Gadgets4You

Transaction Data

Objective

We want to analyze transaction data for Gadgets4You to gain more insights into the current state of business, as well as support data-driven decision making.

Time Range and Unique Transactions

To kick things off, we first need to determine the data range of the transactions provided in the data set. According to the calculations, the first entry was made on **2018.12.01**, and the last one - on **2019.12.09.**

Unique transactions in 2018:

1,552

Unique transactions in 2019:

18,237

Best-selling Product

Cream Hanging Heart T-Light Holder (N 85123A)

Sold **2,336 times**

Products that didn’t sell well

35 products were only sold once within the timeframe and containing 'Blue' in their name, such as Midnight Blue Crystal Drop Earrings, Acrylic Hanging Jewel Blue, etc.

Unique Products Per Transaction

The average number of unique products (regardless of the quantity) per transaction: **27**

The Average Cart Value

3,182€

Country with the highest cart value: **Netherlands**

Country with the lowest cart value: **Saudi Arabia**

Top-5 purchasers in 2019

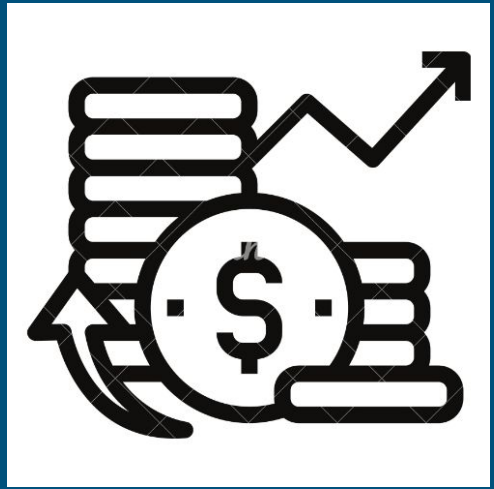
1 - United Kingdom

2 - Germany

3 - France

4 - EIRE

5 - Belgium



Solutions:

1. What is the time range of the data set (first day and last day)?

```
SELECT MIN(Date), MAX(Date)

FROM gadgets4you-421107.gadgets4you.gadgets4you
```

Solutions:

2. How many unique transactions have been recorded in 2018?

```
SELECT COUNT(DISTINCT TransactionNo)
FROM `gadgets4you-421107.gadgets4you.gadgets4you`
WHERE Date >= '2018-01-01' AND Date < '2019-01-01';
```

Solutions:

3. How many unique transactions have been recorded in 2019?

```
SELECT COUNT(DISTINCT TransactionNo)
FROM `gadgets4you-421107.gadgets4you.gadgets4you`
WHERE Date >= '2019-01-01' AND Date <= '2019-12-31';
```

Solutions:

4. What is the name and number of the bestselling product and how many times has it been sold?

```
SELECT ProductNo, ProductName,COUNT(TransactionNo) AS times_sold

FROM `gadgets4you-421107.gadgets4you.gadgets4you`

GROUP BY ProductNo, ProductName

ORDER BY times_sold DESC

LIMIT 1;
```

Solutions:

5. Which products have been sold only once within the time range and have ‘Blue’ in their name?

```
SELECT ProductNo, ProductName

FROM gadgets4you-421107.gadgets4you.gadgets4you

WHERE ProductName LIKE '%Blue%' AND Date >= '2018-01-01' AND Date < '2019-01-01'

GROUP BY ProductNo, ProductName

HAVING COUNT(TransactionNo) = 1;
```

Solutions:

6. What is the average number of unique products (regardless of the quantity) per transaction?

```
SELECT COUNT(ProductName) / COUNT(DISTINCT TransactionNo)

FROM gadgets4you-421107.gadgets4you.gadgets4you
```

Solutions:

7. What is the average cart value?

```
SELECT AVG(cart_value)
FROM (
    SELECT TransactionNo, SUM(Quantity * Price) AS cart_value
    FROM gadgets4you-421107.gadgets4you.gadgets4you
    GROUP BY TransactionNo
)
```

Solutions:

8. What’s the country with the highest average cart value and what’s the one with the lowest?

Highest:

```
SELECT Country, AVG(cart_value) AS average_cart_value
FROM (
    SELECT Country, SUM(Quantity * Price) AS cart_value
    FROM gadgets4you-421107.gadgets4you.gadgets4you
    GROUP BY TransactionNo, Country
) AS country_totals
GROUP BY Country
ORDER BY average_cart_value DESC
LIMIT 1;
```

Solutions:

8. What’s the country with the highest average cart value and what’s the one with the lowest?

Lowest:

```
SELECT Country, AVG(cart_value) AS average_cart_value
FROM (
    SELECT Country, SUM(Quantity * Price) AS cart_value
    FROM gadgets4you-421107.gadgets4you.gadgets4you
    GROUP BY TransactionNo, Country
) AS country_totals
GROUP BY Country
ORDER BY average_cart_value ASC
```

Solutions:

9. Customers from which countries have placed the most orders in 2019?

```
SELECT Country, COUNT(DISTINCT TransactionNo) AS num_orders

FROM gadgets4you-421107.gadgets4you.gadgets4you

WHERE Date >= '2019-01-01' AND Date < '2020-01-01'

GROUP BY Country

ORDER BY num_orders DESC;
```