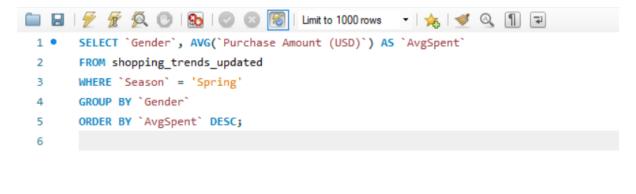
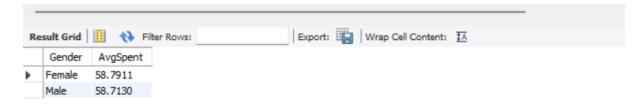
## Task 3: SQL for Data Analysis

1) Use SELECT, WHERE, ORDER BY, and GROUP BY



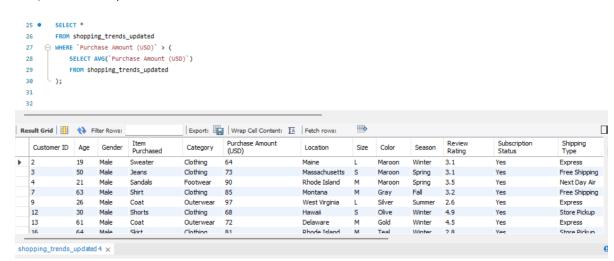


2) Use JOINS (INNER, LEFT, RIGHT)

```
10
        -- LEFT JOIN
 11
 12 • SELECT s. Customer ID', s. Shipping Type', c. Cost'
 13
       FROM shopping_trends_updated s
       LEFT JOIN shipping_cost c
 14
       ON s. Shipping Type = c. Shipping Type;
 16
Export: Wrap Cell Content: 🖽 Fetch rows:
  Customer ID Shipping Type
                         Cost
             Express
                         10
             Express
             Free Shipping
                        20
             Next Day Air
             Free Shipping
                         O
             Standard
  6
             Free Shipping
                         0
             Free Shipping 0
             Evnress
Result 3 ×
```

## Task 3: SQL for Data Analysis

## 3) Write subqueries



4) Use aggregate functions (SUM, AVG)

```
SELECT `Location`, COUNT(*) AS `TotalOrders`,
  32 •
                  AVG('Purchase Amount (USD)') AS 'AvgSpend'
  33
           FROM shopping_trends_updated
          GROUP BY 'Location'
  35
          ORDER BY 'AvgSpend' DESC;
  36
          SELECT `Location`, COUNT(*) AS `TotalOrders`,
                  AVG(`Purchase Amount (USD)`) AS `AvgSpend`
  38
           FROM shopping_trends_updated
  39
  40
          GROUP BY 'Location'
           ORDER BY 'AvgSpend' DESC;
  41
Result Grid
                                                 Export: Wrap Cell Content: IA
                Filter Rows:
    Location
                  TotalOrders
                               AvgSpend
   Alaska
                              67.5972
                 74
                              66.5676
   Pennsylvania
   Arizona
                 65
                              66.5538
   West Virginia
                 81
                              63.8765
   Nevada
                 87
                              63.3793
   Washington
                 73
                              63.3288
   North Dakota
                 83
                              62.8916
   Virginia
                 77
                              62.8831
   Utah
                 71
                              62.5775
Result 5
            Result 6 ×
```

## Task 3: SQL for Data Analysis

```
5) Create views for analysis
  43
          CREATE VIEW CategorySalesSummary AS
          SELECT
  44
             Category,
  45
             count(*) AS ItemsSold,
  46
             SUM('Purchase Amount (USD)') AS TotalSales
  47
          FROM shopping_trends_updated
  48
          group by Category;
  49
          SELECT * FROM categorysalessummary LIMIT 10;
  50 •
Export: Wrap Cell Conter
    Category
               ItemsSold
                        TotalSales
   Clothing
               1737
                         104264
               599
   Footwear
                         36093
   Outerwear
               324
                         18524
   Accessories 1240
                         74200
   6) Optimize queries with indexes
          CREATE INDEX idx_gender ON shopping_trends_updated('Gender');
 56 •
          CREATE INDEX idx_location ON shopping_trends_updated(`Location`);
 57
          SHOW INDEXES FROM shopping trends updated;
 59
                                             Export: Wrap Cell Content: 1
Result Grid Filter Rows:
   Table
                             Non_unique
                                          Key_name
                                                        Seq_in_index
                                                                      Column
   shopping trends updated
                                          idx gender
                                                                      Gender
   shopping_trends_updated
                                          idx_location
                                                                      Location
                             1
                                                       1
```

Result 12 X

Form Editor

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