**This file compiles all of the results for the queries in our project. As each query outputs different file types, we represent the results the best we can here.**

**QUERY 1**

**Important Assumption:** Query 1 focuses on the **processing** of a fresh order (i.e. selecting the earliest fresh order, choosing an appropriate store and assigning a delivery driver) rather than simulating the customer purchasing the order. This is because query 3 deals specifically with this scenario, and so integrating the purchasing of a fresh order into query 1 would make query 3 somewhat redundant.

**PLEASE NOTE:** As explained in the Powerpoint, due to the filtering that the query does (selects oldest fresh order, nearest store to customer with enough of relevant stock, and nearest driver to store) and the use of variable names, both fresh orders can be processed by simply executing the same query twice. Below are the results of executing query 1 twice to process both fresh order.

**FRESH ORDER 1**

**These are examples of statements that are printed when query 1 is executed.**

Figure 1: This is the selectedOrderData variable that prints details about the current fresh order and information regarding details of the ordered products themselves, like product\_id and quantity.

A screenshot of a computer

Description automatically generated

Figure 2: This displays the closestStore variable which contains information on the nearest store to the customer that contains all of the required items within the order, in stock.

A computer screen shot of code

Description automatically generated

Figure 3: This displays the nearestDriver variable, containing information on the driver who is closest to the store and is available for pickup up a delivery.

A computer screen shot of code

Description automatically generated

**These are examples of documents after being altered by query 1.**

Figure 4: This is the state of the ‘customer’ collection document referenced in figure 1 **after** query 1 is executed. My query has changed the value in the ‘delivery\_status’ field.

A screenshot of a computer code

Description automatically generated

Figure 5: This is the state of the ‘store’ collection document referred to in figure 2 **after** query 1 is executed. Query 1 has updated the inventory within the store to reflect that an order has been made. As can be seen in figure 2, the quantity of product\_id 2 was 53 and for product\_id 4 it was 21. After my query, these quantities are now lower.

A screenshot of a computer program

Description automatically generated

Figure 6: This is the state of the document in the ‘partner’ collection, referenced in figure 3, **after** query 1 has been executed. The ‘payout’ and ‘current\_delivery\_id’ fields have been added and the ‘activity\_status’ and ‘available’ fields have been altered.

A screenshot of a computer code

Description automatically generated

**FRESH ORDER 2**

**These are examples of statements that are printed when query 1 is executed.**

Figure 7: This is the selectedOrderData variable that prints details about the current fresh order and information regarding details of the ordered products themselves, like product\_id and quantity.

A screen shot of a computer code

Description automatically generated

Figure 8: This displays the closestStore variable which contains information on the nearest store to the customer that contains all of the required items within the order, in stock.

A computer code with colorful text

Description automatically generated

Figure 9: This displays the nearestDriver variable, containing information on the driver who is closest to the store and is available for pickup up a delivery.

A screen shot of a computer code

Description automatically generated

**These are examples of documents after being altered by query 1**

Figure 10: This is the state of the ‘customer’ collection document referenced in figure 7 **after** query 1 is executed. My query has changed the value in the ‘delivery\_status’ field.

A screenshot of a computer program

Description automatically generated

Figure 11: This is the state of the ‘store’ collection document referred to in figure 8 **after** query 1 is executed. Query 1 has updated the inventory within the store to reflect that an order has been made

A screenshot of a computer code

Description automatically generated

Figure 12: This is the state of the document in the ‘partner’ collection, referenced in figure 9, **after** query 1 has been executed. The ‘payout’ and ‘current\_delivery\_id’ fields have been added and the ‘activity\_status’ and ‘available’ fields have been altered.

A screen shot of a computer code

Description automatically generated

**QUERY 2**

Below displays the full output on the second query, in a similar form to how it would be displayed to the customer.

It has been implemented in this manner to ensure not only that a customer can view which products are available at the closest store to them, but with other options in case their desired basket of products is not available at their closest store.

{

  "randomCustomer": [

    {

      "\_id": 7,

      "location": [

        53.4816,

        -2.2347

      ]

    }

  ],

  "closeriesList": [

    {

      "\_id": "Berry Blast Smoothie",

      "availability": [

        {

          "store\_name": "Piccadilly Morrizon",

          "quantity": 55,

          "distanceToCustomer": 223.7

        },

        {

          "store\_name": "Beswick Morrizon",

          "quantity": 52,

          "distanceToCustomer": 4058.42

        },

        {

          "store\_name": "Old Trafford Morrizon",

          "quantity": 27,

          "distanceToCustomer": 6744.16

        }

      ]

    },

    {

      "\_id": "Chocolate Croissant",

      "availability": [

        {

          "store\_name": "Piccadilly Morrizon",

          "quantity": 58,

          "distanceToCustomer": 223.7

        },

        {

          "store\_name": "Beswick Morrizon",

          "quantity": 52,

          "distanceToCustomer": 4058.42

        },

        {

          "store\_name": "Fallowfield Morrizon",

          "quantity": 64,

          "distanceToCustomer": 4265.63

        }

      ]

    },

    {

      "\_id": "Cinnamon Raisin Roll",

      "availability": [

        {

          "store\_name": "Piccadilly Morrizon",

          "quantity": 21,

          "distanceToCustomer": 223.7

        },

        {

          "store\_name": "Oxford Road Morrizon",

          "quantity": 56,

          "distanceToCustomer": 2142.7

        },

        {

          "store\_name": "Salford Morrizon",

          "quantity": 42,

          "distanceToCustomer": 5311.28

        }

      ]

    },

    {

      "\_id": "Classic Baguette",

      "availability": [

        {

          "store\_name": "Piccadilly Morrizon",

          "quantity": 67,

          "distanceToCustomer": 223.7

        },

        {

          "store\_name": "Oxford Road Morrizon",

          "quantity": 58,

          "distanceToCustomer": 2142.7

        },

        {

          "store\_name": "Beswick Morrizon",

          "quantity": 10,

          "distanceToCustomer": 4058.42

        }

      ]

    },

    {

      "\_id": "Green Tea Infusion",

      "availability": [

        {

          "store\_name": "Piccadilly Morrizon",

          "quantity": 37,

          "distanceToCustomer": 223.7

        },

        {

          "store\_name": "Beswick Morrizon",

          "quantity": 45,

          "distanceToCustomer": 4058.42

        },

        {

          "store\_name": "Fallowfield Morrizon",

          "quantity": 70,

          "distanceToCustomer": 4265.63

        }

      ]

    },

    {

      "\_id": "Iced Coffee Blend",

      "availability": [

        {

          "store\_name": "Piccadilly Morrizon",

          "quantity": 17,

          "distanceToCustomer": 223.7

        },

        {

          "store\_name": "Oxford Road Morrizon",

          "quantity": 59,

          "distanceToCustomer": 2142.7

        },

        {

          "store\_name": "Beswick Morrizon",

          "quantity": 47,

          "distanceToCustomer": 4058.42

        }

      ]

    },

    {

      "\_id": "Organic Apples",

      "availability": [

        {

          "store\_name": "Piccadilly Morrizon",

          "quantity": 48,

          "distanceToCustomer": 223.7

        },

        {

          "store\_name": "Oxford Road Morrizon",

          "quantity": 23,

          "distanceToCustomer": 2142.7

        },

        {

          "store\_name": "Fallowfield Morrizon",

          "quantity": 30,

          "distanceToCustomer": 4265.63

        }

      ]

    },

    {

      "\_id": "Ripe Avocados",

      "availability": [

        {

          "store\_name": "Piccadilly Morrizon",

          "quantity": 32,

          "distanceToCustomer": 223.7

        },

        {

          "store\_name": "Oxford Road Morrizon",

          "quantity": 28,

          "distanceToCustomer": 2142.7

        },

        {

          "store\_name": "Fallowfield Morrizon",

          "quantity": 58,

          "distanceToCustomer": 4265.63

        }

      ]

    },

    {

      "\_id": "Sourdough Boule",

      "availability": [

        {

          "store\_name": "Piccadilly Morrizon",

          "quantity": 35,

          "distanceToCustomer": 223.7

        },

        {

          "store\_name": "Oxford Road Morrizon",

          "quantity": 12,

          "distanceToCustomer": 2142.7

        },

        {

          "store\_name": "Fallowfield Morrizon",

          "quantity": 14,

          "distanceToCustomer": 4265.63

        }

      ]

    },

    {

      "\_id": "Sparkling Lemonade",

      "availability": [

        {

          "store\_name": "Piccadilly Morrizon",

          "quantity": 80,

          "distanceToCustomer": 223.7

        },

        {

          "store\_name": "Oxford Road Morrizon",

          "quantity": 9,

          "distanceToCustomer": 2142.7

        },

        {

          "store\_name": "Beswick Morrizon",

          "quantity": 37,

          "distanceToCustomer": 4058.42

        }

      ]

    },

    {

      "\_id": "Sweet Strawberries",

      "availability": [

        {

          "store\_name": "Piccadilly Morrizon",

          "quantity": 71,

          "distanceToCustomer": 223.7

        },

        {

          "store\_name": "Oxford Road Morrizon",

          "quantity": 40,

          "distanceToCustomer": 2142.7

        },

        {

          "store\_name": "Beswick Morrizon",

          "quantity": 8,

          "distanceToCustomer": 4058.42

        }

      ]

    },

    {

      "\_id": "Blueberry Muffin",

      "availability": [

        {

          "store\_name": "Oxford Road Morrizon",

          "quantity": 20,

          "distanceToCustomer": 2142.7

        },

        {

          "store\_name": "Beswick Morrizon",

          "quantity": 32,

          "distanceToCustomer": 4058.42

        },

        {

          "store\_name": "Fallowfield Morrizon",

          "quantity": 26,

          "distanceToCustomer": 4265.63

        }

      ]

    },

    {

      "\_id": "Colorful Bell Peppers",

      "availability": [

        {

          "store\_name": "Oxford Road Morrizon",

          "quantity": 46,

          "distanceToCustomer": 2142.7

        },

        {

          "store\_name": "Beswick Morrizon",

          "quantity": 35,

          "distanceToCustomer": 4058.42

        },

        {

          "store\_name": "Salford Morrizon",

          "quantity": 19,

          "distanceToCustomer": 5311.28

        }

      ]

    },

    {

      "\_id": "Fresh Broccoli Bunch",

      "availability": [

        {

          "store\_name": "Oxford Road Morrizon",

          "quantity": 62,

          "distanceToCustomer": 2142.7

        },

        {

          "store\_name": "Old Trafford Morrizon",

          "quantity": 17,

          "distanceToCustomer": 6744.16

        }

      ]

    },

    {

      "\_id": "Tropical Smoothie Blend",

      "availability": [

        {

          "store\_name": "Beswick Morrizon",

          "quantity": 68,

          "distanceToCustomer": 4058.42

        },

        {

          "store\_name": "Fallowfield Morrizon",

          "quantity": 42,

          "distanceToCustomer": 4265.63

        },

        {

          "store\_name": "Old Trafford Morrizon",

          "quantity": 35,

          "distanceToCustomer": 6744.16

        }

      ]

    }

  ]

}

**QUERY 3 NUMBER 1**

The following image shows the result of the customers collection being updated. A new current order, with the relevant details, is added for the specified customer.

A screenshot of a computer

Description automatically generated

The following image shows the accompanying formatted message which is printed in MongoDB shell. It gives the main details of the order which has just been added.

A screen shot of a computer

Description automatically generated

**QUERY 3 NUMBER 2**

This query works the same as query 3 number 1. In order to represent the placing of a different order by a different customer, the details of the order have been changed. It still updates the customers collection, and prints an accompanying message.

A screenshot of a computer code

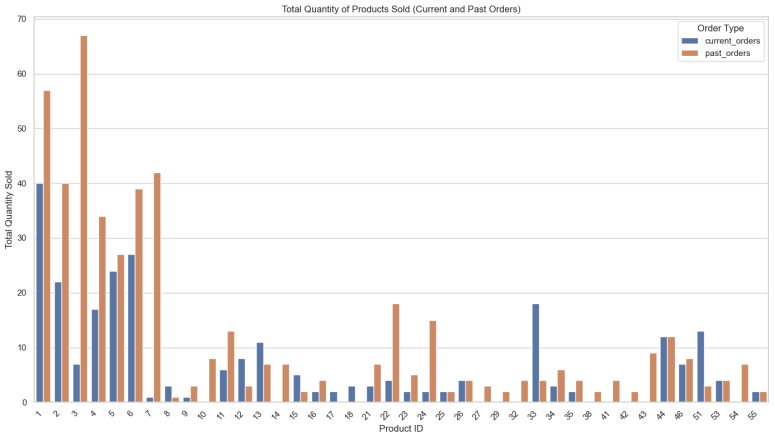
Description automatically generated

A screen shot of a computer

Description automatically generated

**QUERY 4 NUMBER 1**

The visualisation below shows the result of query 4 number 1. It is a graph showing the total quantity of products sold, under both current and past orders. With the help of this graph which shows current and past orders side by side, we can easily compare the sales and identify consumer buying patterns.



**QUERY 4 NUMBER 2**

The below is the result of query 4 number 2. The graph is made using the catplot feature of seaborn package. It describes the inventory level performance of warehouses on both the assumed dates. This can help managers in optimizing the stock levels of certain products which have high demand.



**QUERY 5 NUMBER 1**

The following is the output for the profits calculation function.

**PLEASE NOTE:** This is not projected in the MongoDB shell, but inserted into a new collection after the profits insert function is run.

Profits calculated!

[

  {

    "\_id": 1,

    "revenueBreakdown": {

      "productPrice": 1.99,

      "quantityOrdered": 92,

      "currentRevenue": 69.65,

      "pastRevenue": 113.43,

      "totalRevenue": 183.08

    },

    "costBreakdown": {

      "productSupplierCost": 0.99,

      "totalSupplierCost": 91.08,

      "partnerPaynout": 27.46,

      "totalcost": 118.54

    },

    "salesProfit": 64.54

  },

  {

    "\_id": 2,

    "revenueBreakdown": {

      "productPrice": 1.5,

      "quantityOrdered": 62,

      "currentRevenue": 33,

      "pastRevenue": 60,

      "totalRevenue": 93

    },

    "costBreakdown": {

      "productSupplierCost": 0.75,

      "totalSupplierCost": 46.5,

      "partnerPaynout": 13.95,

      "totalcost": 60.45

    },

    "salesProfit": 32.55

  },

  {

    "\_id": 3,

    "revenueBreakdown": {

      "productPrice": 1.8,

      "quantityOrdered": 74,

      "currentRevenue": 12.6,

      "pastRevenue": 120.6,

      "totalRevenue": 133.2

    },

    "costBreakdown": {

      "productSupplierCost": 0.9,

      "totalSupplierCost": 66.6,

      "partnerPaynout": 19.98,

      "totalcost": 86.58

    },

    "salesProfit": 46.62

  },

  {

    "\_id": 4,

    "revenueBreakdown": {

      "productPrice": 2.2,

      "quantityOrdered": 51,

      "currentRevenue": 37.4,

      "pastRevenue": 74.8,

      "totalRevenue": 112.2

    },

    "costBreakdown": {

      "productSupplierCost": 1.1,

      "totalSupplierCost": 56.1,

      "partnerPaynout": 16.83,

      "totalcost": 72.93

    },

    "salesProfit": 39.27

  },

  {

    "\_id": 5,

    "revenueBreakdown": {

      "productPrice": 1.2,

      "quantityOrdered": 51,

      "currentRevenue": 28.8,

      "pastRevenue": 32.4,

      "totalRevenue": 61.2

    },

    "costBreakdown": {

      "productSupplierCost": 0.6,

      "totalSupplierCost": 30.6,

      "partnerPaynout": 9.18,

      "totalcost": 39.78

    },

    "salesProfit": 21.42

  },

  {

    "\_id": 6,

    "revenueBreakdown": {

      "productPrice": 3.49,

      "quantityOrdered": 66,

      "currentRevenue": 94.23,

      "pastRevenue": 136.11,

      "totalRevenue": 230.34

    },

    "costBreakdown": {

      "productSupplierCost": 1.5,

      "totalSupplierCost": 99,

      "partnerPaynout": 34.55,

      "totalcost": 133.55

    },

    "salesProfit": 96.79

  },

  {

    "\_id": 7,

    "revenueBreakdown": {

      "productPrice": 2.99,

      "quantityOrdered": 43,

      "currentRevenue": 2.99,

      "pastRevenue": 125.58,

      "totalRevenue": 128.57

    },

    "costBreakdown": {

      "productSupplierCost": 1.2,

      "totalSupplierCost": 51.6,

      "partnerPaynout": 19.29,

      "totalcost": 70.89

    },

    "salesProfit": 57.68

  },

  {

    "\_id": 8,

    "revenueBreakdown": {

      "productPrice": 4.99,

      "quantityOrdered": 4,

      "currentRevenue": 14.97,

      "pastRevenue": 4.99,

      "totalRevenue": 19.96

    },

    "costBreakdown": {

      "productSupplierCost": 2,

      "totalSupplierCost": 8,

      "partnerPaynout": 2.99,

      "totalcost": 10.99

    },

    "salesProfit": 8.97

  },

  {

    "\_id": 9,

    "revenueBreakdown": {

      "productPrice": 3.79,

      "quantityOrdered": 4,

      "currentRevenue": 3.79,

      "pastRevenue": 11.37,

      "totalRevenue": 15.16

    },

    "costBreakdown": {

      "productSupplierCost": 1.8,

      "totalSupplierCost": 7.2,

      "partnerPaynout": 2.27,

      "totalcost": 9.47

    },

    "salesProfit": 5.69

  },

  {

    "\_id": 10,

    "revenueBreakdown": {

      "productPrice": 3.99,

      "quantityOrdered": 8,

      "currentRevenue": 0,

      "pastRevenue": 31.92,

      "totalRevenue": 31.92

    },

    "costBreakdown": {

      "productSupplierCost": 1.6,

      "totalSupplierCost": 12.8,

      "partnerPaynout": 4.79,

      "totalcost": 17.59

    },

    "salesProfit": 14.33

  },

  {

    "\_id": 11,

    "revenueBreakdown": {

      "productPrice": 1.99,

      "quantityOrdered": 19,

      "currentRevenue": 11.94,

      "pastRevenue": 25.87,

      "totalRevenue": 37.81

    },

    "costBreakdown": {

      "productSupplierCost": 1,

      "totalSupplierCost": 19,

      "partnerPaynout": 5.67,

      "totalcost": 24.67

    },

    "salesProfit": 13.14

  },

  {

    "\_id": 12,

    "revenueBreakdown": {

      "productPrice": 2.49,

      "quantityOrdered": 11,

      "currentRevenue": 19.92,

      "pastRevenue": 7.47,

      "totalRevenue": 27.39

    },

    "costBreakdown": {

      "productSupplierCost": 1.2,

      "totalSupplierCost": 13.2,

      "partnerPaynout": 4.11,

      "totalcost": 17.31

    },

    "salesProfit": 10.08

  },

  {

    "\_id": 13,

    "revenueBreakdown": {

      "productPrice": 1.79,

      "quantityOrdered": 18,

      "currentRevenue": 19.69,

      "pastRevenue": 12.53,

      "totalRevenue": 32.22

    },

    "costBreakdown": {

      "productSupplierCost": 0.8,

      "totalSupplierCost": 14.4,

      "partnerPaynout": 4.83,

      "totalcost": 19.23

    },

    "salesProfit": 12.99

  },

  {

    "\_id": 14,

    "revenueBreakdown": {

      "productPrice": 2.99,

      "quantityOrdered": 7,

      "currentRevenue": 0,

      "pastRevenue": 20.93,

      "totalRevenue": 20.93

    },

    "costBreakdown": {

      "productSupplierCost": 1.5,

      "totalSupplierCost": 10.5,

      "partnerPaynout": 3.14,

      "totalcost": 13.64

    },

    "salesProfit": 7.29

  },

  {

    "\_id": 15,

    "revenueBreakdown": {

      "productPrice": 2.29,

      "quantityOrdered": 7,

      "currentRevenue": 11.45,

      "pastRevenue": 4.58,

      "totalRevenue": 16.03

    },

    "costBreakdown": {

      "productSupplierCost": 1,

      "totalSupplierCost": 7,

      "partnerPaynout": 2.4,

      "totalcost": 9.4

    },

    "salesProfit": 6.63

  },

  {

    "\_id": 16,

    "revenueBreakdown": {

      "productPrice": 12.99,

      "quantityOrdered": 6,

      "currentRevenue": 25.98,

      "pastRevenue": 51.96,

      "totalRevenue": 77.94

    },

    "costBreakdown": {

      "productSupplierCost": 7.5,

      "totalSupplierCost": 45,

      "partnerPaynout": 11.69,

      "totalcost": 56.69

    },

    "salesProfit": 21.25

  },

  {

    "\_id": 17,

    "revenueBreakdown": {

      "productPrice": 10.99,

      "quantityOrdered": 2,

      "currentRevenue": 21.98,

      "pastRevenue": 0,

      "totalRevenue": 21.98

    },

    "costBreakdown": {

      "productSupplierCost": 6.5,

      "totalSupplierCost": 13,

      "partnerPaynout": 3.3,

      "totalcost": 16.3

    },

    "salesProfit": 5.68

  },

  {

    "\_id": 18,

    "revenueBreakdown": {

      "productPrice": 9.99,

      "quantityOrdered": 0,

      "currentRevenue": 0,

      "pastRevenue": 0,

      "totalRevenue": 0

    },

    "costBreakdown": {

      "productSupplierCost": 5.5,

      "totalSupplierCost": 0,

      "partnerPaynout": 0,

      "totalcost": 0

    },

    "salesProfit": 0

  },

  {

    "\_id": 19,

    "revenueBreakdown": {

      "productPrice": 11.99,

      "quantityOrdered": 0,

      "currentRevenue": 0,

      "pastRevenue": 0,

      "totalRevenue": 0

    },

    "costBreakdown": {

      "productSupplierCost": 6.8,

      "totalSupplierCost": 0,

      "partnerPaynout": 0,

      "totalcost": 0

    },

    "salesProfit": 0

  },

  {

    "\_id": 20,

    "revenueBreakdown": {

      "productPrice": 13.99,

      "quantityOrdered": 0,

      "currentRevenue": 0,

      "pastRevenue": 0,

      "totalRevenue": 0

    },

    "costBreakdown": {

      "productSupplierCost": 8,

      "totalSupplierCost": 0,

      "partnerPaynout": 0,

      "totalcost": 0

    },

    "salesProfit": 0

  },

  {

    "\_id": 21,

    "revenueBreakdown": {

      "productPrice": 10.99,

      "quantityOrdered": 10,

      "currentRevenue": 32.97,

      "pastRevenue": 76.93,

      "totalRevenue": 109.9

    },

    "costBreakdown": {

      "productSupplierCost": 6.5,

      "totalSupplierCost": 65,

      "partnerPaynout": 16.49,

      "totalcost": 81.49

    },

    "salesProfit": 28.42

  },

  {

    "\_id": 22,

    "revenueBreakdown": {

      "productPrice": 18.99,

      "quantityOrdered": 22,

      "currentRevenue": 75.96,

      "pastRevenue": 341.82,

      "totalRevenue": 417.78

    },

    "costBreakdown": {

      "productSupplierCost": 12,

      "totalSupplierCost": 264,

      "partnerPaynout": 62.67,

      "totalcost": 326.67

    },

    "salesProfit": 91.11

  },

  {

    "\_id": 23,

    "revenueBreakdown": {

      "productPrice": 14.99,

      "quantityOrdered": 7,

      "currentRevenue": 29.98,

      "pastRevenue": 74.95,

      "totalRevenue": 104.93

    },

    "costBreakdown": {

      "productSupplierCost": 9.5,

      "totalSupplierCost": 66.5,

      "partnerPaynout": 15.74,

      "totalcost": 82.24

    },

    "salesProfit": 22.69

  },

  {

    "\_id": 24,

    "revenueBreakdown": {

      "productPrice": 13.99,

      "quantityOrdered": 17,

      "currentRevenue": 27.98,

      "pastRevenue": 209.85,

      "totalRevenue": 237.83

    },

    "costBreakdown": {

      "productSupplierCost": 8.5,

      "totalSupplierCost": 144.5,

      "partnerPaynout": 35.67,

      "totalcost": 180.17

    },

    "salesProfit": 57.66

  },

  {

    "\_id": 25,

    "revenueBreakdown": {

      "productPrice": 15.99,

      "quantityOrdered": 4,

      "currentRevenue": 31.98,

      "pastRevenue": 31.98,

      "totalRevenue": 63.96

    },

    "costBreakdown": {

      "productSupplierCost": 10,

      "totalSupplierCost": 40,

      "partnerPaynout": 9.59,

      "totalcost": 49.59

    },

    "salesProfit": 14.37

  },

  {

    "\_id": 26,

    "revenueBreakdown": {

      "productPrice": 8.99,

      "quantityOrdered": 8,

      "currentRevenue": 35.96,

      "pastRevenue": 35.96,

      "totalRevenue": 71.92

    },

    "costBreakdown": {

      "productSupplierCost": 4.5,

      "totalSupplierCost": 36,

      "partnerPaynout": 10.79,

      "totalcost": 46.79

    },

    "salesProfit": 25.13

  },

  {

    "\_id": 27,

    "revenueBreakdown": {

      "productPrice": 9.99,

      "quantityOrdered": 3,

      "currentRevenue": 0,

      "pastRevenue": 29.97,

      "totalRevenue": 29.97

    },

    "costBreakdown": {

      "productSupplierCost": 5,

      "totalSupplierCost": 15,

      "partnerPaynout": 4.5,

      "totalcost": 19.5

    },

    "salesProfit": 10.47

  },

  {

    "\_id": 28,

    "revenueBreakdown": {

      "productPrice": 10.99,

      "quantityOrdered": 0,

      "currentRevenue": 0,

      "pastRevenue": 0,

      "totalRevenue": 0

    },

    "costBreakdown": {

      "productSupplierCost": 5.5,

      "totalSupplierCost": 0,

      "partnerPaynout": 0,

      "totalcost": 0

    },

    "salesProfit": 0

  },

  {

    "\_id": 29,

    "revenueBreakdown": {

      "productPrice": 9.49,

      "quantityOrdered": 2,

      "currentRevenue": 0,

      "pastRevenue": 18.98,

      "totalRevenue": 18.98

    },

    "costBreakdown": {

      "productSupplierCost": 4.8,

      "totalSupplierCost": 9.6,

      "partnerPaynout": 2.85,

      "totalcost": 12.45

    },

    "salesProfit": 6.53

  },

  {

    "\_id": 30,

    "revenueBreakdown": {

      "productPrice": 8.79,

      "quantityOrdered": 0,

      "currentRevenue": 0,

      "pastRevenue": 0,

      "totalRevenue": 0

    },

    "costBreakdown": {

      "productSupplierCost": 4.3,

      "totalSupplierCost": 0,

      "partnerPaynout": 0,

      "totalcost": 0

    },

    "salesProfit": 0

  },

  {

    "\_id": 31,

    "revenueBreakdown": {

      "productPrice": 9.99,

      "quantityOrdered": 0,

      "currentRevenue": 0,

      "pastRevenue": 0,

      "totalRevenue": 0

    },

    "costBreakdown": {

      "productSupplierCost": 4.9,

      "totalSupplierCost": 0,

      "partnerPaynout": 0,

      "totalcost": 0

    },

    "salesProfit": 0

  },

  {

    "\_id": 32,

    "revenueBreakdown": {

      "productPrice": 8.99,

      "quantityOrdered": 4,

      "currentRevenue": 0,

      "pastRevenue": 35.96,

      "totalRevenue": 35.96

    },

    "costBreakdown": {

      "productSupplierCost": 4.4,

      "totalSupplierCost": 17.6,

      "partnerPaynout": 5.39,

      "totalcost": 22.99

    },

    "salesProfit": 12.97

  },

  {

    "\_id": 33,

    "revenueBreakdown": {

      "productPrice": 8.49,

      "quantityOrdered": 22,

      "currentRevenue": 152.82,

      "pastRevenue": 33.96,

      "totalRevenue": 186.78

    },

    "costBreakdown": {

      "productSupplierCost": 4,

      "totalSupplierCost": 88,

      "partnerPaynout": 28.02,

      "totalcost": 116.02

    },

    "salesProfit": 70.76

  },

  {

    "\_id": 34,

    "revenueBreakdown": {

      "productPrice": 9.99,

      "quantityOrdered": 9,

      "currentRevenue": 29.97,

      "pastRevenue": 59.94,

      "totalRevenue": 89.91

    },

    "costBreakdown": {

      "productSupplierCost": 4.5,

      "totalSupplierCost": 40.5,

      "partnerPaynout": 13.49,

      "totalcost": 53.99

    },

    "salesProfit": 35.92

  },

  {

    "\_id": 35,

    "revenueBreakdown": {

      "productPrice": 8.79,

      "quantityOrdered": 6,

      "currentRevenue": 17.58,

      "pastRevenue": 35.16,

      "totalRevenue": 52.74

    },

    "costBreakdown": {

      "productSupplierCost": 4.2,

      "totalSupplierCost": 25.2,

      "partnerPaynout": 7.91,

      "totalcost": 33.11

    },

    "salesProfit": 19.63

  },

  {

    "\_id": 36,

    "revenueBreakdown": {

      "productPrice": 999.99,

      "quantityOrdered": 0,

      "currentRevenue": 0,

      "pastRevenue": 0,

      "totalRevenue": 0

    },

    "costBreakdown": {

      "productSupplierCost": 700,

      "totalSupplierCost": 0,

      "partnerPaynout": 0,

      "totalcost": 0

    },

    "salesProfit": 0

  },

  {

    "\_id": 37,

    "revenueBreakdown": {

      "productPrice": 1499.99,

      "quantityOrdered": 0,

      "currentRevenue": 0,

      "pastRevenue": 0,

      "totalRevenue": 0

    },

    "costBreakdown": {

      "productSupplierCost": 1100,

      "totalSupplierCost": 0,

      "partnerPaynout": 0,

      "totalcost": 0

    },

    "salesProfit": 0

  },

  {

    "\_id": 38,

    "revenueBreakdown": {

      "productPrice": 899.99,

      "quantityOrdered": 2,

      "currentRevenue": 0,

      "pastRevenue": 1799.98,

      "totalRevenue": 1799.98

    },

    "costBreakdown": {

      "productSupplierCost": 650,

      "totalSupplierCost": 1300,

      "partnerPaynout": 270,

      "totalcost": 1570

    },

    "salesProfit": 229.98

  },

  {

    "\_id": 39,

    "revenueBreakdown": {

      "productPrice": 899.99,

      "quantityOrdered": 0,

      "currentRevenue": 0,

      "pastRevenue": 0,

      "totalRevenue": 0

    },

    "costBreakdown": {

      "productSupplierCost": 650,

      "totalSupplierCost": 0,

      "partnerPaynout": 0,

      "totalcost": 0

    },

    "salesProfit": 0

  },

  {

    "\_id": 40,

    "revenueBreakdown": {

      "productPrice": 1099.99,

      "quantityOrdered": 0,

      "currentRevenue": 0,

      "pastRevenue": 0,

      "totalRevenue": 0

    },

    "costBreakdown": {

      "productSupplierCost": 800,

      "totalSupplierCost": 0,

      "partnerPaynout": 0,

      "totalcost": 0

    },

    "salesProfit": 0

  },

  {

    "\_id": 41,

    "revenueBreakdown": {

      "productPrice": 1199.99,

      "quantityOrdered": 4,

      "currentRevenue": 0,

      "pastRevenue": 4799.96,

      "totalRevenue": 4799.96

    },

    "costBreakdown": {

      "productSupplierCost": 900,

      "totalSupplierCost": 3600,

      "partnerPaynout": 719.99,

      "totalcost": 4319.99

    },

    "salesProfit": 479.97

  },

  {

    "\_id": 42,

    "revenueBreakdown": {

      "productPrice": 899.99,

      "quantityOrdered": 2,

      "currentRevenue": 0,

      "pastRevenue": 1799.98,

      "totalRevenue": 1799.98

    },

    "costBreakdown": {

      "productSupplierCost": 650,

      "totalSupplierCost": 1300,

      "partnerPaynout": 270,

      "totalcost": 1570

    },

    "salesProfit": 229.98

  },

  {

    "\_id": 43,

    "revenueBreakdown": {

      "productPrice": 699.99,

      "quantityOrdered": 9,

      "currentRevenue": 0,

      "pastRevenue": 6299.91,

      "totalRevenue": 6299.91

    },

    "costBreakdown": {

      "productSupplierCost": 500,

      "totalSupplierCost": 4500,

      "partnerPaynout": 944.99,

      "totalcost": 5444.99

    },

    "salesProfit": 854.92

  },

  {

    "\_id": 44,

    "revenueBreakdown": {

      "productPrice": 899.99,

      "quantityOrdered": 24,

      "currentRevenue": 10799.88,

      "pastRevenue": 10799.88,

      "totalRevenue": 21599.76

    },

    "costBreakdown": {

      "productSupplierCost": 650,

      "totalSupplierCost": 15600,

      "partnerPaynout": 3239.96,

      "totalcost": 18839.96

    },

    "salesProfit": 2759.8

  },

  {

    "\_id": 45,

    "revenueBreakdown": {

      "productPrice": 599.99,

      "quantityOrdered": 0,

      "currentRevenue": 0,

      "pastRevenue": 0,

      "totalRevenue": 0

    },

    "costBreakdown": {

      "productSupplierCost": 400,

      "totalSupplierCost": 0,

      "partnerPaynout": 0,

      "totalcost": 0

    },

    "salesProfit": 0

  },

  {

    "\_id": 46,

    "revenueBreakdown": {

      "productPrice": 199.99,

      "quantityOrdered": 15,

      "currentRevenue": 1399.93,

      "pastRevenue": 1599.92,

      "totalRevenue": 2999.85

    },

    "costBreakdown": {

      "productSupplierCost": 129.99,

      "totalSupplierCost": 1949.85,

      "partnerPaynout": 449.98,

      "totalcost": 2399.83

    },

    "salesProfit": 600.02

  },

  {

    "\_id": 47,

    "revenueBreakdown": {

      "productPrice": 899.99,

      "quantityOrdered": 0,

      "currentRevenue": 0,

      "pastRevenue": 0,

      "totalRevenue": 0

    },

    "costBreakdown": {

      "productSupplierCost": 699.99,

      "totalSupplierCost": 0,

      "partnerPaynout": 0,

      "totalcost": 0

    },

    "salesProfit": 0

  },

  {

    "\_id": 48,

    "revenueBreakdown": {

      "productPrice": 1999.99,

      "quantityOrdered": 0,

      "currentRevenue": 0,

      "pastRevenue": 0,

      "totalRevenue": 0

    },

    "costBreakdown": {

      "productSupplierCost": 1499.99,

      "totalSupplierCost": 0,

      "partnerPaynout": 0,

      "totalcost": 0

    },

    "salesProfit": 0

  },

  {

    "\_id": 49,

    "revenueBreakdown": {

      "productPrice": 499.99,

      "quantityOrdered": 0,

      "currentRevenue": 0,

      "pastRevenue": 0,

      "totalRevenue": 0

    },

    "costBreakdown": {

      "productSupplierCost": 349.99,

      "totalSupplierCost": 0,

      "partnerPaynout": 0,

      "totalcost": 0

    },

    "salesProfit": 0

  },

  {

    "\_id": 50,

    "revenueBreakdown": {

      "productPrice": 129.99,

      "quantityOrdered": 0,

      "currentRevenue": 0,

      "pastRevenue": 0,

      "totalRevenue": 0

    },

    "costBreakdown": {

      "productSupplierCost": 89.99,

      "totalSupplierCost": 0,

      "partnerPaynout": 0,

      "totalcost": 0

    },

    "salesProfit": 0

  },

  {

    "\_id": 51,

    "revenueBreakdown": {

      "productPrice": 149.99,

      "quantityOrdered": 16,

      "currentRevenue": 1949.87,

      "pastRevenue": 449.97,

      "totalRevenue": 2399.84

    },

    "costBreakdown": {

      "productSupplierCost": 99.99,

      "totalSupplierCost": 1599.84,

      "partnerPaynout": 359.98,

      "totalcost": 1959.82

    },

    "salesProfit": 440.02

  },

  {

    "\_id": 52,

    "revenueBreakdown": {

      "productPrice": 299.99,

      "quantityOrdered": 0,

      "currentRevenue": 0,

      "pastRevenue": 0,

      "totalRevenue": 0

    },

    "costBreakdown": {

      "productSupplierCost": 199.99,

      "totalSupplierCost": 0,

      "partnerPaynout": 0,

      "totalcost": 0

    },

    "salesProfit": 0

  },

  {

    "\_id": 53,

    "revenueBreakdown": {

      "productPrice": 499.99,

      "quantityOrdered": 8,

      "currentRevenue": 1999.96,

      "pastRevenue": 1999.96,

      "totalRevenue": 3999.92

    },

    "costBreakdown": {

      "productSupplierCost": 349.99,

      "totalSupplierCost": 2799.92,

      "partnerPaynout": 599.99,

      "totalcost": 3399.91

    },

    "salesProfit": 600.01

  },

  {

    "\_id": 54,

    "revenueBreakdown": {

      "productPrice": 129.99,

      "quantityOrdered": 7,

      "currentRevenue": 0,

      "pastRevenue": 909.93,

      "totalRevenue": 909.93

    },

    "costBreakdown": {

      "productSupplierCost": 89.99,

      "totalSupplierCost": 629.93,

      "partnerPaynout": 136.49,

      "totalcost": 766.42

    },

    "salesProfit": 143.51

  },

  {

    "\_id": 55,

    "revenueBreakdown": {

      "productPrice": 899.99,

      "quantityOrdered": 4,

      "currentRevenue": 1799.98,

      "pastRevenue": 1799.98,

      "totalRevenue": 3599.96

    },

    "costBreakdown": {

      "productSupplierCost": 699.99,

      "totalSupplierCost": 2799.96,

      "partnerPaynout": 539.99,

      "totalcost": 3339.95

    },

    "salesProfit": 260.01

  }

]

The following is the console output after successfully running the profits insert function.

Profits calculated!

Profits inserted!

The following is the console output after an unsuccessful run.

Profits calculated!

Error inserting profits:

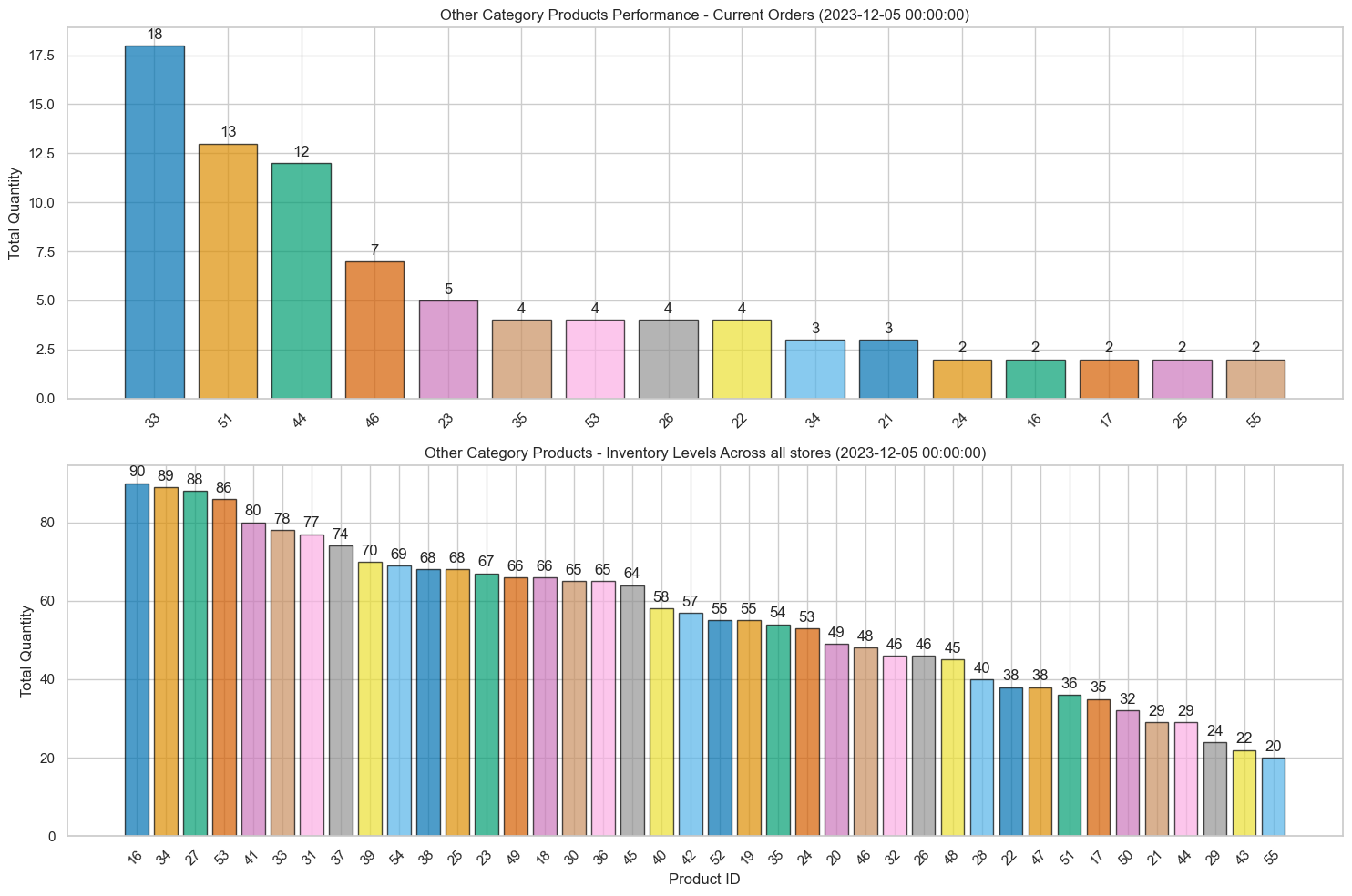
MongoBulkWriteError: E11000 duplicate key error collection: AMAZONE.financial\_summary index: \_id\_ dup key: { \_id: 1 }

**QUERY 5 NUMBER 2**

This query sums up the quantity of products being ordered in the current orders according to their category, then displays them using a bar plot. The bars are in order from most selling to least selling product.

Then we have another graph just beneath it, which will sum up the product category wise quantities. The stores and daily\_inventory\_levels collection are respectively used for fresh and other category. A graph of different colored bars

Description automatically generated



**QUERY 5 NUMBER 3**

This query prints the 3 highest-spending customers across AMAZONE. Here is the output in MongoDB shell.

A screen shot of a computer code

Description automatically generated