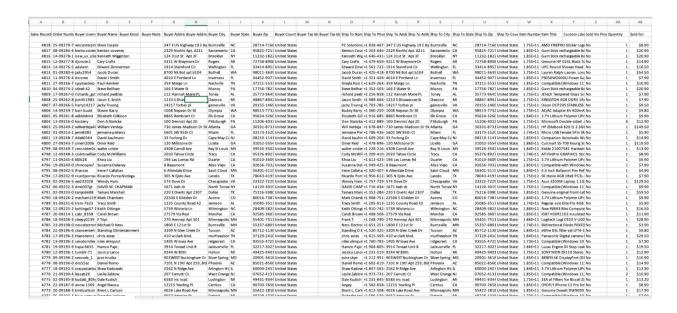
Data Sources

With our reference data set, we generated and manipulated our data set to fit the goal of the project. Our data source contains information on orders, products, stores, manufacturers, shippers, signs, and shipping.

- Order table contains information on the following: product id, store id, order date, quantity sold for orders, product name, product price, total order revenue, total order selling costs, and net profit for orders.
- Product table contains information on the following: product id, name of the product, price of the product, selling cost of products, and manufacturer id.
- Store table contains information on the following: store id, city information of store location, state information of the store location, phone number of store, product id, and shipper id.
- Manufacturer table contains information on the following: manufacturer id, name of the manufacturer, phone number of the manufacturer, product id, and shipper id.
- Shipper table contains information on the following: shipper id, name of shipper, phone number of shipper, store id, manufacturer id, and product id.
- Sign table contains information on the following: manufacturer id, shipper id, product id, and the expiration date of the contract.
- Ship table contains the following: shipper id, product id, store id, and the quantity shipped.

References



E-bay transaction data from the seller's side.

Name of the seller is James Rhee, and the contact number is 540-908-6339.

Screenshot

```
| I- Q1 What are the profit of product for each store in descending order?

© SELECT d.proId, d.proName, f.Unit_Profit, SUM(o.qtySold) AS 'QTY sold', f.Unit_Profit*SUM(o.qtySold) AS 'Profit', s.strId, s.strLocationCity |
FROM [YLY.Store] s, [YLY.Product] d, [YLY.Order] o,(
SELECT (p.proPrice - p.proSellingCost) AS 'Unit_Profit', p.proId
                               FROM [YLY.Product] p
                               GROUP BY p.proPrice, p.proSellingCost, p.proId) f
  WHERE d.proId = f.proId
      AND f.proId = o.proId
       AND o.strId = s.strId
       AND s.strLocationCity = 'Greenbelt'
  GROUP BY d.proId, d.proName,f.Unit_Profit, s.strId, s.strLocationCity
  ORDER BY Profit DESC
   + 4
 Results 📲 Messages
   prold
                  proName
                                              Unit_Profit QTY sold Profit
                                                                            strld
                                                                                       strLocationCity
   174371000000 Thermal Fuse BF172 250V 10A
                                             7.37
                                                         98
                                                                   722.26 c0000001
                                                                                       Greenbelt
   184526000000 UK-201 Battery Charger
                                              15.68
                                                         37
                                                                    580.16 c0000001
                                                                                      Greenbelt
   174486000000 8 GB SD Memory card
                                              5.44
                                                         45
                                                                   244.80 c0000001
                                                                                       Greenbelt
   184599000000 2 EA of Thermistor
                                              11.02
                                                         9
                                                                   99.18
                                                                            c0000001
                                                                                       Greenbelt
   184416000000 3.7V Lithium Polymer Battery
                                             4.70
                                                                   28.20
                                                                            c0000001 Greenbelt
ESELECT d.proId, d.proName, f.Unit_Profit, SUM(o.qtySold) AS 'QTY sold', f.Unit_Profit*SUM(o.qtySold) AS 'Profit', s.strId, s.strLocationCity
  FROM [YLY.Store] s, [YLY.Product] d, [YLY.Order] o,(

SELECT (p.proPrice - p.proSellingCost) AS 'Unit_Profit', p.proId
                              FROM [YLY.Product] p
                              GROUP BY p.proPrice, p.proSellingCost, p.proId) f
  WHERE d.proId = f.proId
     AND f.proId = o.proId
AND o.strId = s.strId
      AND s.strLocationCity = 'Hyattsville'
  GROUP BY d.proId, d.proName,f.Unit_Profit, s.strId, s.strLocationCity
  ORDER BY Profit DESC
% - 4
Results 🗐 Messages
  prold
                 proName
                                             Unit Profit QTY sold Profit strld
                                                                                      strLocationCity
  184526000000 UK-201 Battery Charger
                                             15.68
                                                         18
                                                                   282.24 c0000003 Hyattsville
   184599000000 2 EA of Thermistor
                                              11.02
                                                         23
                                                                   253.46 c0000003
                                                                                      Hyattsville
   174486000000 8 GB SD Memory card
                                                                   184.96 c0000003 Hyattsville
                                             5.44
                                                         34
                                                                  131.60 c0000003 Hyattsville
   184416000000 3.7V Lithium Polymer Battery
                                             4.70
                                                         28
   174371000000 Thermal Fuse BF172 250V 10A 7.37
                                                         12
                                                                   88.44 c0000003 Hyattsville
 SELECT d.proId, d.proName, f.Unit_Profit, SUM(o.qtySold) AS 'QTY sold', f.Unit_Profit*SUM(o.qtySold) AS 'Profit', s.strId, s.strLocationCity
   FROM [YLY.Store] s, [YLY.Product] d, [YLY.Order] o,(

SELECT (p.proPrice - p.proSellingCost) AS 'Unit_Profit', p.proId
                               FROM [YLY.Product] p
                               GROUP BY p.proPrice, p.proSellingCost, p.proId) f
   WHERE d.proId = f.proId
       AND f.proId = o.proId
        AND o.strId = s.strId
        AND s.strLocationCity = 'College Park'
                                                                                                                                           Ι
  GROUP BY d.proId, d.proName,f.Unit_Profit, s.strId, s.strLocationCity
ORDER BY Profit DESC
% - 4
Results Messages
                                              Unit_Profit QTY sold Profit
                                                                                        strLocationCity
   174371000000 Thermal Fuse BF172 250V 10A 7.37
                                                         265
                                                                   1953.05 c0000002
                                                                                       College Park
    174486000000 8 GB SD Memory card
                                              5 44
                                                         112
                                                                   609.28
                                                                             c0000002
                                                                                       College Park
    184416000000 3.7V Lithium Polymer Battery
                                              4.70
                                                          90
                                                                   423.00
                                                                             c0000002
                                                                                       College Park
    184526000000 UK-201 Battery Charger
                                              15.68
                                                         6
                                                                   94.08
                                                                             c0000002
                                                                                       College Park
    184599000000 2 EA of Thermistor
                                              11.02
                                                                  11.02
                                                                             c0000002 College Park
                                                         1
```

```
--Q2 What are the manufacturer name, shipper name, and expiration date for each sign?
    SELECT m.mfcName, h.shpName, s.expDate
     FROM [YLY.Sign] s, [YLY.Shipper] h, [YLY.Manufacturer] m
     WHERE s.mfcId = m.mfcId AND s.shpId = h.shpId
     ORDER BY s.expDate
100 % 🕶 🖣 🗆
 ■ Results 🗐 Messages
                        shpName
                                      expDate
      mfcName
      IN&OUT Elec.
                        Bravo Shipping
                                       2023-02-01
      IN&OUT Elec.
                        Safe Shipping
                                       2023-06-01
 3
      IN&OUT Elec.
                        Safe Shipping
                                       2023-06-06
      SuperDuperDevice
                        Bravo Shipping
                                     2023-06-27
 5
      IN&OUT Elec.
                        Bravo Shipping
                                       2023-07-15
 6
      SuperDuperDevice
                        Safe Shipping
                                       2023-12-01
 7
      SuperDuperDevice |
                        Safe Shipping
                                       2023-12-27
 8
      FiveDevices
                        Safe Shipping
                                       2024-08-12
```

```
±--Q3 What are the product name, inventory turnover ratio,
          -- and store location in descending order assuming that the number of each product is 1,000?
    SELECT p.proName, (o.qtySold/1000) AS 'Inventory_Turnover_Ratio', s.strLocationCity
      FROM [YLY.Order] o, [YLY.Product] p, [YLY.Store] s
      WHERE p.proId = o.proId
               AND o.strId = s.strId
      ORDER BY Inventory_Turnover_Ratio DESC
100 % → ◀ ■
 Ⅲ Results 📳 Messages
      proName
                                   Inventory_Turnover_Ratio
                                                           strLocationCity
       Thermal Fuse BF172 250V 10A
                                   0.265000
                                                            College Park
 2
       8 GB SD Memory card
                                   0.112000
                                                            College Park
 3
       Thermal Fuse BF172 250V 10A
                                   0.098000
                                                            Greenbelt
 4
       3.7V Lithium Polymer Battery
                                   0.090000
                                                            College Park
 5
       8 GB SD Memory card
                                   0.045000
                                                            Greenbelt
 6
       UK-201 Battery Charger
                                   0.037000
                                                            Greenbelt
 7
       8 GB SD Memory card
                                   0.034000
                                                            Hyattsville
 8
       3.7V Lithium Polymer Battery
                                   0.028000
                                                           Hyattsville
 9
       2 EA of Thermistor
                                   0.023000
                                                            Hyattsville
      UK-201 Battery Charger
                                   0.018000
                                                            Hyattsville
       Thermal Fuse BF172 250V 10A
 11
                                   0.012000
                                                            Hyattsville
 12
       2 EA of Thermistor
                                   0.009000
                                                            Greenbelt
 13
                                                            College Park
      UK-201 Battery Charger
                                   0.006000
 14
       3.7V Lithium Polymer Battery
                                   0.006000
                                                            Greenbelt
 15
       2 EA of Thermistor
                                   0.001000
                                                            College Park
```

```
SELECT p.proName, (o.qtySold/1000) AS 'Inventory Turnover Ratio', s.strLocationCity
     FROM [YLY.Order] o, [YLY.Product] p, [YLY.Store] s
     WHERE o.qtySold > 0
          AND p.proId = o.proId
          AND o.strId = s.strId
     ORDER BY Inventory_Turnover_Ratio
100 % 🕝 🖣 🔳
Ⅲ Results

    Messages

      proName
                                 Inventory_Turnover_Ratio
                                                         strLocationCity
      2 EA of Thermistor
                                  0.001000
                                                         College Park
 2
                                                         College Park
      UK-201 Battery Charger
                                  0.006000
 3
      3.7V Lithium Polymer Battery
                                 0.006000
                                                         Greenbelt
 4
      2 EA of Thermistor
                                  0.009000
                                                         Greenbelt
 5
      Thermal Fuse BF172 250V 10A
                                 0.012000
                                                         Hyattsville
 6
      UK-201 Battery Charger
                                                         Hyattsville
                                  0.018000
 7
      2 EA of Thermistor
                                  0.023000
                                                         Hyattsville
 8
      3.7V Lithium Polymer Battery
                                  0.028000
                                                         Hyattsville
 9
      8 GB SD Memory card
                                  0.034000
                                                         Hyattsville
 10
      UK-201 Battery Charger
                                  0.037000
                                                         Greenbelt
 11
      8 GB SD Memory card
                                  0.045000
                                                         Greenbelt
 12
      3.7V Lithium Polymer Battery
                                  0.090000
                                                         College Park
      Thermal Fuse BF172 250V 10A
 13
                                 0.098000
                                                         Greenbelt
 14
      8 GB SD Memory card
                                                         College Park
                                  0.112000
 15
      Thermal Fuse BF172 250V 10A
                                 0.265000
                                                         College Park
       --Q4 What are the row number, the dense rank, and the details of order table?
     SELECT ROW_NUMBER() OVER (ORDER BY o.qtySold DESC) AS 'Row Number',

DENSE_RANK() OVER (ORDER BY o.qtySold DESC) AS 'Dense Rank',
            o.*
       FROM [YLY.Order] o
        - 4 -
100 %
 📰 Results 📳 Messages
                                                                                   qtySold
        Row Number
                        Dense Rank
                                                                     odrDate
                                       prold
                                                         strld
                                       174371000000
                                                         c0000002
                                                                     2022-10-26
                                                                                    265
        1
                        1
  2
        2
                        2
                                       174486000000
                                                         c0000002
                                                                     2022-10-13
                                                                                   112
  3
        3
                        3
                                       174371000000
                                                         c0000001
                                                                     2022-10-09
                                                                                    98
        4
  4
                        4
                                       184416000000
                                                         c0000002
                                                                     2022-10-27
                                                                                    90.
        5
                        5
  5
                                       174486000000
                                                                     2022-10-11
                                                         c0000001
                                                                                    45
  6
        6
                        6
                                                         c0000001
                                                                     2022-10-03
                                                                                    37
                                       184526000000
  7
        7
                        7
                                                                     2022-10-08
                                       174486000000
                                                         c0000003
                                                                                   34
  8
        8
                        8
                                                                                    28
                                       184416000000
                                                         c0000003
                                                                     2022-10-11
                        9
  9
        9
                                       184599000000
                                                         c0000003
                                                                     2022-10-30
                                                                                   23
  10
        10
                        10
                                       184526000000
                                                         c0000003
                                                                     2022-10-31
                                                                                   18
  11
        11
                        11
                                       174371000000
                                                         c0000003
                                                                     2022-10-15
                                                                                   12
                        12
  12
        12
                                       184599000000
                                                         c0000001
                                                                     2022-10-28
                                                                                   9
  13
                        13
                                                                     2022-10-25
                                                                                   6
        13
                                       184526000000
                                                         c0000002
                        13
  14
        14
                                       184416000000
                                                         c0000001
                                                                     2022-10-29
                                                                                   6
  15
        15
                        14
                                       184599000000
                                                         c0000002
                                                                     2022-10-08
                                                                                   1
```

```
--Q5 What are the details of order with the accumulated product quantity sold within each store?
    SELECT o.*, SUM(o.qtySold) OVER (
          PARTITION BY o.strId
          ORDER BY o.qtySold DESC
          ROWS UNBOUNDED PRECEDING ) AS 'Accumulated Product Quantity Sold'
      FROM [YLY.Order] o
100 % 🕝 🖣 🔳
 Ⅲ Results 📳 Messages
      prold
                    strld
                                                 Accumulated Product Quantity Sold
                               odrDate:
                                          qtySold
      174371000000 c0000001
                               2022-10-09 98
                                                  98
  2
      174486000000 c0000001
                               2022-10-11
                                          45
                                                  143
  3
      184526000000 c0000001
                               2022-10-03 37
                                                  180
  4
      184599000000 c0000001
                               2022-10-28
                                                  189
                                          9
  5
      184416000000 c0000001
                               2022-10-29
                                                  195
                                          6
  6
      174371000000 c0000002 2022-10-26 265
                                                  265
  7
       174486000000 c0000002
                               2022-10-13 112
                                                  377
  8
      184416000000 c0000002 2022-10-27
                                          90
                                                  467
      184526000000 c0000002 2022-10-25 6
  9
                                                  473
  10
      184599000000 c0000002 2022-10-08 1
                                                  474
                                                  34
  11
      174486000000 c0000003 2022-10-08 34
 12
      184416000000 c0000003 2022-10-11 28
                                                  62
  13
       184599000000
                    c0000003
                               2022-10-30
                                          23
                                                  85
  14
      184526000000 c0000003
                               2022-10-31 18
                                                  103
  15
      174371000000 c0000003 2022-10-15 12
                                                  115
    --Q6 How many products did each store sold within 7 days from the end day of October?
  SELECT p.strid , ISNULL([25],0) AS '10/25',ISNULL([26],0) AS '10/26',ISNULL([27],0) AS '10/27',ISNULL([28],0) AS '10/28',
       ISNULL([29],0) AS '10/29', ISNULL([30],0) AS '10/30', ISNULL([31],0) AS '10/31'
    FROM (
        SELECT o.qtySold, o.strId, DAY(o.odrDate) AS day
        FROM [YLY.Order] o) m
   PIVOT (SUM(m.qtySold) FOR m.day IN ([25],[26],[27],[28],[29],[30],[31])) p
100 % - 4
⊞ Results 📳 Messages
            10/25 10/26 10/27 10/28 10/29 10/30 10/31
    strid
                0
    c0000001 0
                        0
                              9
                                    6
                                          0
                                                0
                                                0
2
     c0000002 6
                  265
                        90
                              0
                                    0
                                          0
    c0000003 0
                        0
                              0
                                    0
                                          23
                                                18
```