName": "iPhone 14",

"category": "Electronics",

"quantity": 1,

"totalPrice": 1000,

"orderDate": "2025-04-20T18:10:00Z",

"status": "Delivered"

},

{

"username": "olivia",

"productName": "T-shirt",

"category": "Clothing",

"quantity": 3,

"totalPrice": 60,

"orderDate": "2025-04-28T20:45:00Z",

"status": "Delivered"

}

]

**Tasks:**

1. **Top 3 best-selling products by quantity sold.**
2. **Total revenue for each product category.**
3. **Average total price of all orders.**
4. **Number of orders placed each month.**
5. **Percentage of canceled orders.**
6. **Top product category by revenue.**
7. **Most frequently ordered product.**
8. **Monthly revenue trend.**
9. **Count of orders by status.**
10. **Total number of orders and quantity sold.**