

Dataset 1: customers

This dataset contains customer information. Each row represents a different customer.

- CustomerID: 1

Explanation: This is a unique identifier for the customer. Here, "1" represents the first customer in the dataset.

- FirstName: John

Explanation: The customer's first name is "John."

- LastName: Doe

Explanation: The customer's last name is "Doe."

- Email: johndoe@example.com

Explanation: The email address of the customer is "johndoe@example.com," used for communication purposes.

- PhoneNumber: 123-456-7890

Explanation: The contact number for John Doe is "123-456-7890."

- CustomerID: 2

Explanation: This is a unique identifier for the second customer.

- FirstName: Jane

Explanation: The customer's first name is "Jane."

- LastName: Smith

Explanation: The customer's last name is "Smith."

- Email: janesmith@example.com

Explanation: The email address of the customer is "janesmith@example.com."

- PhoneNumber: 234-567-8901

Explanation: The contact number for Jane Smith is "234-567-8901."

- CustomerID: 3

Explanation: This is a unique identifier for the third customer.

- FirstName: Jim

Explanation: The customer's first name is "Jim."

- LastName: Brown

Explanation: The customer's last name is "Brown."

- Email: jimbrown@example.com

Explanation: The email address of the customer is "jimbrown@example.com."

- PhoneNumber: 345-678-9012

Explanation: The contact number for Jim Brown is "345-678-9012."

- CustomerID: 4

Explanation: This is a unique identifier for the fourth customer.

- FirstName: Jack

Explanation: The customer's first name is "Jack."

- LastName: Johnson

Explanation: The customer's last name is "Johnson."

- Email: jackjohnson@example.com

Explanation: The email address of the customer is "jackjohnson@example.com."

- PhoneNumber: 456-789-0123

Explanation: The contact number for Jack Johnson is "456-789-0123."

- CustomerID: 5

Explanation: This is a unique identifier for the fifth customer.

- FirstName: Jill

Explanation: The customer's first name is "Jill."

- LastName: Williams

Explanation: The customer's last name is "Williams."

- Email: jillwilliams@example.com

Explanation: The email address of the customer is "jillwilliams@example.com."

- PhoneNumber: 567-890-1234

Explanation: The contact number for Jill Williams is "567-890-1234."

Dataset 2: orders

This dataset contains order details, where each row represents a unique order placed by a customer.

- OrderID: 1001

Explanation: This is a unique identifier for the first order.

- CustomerID: 1

Explanation: This order was placed by the customer with CustomerID "1" (John Doe).

- OrderDate: 2023-01-15

Explanation: The order was placed on January 15, 2023.

- OrderAmount: 150.50

Explanation: The total amount for this order is \$150.50.

- OrderStatus: Shipped

Explanation: The order status is "Shipped," meaning it has been sent out to the customer.

- OrderID: 1002

Explanation: This is a unique identifier for the second order.

- CustomerID: 2

Explanation: This order was placed by the customer with CustomerID "2" (Jane Smith).

- OrderDate: 2023-02-20

Explanation: The order was placed on February 20, 2023.

- OrderAmount: 250.00

Explanation: The total amount for this order is \$250.00.

- OrderStatus: Processing

Explanation: The order status is "Processing," meaning it is currently being prepared.

- OrderID: 1003

Explanation: This is a unique identifier for the third order.

- CustomerID: 1

Explanation: This order was placed by the customer with CustomerID "1" (John Doe).

- OrderDate: 2023-03-10

Explanation: The order was placed on March 10, 2023.

- OrderAmount: 300.75

Explanation: The total amount for this order is \$300.75.

- OrderStatus: Delivered

Explanation: The order status is "Delivered," meaning it has been delivered to the customer.

- OrderID: 1004

Explanation: This is a unique identifier for the fourth order.

- CustomerID: 3

Explanation: This order was placed by the customer with CustomerID "3" (Jim Brown).

- OrderDate: 2023-04-05

Explanation: The order was placed on April 5, 2023.

- OrderAmount: 75.25

Explanation: The total amount for this order is \$75.25.

- OrderStatus: Cancelled

Explanation: The order status is "Cancelled," meaning the order was cancelled and not fulfilled.

- OrderID: 1005

Explanation: This is a unique identifier for the fifth order.

- CustomerID: 4

Explanation: This order was placed by the customer with CustomerID "4" (Jack Johnson).

- OrderDate: 2023-05-25

Explanation: The order was placed on May 25, 2023.

- OrderAmount: 500.00

Explanation: The total amount for this order is \$500.00.

- OrderStatus: Shipped

Explanation: The order status is "Shipped," meaning it has been sent out to the customer.

Dataset 3: products

This dataset lists the products available for purchase, with each row representing a different product.

- ProductID: 101

Explanation: This is a unique identifier for the first product in the dataset.

- ProductName: Widget A

Explanation: The name of the product is "Widget A."

- Category: Category 1

Explanation: The product belongs to "Category 1."

- Price: 25.00

Explanation: The price of the product is \$25.00.

- StockQuantity: 100

Explanation: There are 100 units of "Widget A" available in stock.

- ProductID: 102

Explanation: This is a unique identifier for the second product in the dataset.

- ProductName: Widget B

Explanation: The name of the product is "Widget B."

- Category: Category 2

Explanation: The product belongs to "Category 2."

- Price: 50.00

Explanation: The price of the product is \$50.00.

- StockQuantity: 200

Explanation: There are 200 units of "Widget B" available in stock.

- ProductID: 103

Explanation: This is a unique identifier for the third product in the dataset.

- ProductName: Widget C

Explanation: The name of the product is "Widget C."

- Category: Category 1

Explanation: The product belongs to "Category 1."

- Price: 75.00

Explanation: The price of the product is \$75.00.

- StockQuantity: 150

Explanation: There are 150 units of "Widget C" available in stock.

- ProductID: 104

Explanation: This is a unique identifier for the fourth product in the dataset.

- ProductName: Widget D

Explanation: The name of the product is "Widget D."

- Category: Category 3

Explanation: The product belongs to "Category 3."

- Price: 100.00

Explanation: The price of the product is \$100.00.

- StockQuantity: 75

Explanation: There are 75 units of "Widget D" available in stock.

- ProductID: 105

Explanation: This is a unique identifier for the fifth product in

the dataset.

- ProductName: Widget E

Explanation: The name of the product is "Widget E."

- Category: Category 2

Explanation: The product belongs to "Category 2."

- Price: 125.00

Explanation: The price of the product is \$125.00.

- StockQuantity: 50

Explanation: There are 50 units of "Widget E" available in stock.

Dataset 4: order_items

This dataset details the items within each order. Each row represents a specific product ordered within a particular order.

- OrderItemID: 1

Explanation: This is a unique identifier for the first item in the order.

- OrderID: 1001

Explanation: This item belongs to OrderID "1001."

- ProductID: 101

Explanation: The product ordered is "Widget A," identified by ProductID "101."

- Quantity: 2

Explanation: The customer ordered 2 units of this product.

- UnitPrice: 25.00

Explanation: The price per unit of the product is \$25.00.

- OrderItemID: 2

Explanation: This is a unique identifier for the second item in the order.

- OrderID: 1001

Explanation: This item belongs to OrderID "1001."

- ProductID: 102

Explanation: The product ordered is "Widget B," identified by ProductID "102."

- Quantity: 1

Explanation: The customer ordered 1 unit of this product.

- UnitPrice: 50.00

Explanation: The price per unit of the product is \$50.00.

- OrderItemID: 3

Explanation: This is a unique identifier for the third item in the order.

- OrderID: 1002

Explanation: This item belongs to OrderID "1002."

- ProductID: 103

Explanation: The product ordered is "Widget C," identified by ProductID "103."

- Quantity: 3

Explanation: The customer ordered 3 units of this product.

- UnitPrice: 75.00

Explanation: The price per unit of the product is \$75.00.

- OrderItemID: 4

Explanation: This is a unique identifier for the fourth item in the order.

- OrderID: 1003

Explanation: This item belongs to OrderID "1003."

- ProductID: 101

Explanation: The product ordered is "Widget A," identified by ProductID "101."

- Quantity: 1

Explanation: The customer ordered 1 unit of this product.

- UnitPrice: 25.00

Explanation: The price per unit of the product is \$25.00.

- OrderItemID: 5

Explanation: This is a unique identifier for the fifth item in the order.

- OrderID: 1003

Explanation: This item belongs to OrderID "1003."

- ProductID: 104

Explanation: The product ordered is "Widget D," identified by ProductID "104."

- Quantity: 2

Explanation: The customer ordered 2 units of this product.

- UnitPrice: 100.00

Explanation: The price per unit of the product is \$100.00.

- OrderItemID: 6

Explanation: This is a unique identifier for the sixth item in the order.

- OrderID: 1004

Explanation: This item belongs to OrderID "1004."

- ProductID: 105

Explanation: The product ordered is "Widget E," identified by ProductID "105."

- Quantity: 1

Explanation: The customer ordered 1 unit of this product.

- UnitPrice: 125.00

Explanation: The price per unit of the product is \$125.00.

- OrderItemID: 7

Explanation: This is a unique identifier for the seventh item in the order.

- OrderID: 1005

Explanation: This item belongs to OrderID "1005."

- ProductID: 102

Explanation: The product ordered is "Widget B," identified by ProductID "102."

- Quantity: 4

Explanation: The customer ordered 4 units of this product.

- UnitPrice: 50.00

Explanation: The price per unit of the product is \$50.00.

- OrderItemID: 8

Explanation: This is a unique identifier for the eighth item in the order.

- OrderID: 1005

Explanation: This item belongs to OrderID "1005."

- ProductID: 103

Explanation: The product ordered is "Widget C," identified by ProductID "103."

- Quantity: 2

Explanation: The customer ordered 2 units of this product.

- UnitPrice: 75.00

Explanation: The price per unit of the product is \$75.00.

5. Total Revenue Calculation from Order Items

The total revenue generated by each product is calculated by multiplying the quantity sold by the unit price for each item in the order items dataset. Below are the calculations for each order item related to the products:

1. Order Item 1 (ProductID 101):

- Quantity: 2
- Unit Price: \$25.00
- Revenue: $2 \times 25.00 = 50.00$

2. Order Item 2 (ProductID 102):

- Quantity: 1
- Unit Price: \$50.00

- Revenue: $1 \times 50.00 = 50.00$ $1 \times 50.00 = 50.00$ $1 \times 50.00 = 50.00$
- 3. **Order Item 3** (ProductID 103):
 - Quantity: 3
 - Unit Price: \$75.00
 - Revenue: $3 \times 75.00 = 225.00$ $3 \times 75.00 = 225.00$ $3 \times 75.00 = 225.00$
- 4. **Order Item 4** (ProductID 101):
 - Quantity: 1
 - Unit Price: \$25.00
 - Revenue: $1 \times 25.00 = 25.00$ $1 \times 25.00 = 25.00$ $1 \times 25.00 = 25.00$
- 5. **Order Item 5** (ProductID 104):
 - Quantity: 2
 - Unit Price: \$100.00
 - Revenue: $2 \times 100.00 = 200.00$ $2 \times 100.00 = 200.00$ $2 \times 100.00 = 200.00$
- 6. **Order Item 6** (ProductID 105):
 - Quantity: 1
 - Unit Price: \$125.00
 - Revenue: $1 \times 125.00 = 125.00$ $1 \times 125.00 = 125.00$ $1 \times 125.00 = 125.00$
- 7. **Order Item 7** (ProductID 102):
 - Quantity: 4
 - Unit Price: \$50.00
 - Revenue: $4 \times 50.00 = 200.00$ $4 \times 50.00 = 200.00$ $4 \times 50.00 = 200.00$
- 8. **Order Item 8** (ProductID 103):
 - Quantity: 2
 - Unit Price: \$75.00
 - Revenue: $2 \times 75.00 = 150.00$ $2 \times 75.00 = 150.00$ $2 \times 75.00 = 150.00$

Total Revenue Summary by Product

The total revenue generated by each product based on the calculations above is as follows:

- **ProductID 101:**
 - Total Revenue: $50.00 + 25.00 = 75.00$ $50.00 + 25.00 = 75.00$ $50.00 + 25.00 = 75.00$
- **ProductID 102:**
 - Total Revenue: $50.00 + 200.00 = 250.00$ $50.00 + 200.00 = 250.00$ $50.00 + 200.00 = 250.00$

- **ProductID 103:**
 - Total Revenue: $225.00 + 150.00 = 375.00$
 $225.00 + 150.00 = 375.00$
- **ProductID 104:**
 - Total Revenue: $200.00 + 200.00 = 400.00$
- **ProductID 105:**
 - Total Revenue: $125.00 + 125.00 = 250.00$

6. Overall Insights

The analysis reveals the following insights:

- Widget C (ProductID 103) generated the highest total revenue of **\$375.00**, demonstrating strong demand.
- ProductID 102 also performed well, with a total revenue of **\$250.00**.
- The revenues calculated for each product indicate the effectiveness of pricing strategies and highlight areas for potential marketing focus.