Power BI Analysis Report

This report includes step-by-step details of data preparation, SQL queries, and insights derived from the provided datasets. Screenshots have been added for clarity and illustration.

Screenshot 1

Figure 1 illustrates a key component of the data preparation or query process. These screenshots provide visual proof of the intermediate steps.

order_lines

order_id	product_id	price	quantity
47772	1929	110.25	1
47772	3785	16.5	1
47772	3967	39.0	1
47772	5837	36.75	1
56496	2591	171.75	1
56496	2928	101.25	1
56496	3419	96.75	1
56496	4566	328.5	1
56496	5211	119.25	1
56496	5345	44.25	1
56496	6048	39.0	10
56496	7350	14.25	2
56496	8165	18.0	3
56496	10135	29.25	1
60135	3950	39.75	1
60135	5284	117.0	1
60135	5825	21.75	1
60135	12770	96.75	1

Screenshot 2

Figure 2 illustrates a key component of the data preparation or query process. These screenshots provide visual proof of the intermediate steps.

orders

order_date	order_id	warehouse_id	user_id
2017-08-01	910381	38	11473.0
2017-08-01	918510	276	52410.0
2017-08-01	909015	208	10155.0
2017-08-01	915064	2	60635.0
2017-08-01	914110	38	17185.0
2017-08-01	916127	24	60455.0
2017-08-01	916187	24	91612.0
2017-08-01	903618	252	56385.0
2017-08-01	903545	274	85943.0
2017-08-01	904227	35	21089.0
2017-08-01	911506	274	87620.0
2017-08-01	914793	32	69964.0
2017-08-01	921553	208	16510.0
2017-08-01	913683	35	21089.0
2017-08-01	903738	54	45093.0
2017-08-01	903798	201	45319.0
2017-08-01	908379	156	82773.0
2017-08-01	896239	163	17138.0

Screenshot 3

Figure 3 illustrates a key component of the data preparation or query process. These screenshots provide visual proof of the intermediate steps.

products

productId	product	category
8	îðîæåíîå îðîâêà èç îðåíîâêè ïëîäîâ, âàíèëüíîå, ñ ìßãêîé êàðàìåëüþ, â ïëàñòèêîâîì ñòàêàí÷èêå, 1	àìîðîæåííàß ïðîäóêöèß
9	îðîæåíîå îðîâêà èç îðåíîâêè ïëîäîâ, ìîëî÷íîãî øîêîëàäà, â øîêîëàäíî-ñëèâî÷íîé ãëàçóðè, 90 ã	àìîðîæåííàß ïðîäóêöèß
12	îðîæåíîå îðîâêà èç îðåíîâêè ïëîäîâ, êðåì-áðþëå, ëàêîìñòâî, â øîêîëàäíî-ñëèâî÷íîé ãëàçóðè, 90 ã	àìîðîæåííàß ïðîäóêöèß
16	îðîæåíîå îðîâêà èç îðåíîâêè ïëîäîâ, øîêîëàäíîå, ýñêèìî, â øîêîëàäíîé ãëàçóðè, ñ êàêàî-êðóïêîé,	àìîðîæåííàß ïðîäóêöèß
22	îðîæåíîå îðîâêà èç îðåíîâêè ïëîäîâ, ãàóôðåòéíîå âàíèëüíîå, ñ ÷åðíîé ñìîðîäèíîé, ïîëíî, 400 ã	àìîðîæåííàß ïðîäóêöèß
23	îêîëàä Alpen Gold Max Fun c ôðóêòîâûìè êóñî÷êàìè, ñ øèíó÷èìè øàðèêàìè è âçðûâíîé êàðàìåëüþ, 160 ã	ïîäèòåðñêèå èçäåëèß
30	îðîæåíîå îðîâêà èç îðåíîâêè ïëîäîâ, øîêîëàäíîå, ñ øîêîëàäîì, â ïëàñòèêîâîì ñòàêàí÷èêå, 150 ã	àìîðîæåííàß ïðîäóêöèß
38	îðîæåíîå îðîâêà èç îðåíîâêè ïëîäîâ, âàíèëüíîå, ñ áðóñíè÷íîé, â ïëàñòèêîâîì ñòàêàí÷èêå, 150 ã	àìîðîæåííàß ïðîäóêöèß
41	îðîæåíîå îðîâêà èç îðåíîâêè ïëîäîâ, ýñêèìî, ñ ôóíäóêîì, â ìîëî÷íî-øîêîëàäíîé ãëàçóðè, 70 ã	àìîðîæåííàß ïðîäóêöèß
43	îðîæåíîå îðîâêà èç îðåíîâêè ïëîäîâ, êðåì-áðþëå, ýñêèìî, ñ êàðàìåëüþ, â áåëîé ãëàçóðè, 70 ã	àìîðîæåííàß ïðîäóêöèß
49	íåðãåòè÷åñêèé íàïèòîê Adrenaline Game Fuel, áåçàëêîãîëüíûé, ñî âêóñîì ëàéìà è èìáèðß, 449 ìë	åçàëêîãîëüíûå íàïèòêè
52	åëüìåíè èáèðñêàß êîëëåêöèß ëàññè÷åñêàß, èç ãîâßäèíû, ñàèíèíû è ôèëå áåäðà êóðèíîãî, 700 ã	àìîðîæåííàß ïðîäóêöèß
73	îêîëàä Milka ìîëî÷íûé, ñ àðàõèñîì, êàðàìåëüþ, ðèñîâûìè øàðèêàìè è êóêóðóçíûìè õëîïüßìè, 90 ã	ïîäèòåðñêèå èçäåëèß
74	îðîæåíîå îðîâêà èç îðåíîâêè ïëîäîâ, ïîëåî, 2-õ ñëîéíîå, øîêîëàäíîå è âàíèëüíîå, 400 ã	àìîðîæåííàß ïðîäóêöèß
76	ëåá ïøåíè÷íî-ðæàíîé àíèëîâñêèé ïëîìåíñêîå íà ïøåíè÷íîé çàêâàñêå, â íàðåçêå, 275 ã	ëåá è õëåáîáóëî÷íûå èçäåëèß
80	å÷åíûå Milka Sensations, ñ êóñî÷êàìè ìîëî÷íîãî øîêîëàäà è øîêîëàäíîé íà÷èíêîé, 156 ã	ó÷íûå êîíäèòåðñêèå èçäåëèß
81	åëüìåíè èáèðñêàß êîëëåêöèß èðìåíûå, èç ãîâßäèíû, ñàèíèíû è ôèëå áåäðà êóðèíîãî, 700 ã	àìîðîæåííàß ïðîäóêöèß
105	îêîëàä Alpen Gold ìîëî÷íûé, ñ êàðàìåëåçèðîâàííûìè êóñî÷êàìè êàêàî-áîáîâ è êàðàìåëè, 85 ã	îíäèòåðñêèå èçäåëèß
125	ëîéêà àñòàð èðîãîâú îëîåíñêîå âåíñêèé êîíåðòèê, ñ áðóñíèêîé è ßáëîêîì, 70 ã	ëåá è õëåáîáóëî÷íûå èçäåëèß
126	åðáåò îðîâêà èç îðåíîâêè â øîêîëàäíîé ãëàçóðè, ñ ÷åðíîé ñìîðîäèíîé, íà ìàëî÷êå, 70 ã	àìîðîæåííàß ïðîäóêöèß
128	îðîæåíîå îðîâêà èç îðåíîâêè ïëîäîâ, êàêîñòàî, â øîêîëàäíî-ñëèâî÷íîé ãëàçóðè, 90 ã	àìîðîæåííàß ïðîäóêöèß
139	îêîëàä Alpen Gold ìîëî÷íûé, ñ êàðàìåëåçèðîâàííûìè êóñî÷êàìè êàêàî-áîáîâ è ÷åðíèêè, 85 ã	îíäèòåðñêèå èçäåëèß
148	àïèòîê Fuze Tea õîëîäíûé ÷àé, ñ ëåñíûìè ßãîäàìè è ãèáiñêóñîì, íåãàçèðîâàííûé, 500 ìë	åçàëêîãîëüíûå íàïèòêè
154	îðîæåíîå îðîâêà èç îðåíîâêè ïëîäîâ, âàíèëüíîå, ýñêèìî, â øîêîëàäíîé ãëàçóðè, 70 ã	àìîðîæåííàß ïðîäóêöèß
157	íåðãåòè÷åñêèé íàïèòîê Drive Me áåçàëêîãîëüíûé, ñî âêóñîì ßáëîêà è êàðàìåëü, 449 ìë	åçàëêîãîëüíûå íàïèòêè
171	àòåëüíûé òîðò îðîâêà ñî âêóñîì òîïåíîãî ìîêîà, ñãåòòûé è òåìíûé êðåì, 200 ã	ó÷íûå êîíäèòåðñêèå èçäåëèß
173	ûðîê òâîðîæíûé .. ëåêñàíäðîâ ãëàçèðîâàííûé, ñ âàíèëüþ â ìîëî÷íî øîêîëàäå, 26%, 50 ã	îëî÷íàß ïðîäóêöèß
180	íåðãåòè÷åñêèé íàïèòîê Adrenaline Juicy, áåçàëêîãîëüíûé, ñî âêóñîì àïåëüñèíà, 449 ìë	åçàëêîãîëüíûå íàïèòêè
190	ëåáöû ëèçàâêòà öåëüíîçåðíîâûå, ðæàíî-ïøåíè÷íûå, ñ âèòàìèíàìè è ìàãíèåì, 90 ã	ó÷íûå êîíäèòåðñêèå èçäåëèß

Screenshot 4

Figure 4 illustrates a key component of the data preparation or query process. These screenshots provide visual proof of the intermediate steps.

```
-- Task 2: List of users who bought any 2 pet foods except "Kitekat" between 1–15 August
WITH FilteredOrders AS (
    SELECT
        o.order_id,
        o.user_id,
        ol.product_id,
        p.product
    FROM orders o
    JOIN order_lines ol ON o.order_id = ol.order_id
    JOIN products p ON ol.product_id = p.product_id
    WHERE o.order_date BETWEEN '2023-08-01' AND '2023-08-15'
      AND p.category = 'Pet Food'
      AND p.product NOT LIKE '%Kitekat%'
)
SELECT
    user_id,
    COUNT(DISTINCT product_id) AS unique_pet_foods
FROM FilteredOrders
GROUP BY user_id
HAVING unique_pet_foods >= 2;

-- Task 3: Top 5 most frequently purchased products in St. Petersburg (15–30 August)
WITH FilteredOrders AS (
    SELECT
        o.order_id,
        o.user_id,
        o.city,
        ol.product_id,
        COUNT(ol.product_id) AS product_count
    FROM orders o
    JOIN order_lines ol ON o.order_id = ol.order_id
    WHERE o.order_date BETWEEN '2023-08-15' AND '2023-08-30'
      AND o.city = 'St. Petersburg'
    GROUP BY o.order_id, ol.product_id, o.city
)
SELECT
    p.product,
    SUM(product_count) AS total_count
FROM FilteredOrders fo
JOIN products p ON fo.product_id = p.product_id
GROUP BY p.product
ORDER BY total_count DESC
LIMIT 5;
```

SQL Queries

The following SQL queries were created based on the provided data:

1. Users who bought any 2 pet foods except 'Kitekat' between 1-15 August:

```sql
WITH FilteredOrders AS (
    SELECT o.order_id, o.user_id, ol.product_id, p.product
    FROM orders o
    JOIN order_lines ol ON o.order_id = ol.order_id
    JOIN products p ON ol.product_id = p.product_id
    WHERE o.order_date BETWEEN '2023-08-01' AND '2023-08-15'
      AND p.category = 'Pet Food'
      AND p.product NOT LIKE '%Kitekat%'
)
SELECT user_id, COUNT(DISTINCT product_id) AS unique_pet_foods
FROM FilteredOrders
GROUP BY user_id
HAVING unique_pet_foods >= 2;
```

2. Top 5 most frequently purchased products in St. Petersburg (15-30 August):

```sql
WITH FilteredOrders AS (
    SELECT o.order_id, o.user_id, o.city, ol.product_id,
           COUNT(ol.product_id) AS product_count
    FROM orders o
    JOIN order_lines ol ON o.order_id = ol.order_id
    WHERE o.order_date BETWEEN '2023-08-15' AND '2023-08-30'
      AND o.city = 'St. Petersburg'
    GROUP BY o.order_id, ol.product_id, o.city
)
SELECT p.product, SUM(product_count) AS total_count
FROM FilteredOrders fo
JOIN products p ON fo.product_id = p.product_id
GROUP BY p.product
ORDER BY total_count DESC
LIMIT 5;
```