Shop-Performance-Analysis

Section A Google Sheets / Excel

1. Import the dataset into Excel.

2. Created the following summaries:
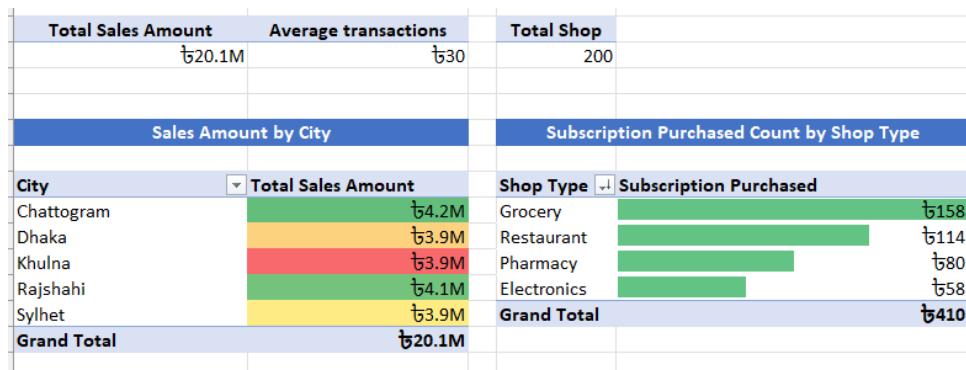
- Total sales amount by date
- Total sales amount by shop type
- Average transactions per shop

Total Sales Amount	Average transactions
৳20.1M	৳30

Total Sales Amount by Date			Total Sales Amount by Shop Type			Average Transactions per shop		
Date	**Total Sales Amount**		**Date**	**Total Sales Amount**		**Date**	**Average Transactions**	
01 January 2024	241973		Electronics	2850278		1000	৳26	
02 January 2024	176197		Grocery	8001731		1001	৳33	
03 January 2024	269268		Pharmacy	3759647		1002	৳25	
04 January 2024	271056		Restaurant	5471903		1003	৳34	
05 January 2024	196218					1004	৳26	
06 January 2024	238615					1005	৳29	
07 January 2024	256331					1006	৳26	
08 January 2024	207249					1007	৳30	
09 January 2024	234248					1008	৳28	
10 January 2024	230591					1009	৳28	
11 January 2024	205899					1010	৳29	
12 January 2024	167465					1011	৳24	
13 January 2024	226794					1012	৳21	
14 January 2024	290105					1013	৳31	
15 January 2024	263865					1014	৳32	
16 January 2024	316404					1015	৳30	
17 January 2024	268961					1016	৳31	
18 January 2024	225794					1017	৳21	
19 January 2024	193308					1018	৳34	
20 January 2024	203684					1019	৳38	
21 January 2024	258802					1020	৳30	
22 January 2024	265600					1021	৳36	
23 January 2024	195924					1022	৳31	
24 January 2024	229961					1023	৳29	
25 January 2024	251298					1024	৳31	
26 January 2024	278012					1025	৳32	
27 January 2024	245561					1026	৳27	
28 January 2024	230358					1027	৳33	
29 January 2024	231731					1028	৳35	
30 January 2024	274048					1029	৳35	

Task_dataset | **Summaries** | Two Pivot Tables | +
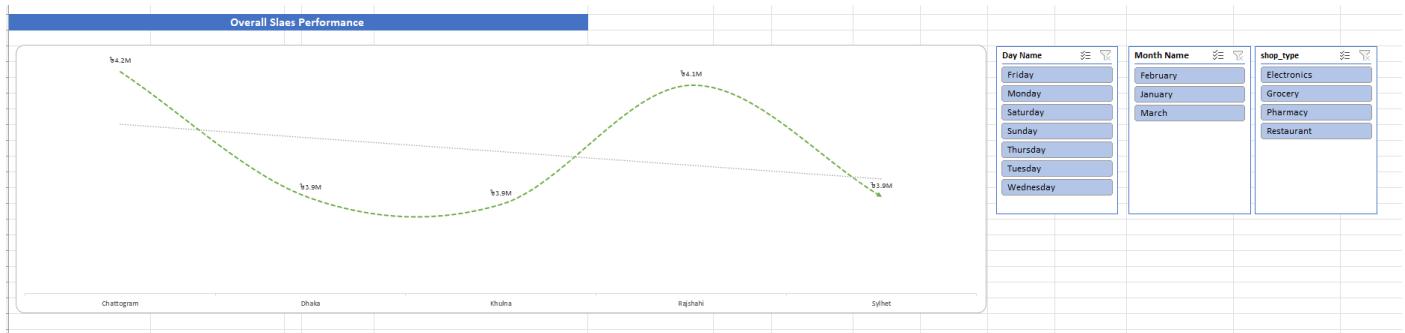
3. Create at least two Pivot Tables:

- Sales amount by city
- Subscription purchased count by shop type

Total Sales Amount	Average transactions	Total Shop
৳20.1M	৳30	200

Sales Amount by City		Subscription Purchased Count by Shop Type	
City	**Total Sales Amount**	**Shop Type**	**Subscription Purchased**
Chattogram	৳4.2M	Grocery	৳158
Dhaka	৳3.9M	Restaurant	৳114
Khulna	৳3.9M	Pharmacy	৳80
Rajshahi	৳4.1M	Electronics	৳58
Sylhet	৳3.9M	**Grand Total**	**৳410**
Grand Total	**৳20.1M**		

4. Create one chart (bar/line/column your choice) that best explains overall business performance

(I also used interactive filter for chats will show data dynamically)

Section B SQL

Q1. Daily Performance Classification

- Show date
- Total sales amount
- Total transactions
- Classify activity type as good or bad or worst
- I define my own logic for classification based on sales or transactions.

SQL Query:

```
SELECT
        DATE(date) AS date,
    SUM(total_sales_amount) AS total_sales_amount,
    SUM(transactions_count) AS total_transactions,
    CASE
        WHEN SUM(total_sales_amount) >= 100000 AND SUM(transactions_count) >= 100 THEN 'Good'
        WHEN SUM(total_sales_amount) BETWEEN 50000 AND 99999 OR SUM(transactions_count) BETWEEN 50 AND
99 THEN 'Bad'
        ELSE 'Worst'
    END AS activity_type
FROM
    task_dataset
GROUP BY
    DATE(date)
ORDER BY
    2 desc;
```


date	total_sales_amount	total_transactions	activity_type
2024-03-11	318011	587	Good
2024-01-16	316404	813	Good
2024-03-15	308285	671	Good
2024-03-04	301413	639	Good
2024-01-14	290105	729	Good
2024-02-23	286493	790	Good
2024-03-05	282655	835	Good
2024-03-14	279381	621	Good

Q2. New vs Existing User Analysis

- Writing a SQL query to compare new user's vs existing users in terms of:
- Total sales amount
- Number of shops
- Subscription purchases

SQL Query:

```
SELECT
  CASE
    WHEN new_user = 1 THEN 'New User'
    ELSE 'Existing User'
  END AS user_type,
  FORMAT(SUM(total_sales_amount), 0) AS total_sales_amount,
  COUNT(DISTINCT shop_id) AS number_of_shops,
  SUM(subscription_purchased) AS subscription_purchases
FROM task_dataset
GROUP BY new_user;
select * from task_dataset;
-- Q3. Subscription Conversion by Shop Type
-- Writting a SQL query to calculate:
-- Subscription conversion rate by shop type
 SELECT
  shop_type,
  COUNT(DISTINCT shop_id) AS total_shops,
  SUM(subscription_purchased) AS subscription_purchased,
  ROUND(
    (SUM(total_sales_amount)/ (SELECT SUM(total_sales_amount) FROM task_dataset)) * 100,
    2
  )  as sales_percentage,
  ROUND(
    (SUM(subscription_purchased) / COUNT(DISTINCT shop_id)) * 100,
    2
  ) AS subscription_conversion_rate_pct
FROM task_dataset
GROUP BY shop_type;
```

Result Grid	Filter Rows:	Export:	Wrap Cell Content:
user_type	total_sales_amount	number_of_shops	subscription_purchases
Existing User	14,313,584	200	271
New User	5,769,975	189	139

Q3. Subscription Conversion by Shop Type

- Writing a SQL query to calculate:
- Subscription conversion rate by shop type

SQL Query:

```
SELECT
  shop_type,
  COUNT(DISTINCT shop_id) AS total_shops,
  SUM(subscription_purchased) AS subscription_purchased,
  ROUND(
    (SUM(total_sales_amount)/ (SELECT SUM(total_sales_amount) FROM task_dataset)) * 100,
    2
  )  as sales_percentage,
  ROUND(
    (SUM(subscription_purchased) / COUNT(DISTINCT shop_id)) * 100,
    2
  ) AS subscription_conversion_rate_pct
FROM task_dataset
GROUP BY shop_type;
```

shop_type	total_shops	subscription_purchased	sales_percentage	subscription_conversion_rate_pct
Electronics	159	58	14.19	36.48
Grocery	194	158	39.84	81.44
Pharmacy	163	80	18.72	49.08
Restaurant	184	114	27.25	61.96

Q4. City Performance

- Writing a SQL query to:
- Find the top 5 cities by total sales
- Only include cities where at least one subscription was purchased

```
SELECT
  city,
  FORMAT(SUM(total_sales_amount), 0) AS total_sales_amount,
  SUM(subscription_purchased) AS subscription_purchased
FROM
  task_dataset
GROUP BY 1
HAVING SUM(COALESCE(subscription_purchased,0)) >= 1
ORDER BY 3 DESC
LIMIT 5;
```

city	total_sales_amount	subscription_purchased
Chattogram	4,166,972	99
Sylhet	3,930,634	88
Dhaka	3,927,997	78
Khulna	3,916,410	74
Rajshahi	4,141,546	71

Section C Business Insights

1. Which shop type appears to be the most valuable for the business? Why?

Answers: The most valuable segment is definitely **Grocery** shop.

It's the clear winner because it's pulling the most weight for the company. Not only does it drive the biggest chunk of sales (nearly 40%), but the shop owners there are incredibly loyal—over 81% of them are actually signing up for subscriptions.

shop_type	total_shops	subscription_purchased	sales_percentage	subscription_conversion_rate_pct
Electronics	159	58	14.19	36.48
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Restaurant	184	114	27.25	61.96

2. Do new users or existing users contribute more to total sales? What does this imply?

Answers: Existing users contribute way more to **total sales**.

It is implied that:

- **They spend much more:** Even though the number of shops is nearly the same, existing users bring in over **14 million**, while new users bring in less than **6 million**.
- **They are more loyal:** Existing users are buying twice as many **subscriptions** as the new guys.
- **The takeaway:** This implies that the business is great at keeping people around once they join, but **new users aren't yet convinced** to spend big or commit to a subscription.

user_type	total_sales_amount	number_of_shops	subscription_purchases
Existing User	14,313,584	200	271
New User	5,769,975	189	139

3. Suggest one business or product improvement based on the data.

We should be to turn **new users** into **regulars** faster.

Recommendations:

Offer a first-month subscription discount: This encourages the 189 new shops to sign up immediately, following the high subscription habit of existing users.