REPORT ON MINI PROJECT

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PROJECT TITLE: CUSTOMER SALES AND TRANSACTION ANALYSIS

PROJECT DOMAIN: SALES & E-COMMERCE

SUBMISSION DATE: 10-12-2025

MENTOR NAME: KUMARAN M

RAW DATASET LINK: https://github.com/acdevipriya94/Mini-Project/blob/main/Raw%20Dataset_Customer%20Sales%20and%20Transaction%20Analysis.xlsx

CLEANED DATASET LINK: https://github.com/acdevipriya94/Mini-Project/blob/main/Final_Excel_Cleaned%20Dataset_Customer%20Sales%20and%20Transaction%20Analysis.xlsx

PURPOSE OF THE PROJECT:

The purpose of this project is to develop an interactive dashboard that provides a comprehensive analysis of customer sales, transaction trends, and purchasing behavior. The dashboard helps stakeholders understand key metrics such as customer count, revenue performance, discount impact, payment preferences, and demographic distribution.

OBJECTIVE:

Objective of this project is to analyze total revenue, customer count, and subscriber base. Identify customer behavior patterns such as age groups, gender distribution, and tenure. Understand payment method preferences and how they relate to subscription behavior. Visualize customer distribution by state using a map. Analyze revenue contribution by discount ranges.

DATA CLEANING IN EXCEL:

1. **TABLE CONVERSION**

Entire Dataset was first converted into table for perfect formatting in Excel.

Navigation: Insert -> Table

customer_id	name	age	gender	state	signup_date	email	phone_number	subscribe
CUST0001	Gandi	26	Male	Sulawesi I	05-05-2025	gandi_96@	8422757160	No
CUST0002	Cecep	49	Male	Aceh	02-06-2025	cecep467(	88171122035	No
CUST0003	Artawan	26	Male	Jambi	11-02-2025	wahyunin	8692932468	Yes
CUST0004	Mulya	61	Male	Nusa Teng	19-02-2025	nnapitupu	8515735210	Yes
CUST0005	Taufik	43	Male	Kepulauar	04-08-2025	taufik_87(	81034538051	Yes
CUST0006	Genta	20	Female	Kalimanta	04-06-2025	puyainah(	8.18758E+11	Yes
CUST0007	Dimas	18	Male	Sumatera	14-11-2024	224dimas(	8189638436	No
CUST0008	Nilam	26	Female	Jawa Timu	22-05-2025	tariandria	8649564474	Yes
CUST0009	Emas	29	Male	Nusa Teng	30-11-2023	emas288@	8712019987	Yes
CUST0010	Kani	64	Female	Kalimanta	05-03-2025	asmiantos	8691418746	Yes
CUST0011	Putri	62	Female	Kepulauar	15-01-2025	jailanidars	811765466	Yes
CUST0012	Raditya	45	Male	Jawa Timu	14-03-2024	raditya_90	82220924900	Yes
CUST0013	Olivia	21	Female	DKI Jakart	29-04-2025	olivia35@	88842000527	Yes
CUST0014	Asmianto	35	Male	Sulawesi T	24-08-2024	raharja94(	830056278	Yes
CUST0015	Karya	45	Male	Kalimanta	16-05-2024	prasastafe	8.83185E+11	Yes
CUST0016	Enteng	18	Male	Kalimanta	26-05-2025	enteng78:	8.19222E+11	Yes
CUST0017	Belinda	27	Female	Sulawesi I	15-12-2024	belinda_9	87789167795	Yes
CUST0018	Kania	54	Female	Jawa Teng	20-12-2023	rusman50	82570741299	Yes
CUST0019	Wirda	50	Female	Kalimanta	15-12-2024	wirda_21(	8167366035	Yes
CUST0020	Ajimin		Male	Bengkulu	09-10-2024	ajimin354	8.57253E+11	Yes
CUST0514	Adinata	60	Male	Aceh	11-12-2023	bgunawar	8287301073	Yes
CUST0021	Irfan	59	Male	Jawa Timu	23-09-2025	irfan560@	89030985121	Yes
CUST0022	Laras	25	Female	Gorontalo	04-07-2025	laras202@	876149291	No

2. REMOVING DUPLICATES:

During the data cleaning process, duplicate records were identified and removed. A total of 10 duplicate rows in Customer table were found in the dataset and were deleted to ensure data accuracy and reliability.

Navigation: Data -> Remove Duplicates

3. FORMATTING:

During the data cleaning stage, the column data types were standardized. Numerical fields were converted to number format, date fields were formatted correctly, Price column were converted to currency and text fields were adjusted in both tables to ensure consistency and prevent calculation errors.

4. HANDLING NULL VALUES:

Problem Identified: Null Values in Age Column.

Action Taken: The Missing Values were Filled with the Average Age.

Steps Followed: Created a new column and applied the below formula to fill the null values with their corresponding average.

Formula Used: =IF(ISBLANK(C2),AVERAGE($C$2:$C$1001),C2)

A	B	C	D	E	F	G	H	I	J
customer_id	name	age	gender	state	signup_date	email	phone_number	subscribe	Age2
CUST0001	Gandi	26	Male	Sulawesi Utara	05-05-2025	gandi_96@example.com	8422757160	No	26
CUST0002	Cecep	49	Male	Aceh	02-06-2025	cecep467@example.com	88171122035	No	49
CUST0003	Artawan	26	Male	Jambi	11-02-2025	wahyuninovi@example.net	8692932468	Yes	26
CUST0004	Mulya	61	Male	Nusa Tenggara Timur	19-02-2025	nnapitupulu@example.com	8515735210	Yes	61
CUST0005	Taufik	43	Male	Kepulauan Riau	04-08-2025	taufik_87@example.com	81034538051	Yes	43
CUST0006	Genta	20	Female	Kalimantan Timur	04-06-2025	puyainah@example.com	8.18758E+11	Yes	20
CUST0007	Dimas	18	Male	Sumatera Barat	14-11-2024	224dimas@example.com	8189638436	No	18
CUST0008	Nilam	26	Female	Jawa Timur	22-05-2025	tariandriani@example.org	8649564474	Yes	26
CUST0009	Emas	29	Male	Nusa Tenggara Timur	30-11-2023	emas288@example.com	8712019987	Yes	29
CUST0010	Kani	64	Female	Kalimantan Utara	05-03-2025	asmiantosimbolon@example.org	8691418746	Yes	64
CUST0011	Putri	62	Female	Kepulauan Riau	15-01-2025	jailanidarsirah@example.org	811765466	Yes	62
CUST0012	Raditya	45	Male	Jawa Timur	14-03-2024	raditya_90@example.com	82220924900	Yes	45
CUST0013	Olivia	21	Female	DKI Jakarta	29-04-2025	olivia35@example.com	88842000527	Yes	21
CUST0014	Asmianto	35	Male	Sulawesi Tengah	24-08-2024	raharja94@example.net	830056278	Yes	35
CUST0015	Karya	45	Male	Kalimantan Tengah	16-05-2024	prasastafebi@example.net	8.83185E+11	Yes	45
CUST0016	Enteng	18	Male	Kalimantan Tengah	26-05-2025	enteng782@example.com	8.19222E+11	Yes	18
CUST0017	Belinda	27	Female	Sulawesi Utara	15-12-2024	belinda_94@example.com	87789167795	Yes	27
CUST0018	Kania	54	Female	Jawa Tengah	20-12-2023	rusman50@example.org	82570741299	Yes	54
CUST0019	Wirda	50	Female	Kalimantan Timur	15-12-2024	wirda_21@example.com	8167366035	Yes	50

Problem Identified: Null Values in State Column.

Action Taken: The Missing State Values were replaced with “Unknown”

Steps Followed: Using Filter option found the “Blanks”, there were 53 blanks and they were replaced with “Unknown”

Navigation: In “Find and Replace” Found Blanks in State Column and Replaced them with “Unknown”

	customer_id	name	age	gender	state	signup_date	email	phone_number	subscribe	Age2
25	CUST0023	Drajat	63	Male	Bengkulu	08-11-2023	586drajat@example.com	8.6924E+11	Yes	63
26	CUST0024	Halima	49	Female	Sumatera Selatan	28-05-2024	vfirmansyah@example.com	8428991937	Yes	49
27	CUST0025	Gina	25	Female	Sulawesi Tenggara	29-12-2024	kayla05@example.com	875066923	Yes	25
28	CUST0026	Teddy	23	Male	Bengkulu	07-12-2024	hsihotang@example.net	801317419	Yes	23
29	CUST0027	Elisa	21	Female	Sumatera Barat	04-06-2024	933elisa@example.com	8.88243E+11	Yes	21
30	CUST0028	Septi	43	Female	Bali	14-11-2024	septi362@example.com	8.56469E+11	No	43
31	CUST0029	Kiandra	52	Female	Jawa Barat	28-02-2024	hutapeadaryani@example.org	84150799109	Yes	52
32	CUST0030	Hamima	61	Female	Kalimantan Barat	16-09-2024	ibrahimhartati@example.org	89959402600	Yes	61
33	CUST0031	Salimah	60	Female	Kalimantan Barat	10-04-2025	rafid56@example.org	8186096425	No	60
34	CUST0032	Iriana	40	Female	Riau	10-02-2025	cagakkusumo@example.org	826260451	Yes	40
35	CUST0033	Raden	47	Male	Kalimantan Selatan	16-11-2023	raden_6@example.com	8448856016	Yes	47
36	CUST0034	Ani	39	Female	Kalimantan Barat	08-08-2025	ani_50@example.com	8.39711E+11	No	39
37	CUST0035	Yessi	21	Female	Gorontalo	25-04-2024	cawuk46@example.net	81027769908	No	21
38	CUST0036	Amelia	28	Female	Sulawesi Tenggara	13-06-2025	phutapea@example.net	851504518	Yes	28
39	CUST0037	Dewi	60	Female	Kepulauan Riau	15-01-2024	578dewi@example.com	8.0301E+11	Yes	60
40	CUST0038	Ganep	27	Male	Unknown	02-04-2024	uwaishimawan@example.org	800743640	Yes	27
41	CUST0039	Kawaya	22	Male	Sumatera Barat	07-05-2025	kawaya429@example.com	89967696232	Yes	22
42	CUST0040	Bahuwarna	56	Male	Kalimantan Timur	20-05-2024	wriyanti@example.com	883953990	No	56
43	CUST0041	Zulfa	49	Female	Kepulauan Riau	28-04-2025	kemba06@example.org	895039630	Yes	49
44	CUST0042	Daryani	39	Male	Sulawesi Utara	15-12-2024	pudjiastutiprayoga@example.org	88017553925	No	39

Problem Identified: Null Values in Discount Column.

Action Taken: The Missing Values were Filled with the Average Discount.

Steps Followed: Created a new column and applied the below formula to fill the null values with their corresponding average.

Formula Used: =IF(ISBLANK(H2),AVERAGE($H$2:$H$8200),H2)

	A	B	C	D	E	F	G	H	I	J	K
	transaction_id	customer_id	transaction_date	product_id	quantity	unit_price	payment_method	discount_applied	transaction_status	review_text	Column1
	TX_0000003568	CUST0429	29-12-2024	WZ-802	30	₹4,48,000.00	Credit Card	6	Completed		6
	TX_0000001323	CUST0165	20-09-2025	LE-969	31	₹3,26,000.00	E-wallet	7	Completed		7
	TX_0000007976	CUST0969	19-09-2025	CR-562	22	₹3,26,000.00	E-wallet	8	Completed		8
	TX_0000002408	CUST0293	23-04-2025	BL-316	38	₹4,18,000.00	Credit Card	42	Completed		42
	TX_0000004435	CUST0537	28-08-2025	KL-203	3	₹15,000.00	E-wallet	27	Completed		27
	TX_0000005447	CUST0661	22-09-2025	QQ-301	19	₹3,21,000.00	Cash	4	Completed		4
	TX_0000003024	CUST0370	10-02-2025	GW-908	21	₹4,73,000.00	Bank Transfer	40	Completed		40
	TX_0000001534	CUST0193	19-06-2025	GF-891	7	₹3,29,000.00	Credit Card	12	Completed	Very slow shipp	12
	TX_0000000264	CUST0033	16-01-2025	ON-125	40	₹1,05,000.00	Debit Card	40	Completed		40
	TX_0000000744	CUST0093	27-10-2024	EC-962	30	₹1,61,000.00	Debit Card	16	Completed		16
	TX_0000003860	CUST0462	28-08-2025	IM-080	19	₹1,87,000.00	Bank Transfer	47	Completed		47
	TX_0000007460	CUST0904	30-09-2024	WD-572	15	₹3,68,000.00	Bank Transfer	26	Completed		26
	TX_0000005763	CUST0696	23-07-2025	BC-170	40	₹39,000.00	Cash	46	Completed		46
	TX_0000004195	CUST0508	28-11-2024	ZK-154	24	₹1,60,000.00	Cash	46	Completed		46
	TX_0000004127	CUST0501	03-01-2025	QJ-620	24	₹1,03,000.00	Debit Card	0	Completed	A bit expensive	0
	TX_0000001704	CUST0210	26-01-2025	SX-681	32	₹1,76,000.00	Cash		Completed		25
	TX_0000006700	CUST0811	07-09-2025	DY-596	20	₹2,11,000.00	E-wallet	12	Completed	Amazing produ	12

Problem Identified: Null Values in the “Review Text”.

Action Taken: The Missing “Review Text” Values were replaced with “No Reviews”

Steps Followed: Using Filter option found the “Blanks”, and they were replaced with “No reviews”

Navigation: Using “Find and Replace” Found Blanks in State Column and Replaced them with “No reviews”

A	B	C	D	E	F	G	H	I	J	K
transaction_id	customer_id	transaction_date	product_id	quantity	unit_price	payment_method	discount_applied	transaction_status	review_text	Column1
TX_0000003568	CUST0429	29-12-2024	WZ-802	30	₹4,48,000.00	Credit Card	6	Completed	No Reviews	6
TX_0000001323	CUST0165	20-09-2025	LE-969	31	₹3,26,000.00	E-wallet	7	Completed	No Reviews	7
TX_0000007976	CUST0969	19-09-2025	CR-562	22	₹3,26,000.00	E-wallet	8	Completed	No Reviews	8
TX_0000002408	CUST0293	23-04-2025	BL-316	38	₹4,18,000.00	Credit Card	42	Completed	No Reviews	42
TX_0000004435	CUST0537	28-08-2025	KL-203	3	₹15,000.00	E-wallet	27	Completed	No Reviews	27
TX_0000005447	CUST0661	22-09-2025	QQ-301	19	₹3,21,000.00	Cash	4	Completed	No Reviews	4
TX_0000003024	CUST0370	10-02-2025	GW-908	21	₹4,73,000.00	Bank Transfer	40	Completed	No Reviews	40
TX_0000001534	CUST0193	19-06-2025	GF-891	7	₹3,29,000.00	Credit Card	12	Completed	Very slow ship	12
TX_0000000264	CUST0033	16-01-2025	ON-125	40	₹1,05,000.00	Debit Card	40	Completed	No Reviews	40
TX_0000000744	CUST0093	27-10-2024	EC-962	30	₹1,61,000.00	Debit Card	16	Completed	No Reviews	16
TX_0000003860	CUST0462	28-08-2025	IM-080	19	₹1,87,000.00	Bank Transfer	47	Completed	No Reviews	47
TX_0000007460	CUST0904	30-09-2024	WD-572	15	₹3,68,000.00	Bank Transfer	26	Completed	No Reviews	26
TX_0000005763	CUST0696	23-07-2025	BC-170	40	₹39,000.00	Cash	46	Completed	No Reviews	46
TX_0000004195	CUST0508	28-11-2024	ZK-154	24	₹1,60,000.00	Cash	46	Completed	No Reviews	46
TX_0000004127	CUST0501	03-01-2025	QJ-620	24	₹1,03,000.00	Debit Card	0	Completed	A bit expensive	0
TX_0000001704	CUST0210	26-01-2025	SX-681	32	₹1,76,000.00	Cash		Completed	No Reviews	25
TX_0000006700	CUST0811	07-09-2025	DY-596	20	₹2,11,000.00	E-wallet	12	Completed	Amazing produ	12
TX_0000008049	CUST0980	20-03-2025	FA-173	7	₹1,33,000.00	Credit Card	46	Completed	No Reviews	46
TX_0000005168	CUST0624	25-10-2024	CS-132	31	₹3,90,000.00	Cash		Completed	No Reviews	25
TX_0000005499	CUST0667	12-03-2025	GD-567	37	₹27,000.00	E-wallet	26	Pending	No Reviews	26
TX_0000004782	CUST0576	11-03-2025	MN-198	33	₹2,81,000.00	Cash	44	Completed	Product matche	44
TX_0000006422	CUST0777	31-08-2025	NX-179	27	₹3,92,000.00	Credit Card	6	Pending	Honest seller, i	6
TX_0000005181	CUST0626	16-01-2025	SV-880	25	₹1,48,000.00	E-wallet	1	Completed	No Reviews	1

5. EXCEL FINDINGS

- **Number of Purchases per Customer**: I have created a table called "Number of Purchases" were the number of purchases per customer was calculated by loading the transaction dataset into Power Query and grouping the data by Customer_ID. This allowed me to count the total number of purchases made by each customer.

	Customer_id	Number of Purchases
2	CUST0429	13
3	CUST0165	12
4	CUST0969	15
5	CUST0293	15
6	CUST0537	13
7	CUST0661	21
8	CUST0370	5
9	CUST0193	10
10	CUST0033	9
11	CUST0093	14
12	CUST0462	12
13	CUST0904	11
14	CUST0696	15
15	CUST0508	11
16	CUST0501	7
17	CUST0210	13
18	CUST0811	10
19	CUST0980	12
20	CUST0624	14

- **Year of Transaction**: I applied the **YEAR()** formula to the transaction date column to extract the year for each record.
  Formula Used: =YEAR([@[Transaction_Date]])

Year of Transaction
2024
2025
2025
2025
2025
2025
2025
2025
2025
2024
2025
2024

- **Month of Transaction**: The **MONTH()** formula was used to obtain the month number from each transaction date

  Formula Used: =MONTH([@[Transaction_Date]])

Month of Transaction
12
9
9
4
8
9
2
6
1
10
8

- **Finding Transaction Month Name**:

  Formula Used: =TEXT(DATE(L2,M2,1),"mmm")

  Where in “L” Column I have Year and in “M” Column I have Month.

Month Name
Dec
Sep
Sep
Apr
Aug
Sep
Feb
Jun
Jan

- **Adding Number of Purchases to Customer Table**: I used the VLOOKUP function to bring the number of purchases into the customer table by matching Customer ID.

  Formula used: =VLOOKUP($A2, 'Number of Purchases'!$A$1:$B$1001,2,FALSE)

Customer_ID	Name	Age	Gender	State	Signup Date	Email	Phone Number	Subscribe	Age Group	Number of Purchases
CUST0001	Gandi	26	Male	Sulawesi Utara	05-05-2025	gandi_96@example.com	8422757160	No	26-35	1
CUST0002	Cecep	49	Male	Aceh	02-06-2025	cecep467@example.com	88171122035	No	46-55	7
CUST0003	Artawan	26	Male	Jambi	11-02-2025	wahyuninovi@example.net	8692932468	Yes	26-35	9
CUST0004	Mulya	61	Male	Nusa Tenggara Timur	19-02-2025	nnapitupulu@example.com	8515735210	Yes	Above 55	10
CUST0005	Taufik	43	Male	Kepulauan Riau	04-08-2025	taufik_87@example.com	81034538051	Yes	36-45	13
CUST0006	Genta	20	Female	Kalimantan Timur	04-06-2025	puyainah@example.com	818757946920	Yes	18-25	10
CUST0007	Dimas	18	Male	Sumatera Barat	14-11-2024	224dimas@example.com	8189638436	No	18-25	7
CUST0008	Nilam	26	Female	Jawa Timur	22-05-2025	tariandriani@example.org	8649564474	Yes	26-35	5

- **Calculating Months Since Signup**:

  Formula Used: =DATEDIF(F2, TODAY(), "m")

  Where in “F” Column I have Signup_Date.

Months Since Singnup
7
6
9
9
4
6
12
6
24
9

- **Calculating Age Group**:

  Formula Used: =IF(C2<=25,"18-25",IF(C2<=35,"26-35",IF(C2<=45,"36-45",IF(C2<=55,"46-55", "Above 55"))))

  Where in “C” Column I have Age.

Age Group
26-35
46-55
26-35
Above 55
36-45
18-25
18-25
26-35
26-35
Above 55

- **Finding Revenue**:

  Formula Used: =E2*(F2*(1-H2))

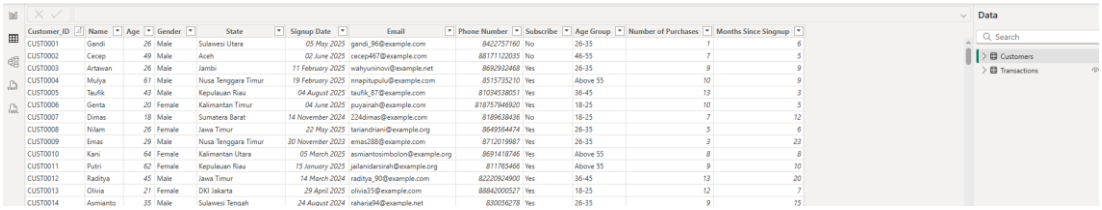
  Where in “E” Column I have Quantity, in “F” Column I have “Unit Price” and in “H” Column I have Discount Applied.

Revenue
₹ 1,26,33,600.00
₹ 93,98,580.00
₹ 65,98,240.00
₹ 92,12,720.00
₹ 32,850.00
₹ 58,55,040.00
₹ 59,59,800.00
₹ 20,26,640.00
₹ 25,20,000.00
₹ 40,57,200.00

DATA VISUALIZATION IN POWER BI

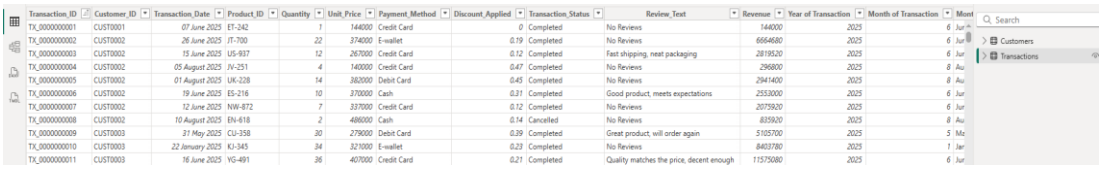
Loaded Both the Tables in Power BI using File -> Open -> Excel

Customer Table:



Customer_ID	Name	Age	Gender	State	Signup Date	Email	Phone Number	Subscribe	Age Group	Number of Purchases	Months Since Singnup
CUST0001	Gandi	26	Male	Sulawesi Utara	05 May 2025	gandi_96@example.com	8422757160	No	26-35	1	6
CUST0002	Cecep	49	Male	Aceh	02 June 2025	cecep467@example.com	88171122035	No	46-55	7	5
CUST0003	Artawan	26	Male	Jambi	11 February 2025	wahyuninovi@example.net	8692932468	Yes	26-35	9	9
CUST0004	Mulya	61	Male	Nusa Tenggara Timur	19 February 2025	nnapitupulu@example.com	8513735210	Yes	Above 55	10	9
CUST0005	Taufik	43	Male	Kepulauan Riau	04 August 2025	taufik_87@example.com	81034538051	Yes	36-45	13	3
CUST0006	Genta	20	Female	Kalimantan Timur	04 June 2025	puyainah@example.com	818757946920	Yes	18-25	10	5
CUST0007	Dimas	18	Male	Sumatera Barat	14 November 2024	224dimas@example.com	8189638436	No	18-25	7	12
CUST0008	Nilam	26	Female	Jawa Timur	22 May 2025	tariandriani@example.org	8649564474	Yes	26-35	5	6
CUST0009	Emas	29	Male	Nusa Tenggara Timur	30 November 2023	emas288@example.com	8712019987	Yes	26-35	3	23
CUST0010	Kani	64	Female	Kalimantan Utara	05 March 2025	asmiantosimbolon@example.org	8691418746	Yes	Above 55	8	8
CUST0011	Putri	62	Female	Kepulauan Riau	15 January 2025	jailanidarsirah@example.org	811765466	Yes	Above 55	9	10
CUST0012	Raditya	45	Male	Jawa Timur	14 March 2024	raditya_90@example.com	82230824900	Yes	36-45	13	20
CUST0013	Olivia	21	Female	DKI Jakarta	29 April 2025	olivia35@example.com	88842000527	Yes	18-25	12	7
CUST0014	Asmianto	35	Male	Sulawesi Tengah	24 August 2024	raharia94@example.net	830056278	Yes	26-35	9	15

Transaction Table:



Transaction_ID	Customer_ID	Transaction_Date	Product_ID	Quantity	Unit_Price	Payment_Method	Discount_Applied	Transaction_Status	Review_Text	Revenue	Year of Transaction	Month of Transaction
TX_0000000001	CUST0001	07 June 2025	ET-242	1	144000	Credit Card	0	Completed	No Reviews	144000	2025	6
TX_0000000002	CUST0002	26 June 2025	IT-700	22	374000	E-wallet	0.19	Completed	No Reviews	6664680	2025	6
TX_0000000003	CUST0002	15 June 2025	US-937	12	267000	Credit Card	0.12	Completed	Fast shipping, neat packaging	2819520	2025	6
TX_0000000004	CUST0002	05 August 2025	JV-251	4	140000	Credit Card	0.47	Completed	No Reviews	296800	2025	8
TX_0000000005	CUST0002	01 August 2025	UK-228	14	382000	Debit Card	0.45	Completed	No Reviews	2941400	2025	8
TX_0000000006	CUST0002	19 June 2025	ES-216	10	370000	Cash	0.31	Completed	Good product, meets expectations	2553000	2025	6
TX_0000000007	CUST0002	12 June 2025	NW-872	7	337000	Credit Card	0.12	Completed	No Reviews	2075920	2025	6
TX_0000000008	CUST0002	10 August 2025	EN-618	2	486000	Cash	0.14	Cancelled	No Reviews	835920	2025	8
TX_0000000009	CUST0003	31 May 2025	CU-358	30	279000	Debit Card	0.39	Completed	Great product, will order again	5105700	2025	5
TX_0000000010	CUST0003	22 January 2025	KJ-345	34	321000	E-wallet	0.23	Completed	No Reviews	8403780	2025	1
TX_0000000011	CUST0003	16 June 2025	YG-491	36	407000	Credit Card	0.21	Completed	Quality matches the price, decent enough	11575080	2025	6

CALCULATED MEASURES:

i) **Customer Count**: shows the total number of unique customers in the dataset.

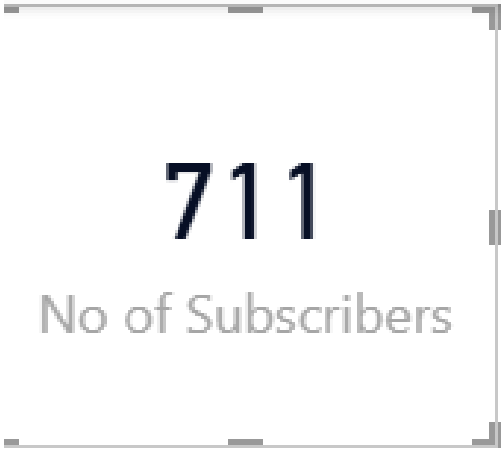
Formula Used:

```
1 Customer Count = DISTINCTCOUNT(Customers[Customer_ID])
```

ii) **Number of Subscribers**: indicates how many customers have an active subscription.

Formula Used:

```
1  No of Subscribers = CALCULATE(COUNTROWS(Customers),Customers[Subscribe]="Yes")
```



iii) **Total Revenue**: Reflects the sum of all customer transactions.

Formula Used:

```
1  Total Revenue = SUM(Transactions[Revenue])
```

CALCULATED COLUMN:

Calculated "Discount Range": using Calculated Column

Formula Used:

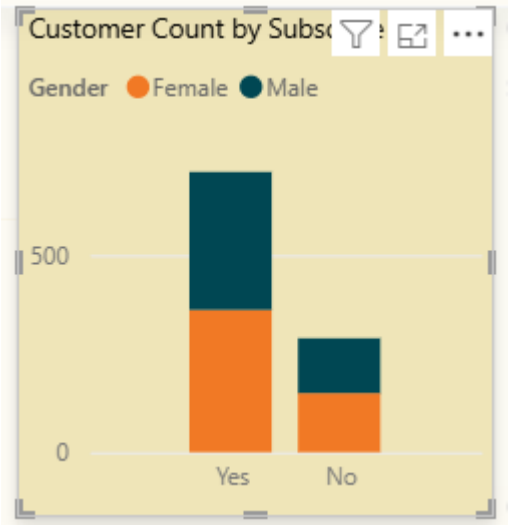
```
1 Discount Range = SWITCH(TRUE(),Transactions[Discount_Applied] = 0, "No Discount", Transactions[Discount_Applied] <=0.10, "0% - 10%", Transactions[Discount_Applied] <=0.20, "11% - 20%", Transactions[Discount_Applied] <= 0.30,
  "21% - 30%", Transactions[Discount_Applied] <=0.40, "31% - 40%", Transactions[Discount_Applied] <= 0.50, "41% - 50%", "Above 50%")
```

Discount Range
No Discount
41% - 50%
11% - 20%
11% - 20%
41% - 50%
31% - 40%
11% - 20%
11% - 20%
21% - 30%
21% - 30%
21% - 30%
21% - 30%
41% - 50%
0% - 10%
0% - 10%
31% - 40%
31% - 40%
11% - 20%
0% - 10%
41% - 50%
0% - 10%
21% - 30%
21% - 30%
0% - 10%
41% - 50%
No Discount
41% - 50%
41% - 50%
11% - 20%

VISUALS:

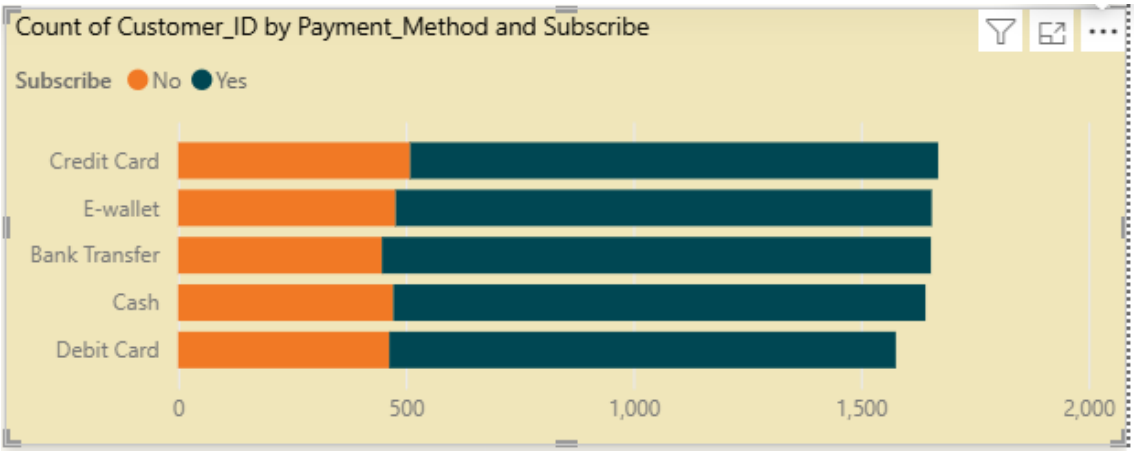
CHARTS

- **Stacked Column Chart**



Analysis: This chart shows how subscription status varies across male and female customers. It highlights whether one gender group is more likely to subscribe than the other. This insight can be used to tailor marketing strategies toward customer groups with lower subscription adoption. Maximum Customers have subscribed.

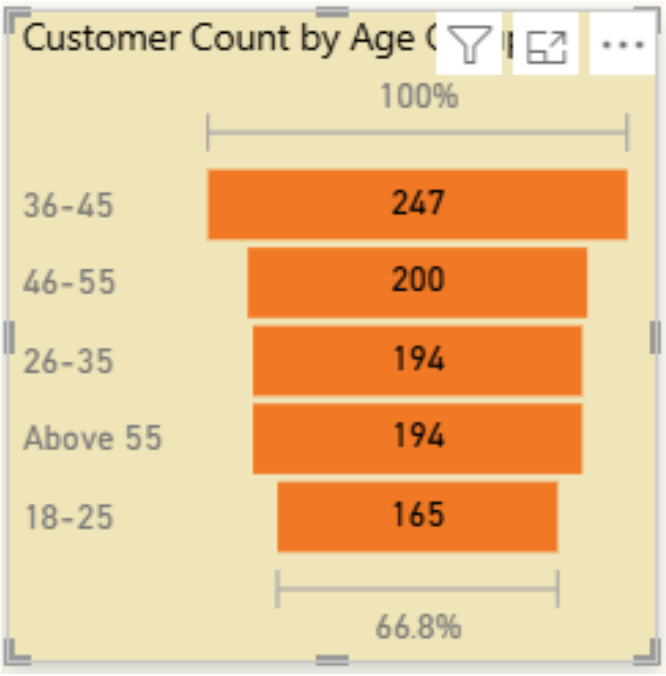
- **Stacked Bar Chart:**



Analysis: This visual illustrates the relationship between payment methods and whether customers subscribe or not. It shows how popular each payment method is among subscribers compared to non-

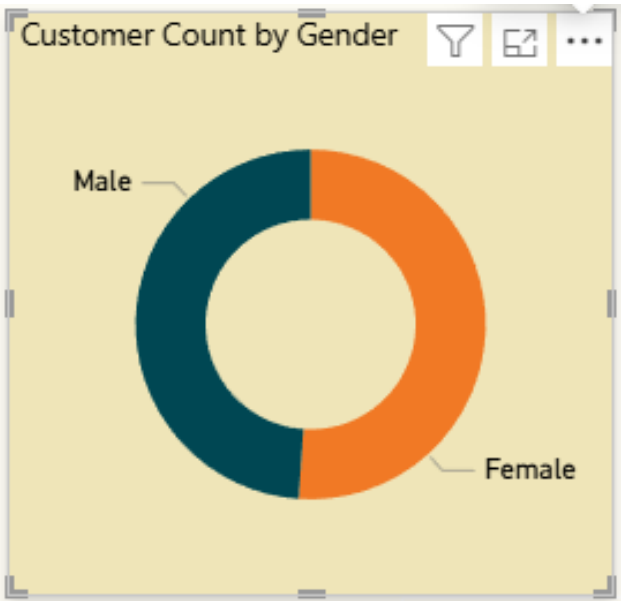
subscribers. This helps the business understand preferred payment options and design better payment experiences for subscription users.

- **Funnel Chart**



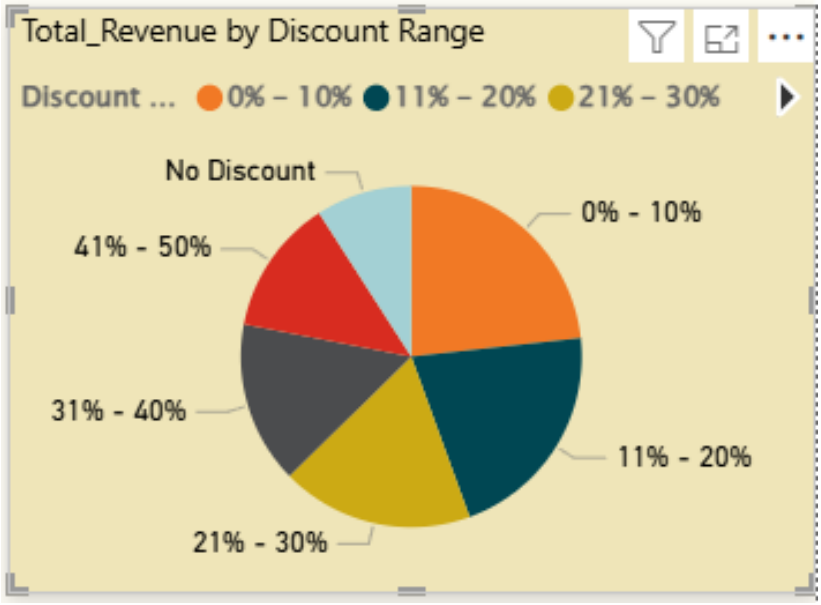
Analysis: This chart analyzes the distribution of customers across different age ranges. It identifies which age groups form the largest portion of the customer base.
Understanding dominant age groups helps with targeted marketing and product personalization. Maximum Customers were from the age group 36-45.

- **Donut Chart**



Analysis: This donut chart shows the proportion of male and female customers in the dataset. It provides a simple yet effective view of customer demographics and identifies whether the customer base is gender-balanced or dominated by one segment.

- **Pie Chart**

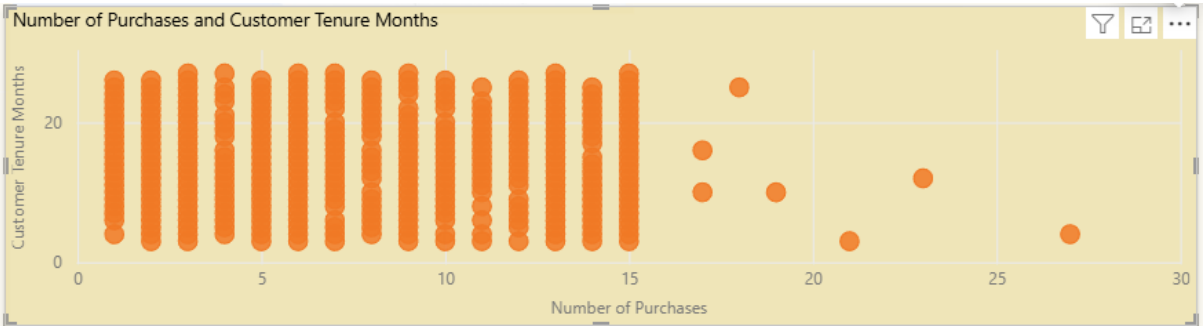


Analysis: This chart displays how total revenue is distributed across different discount categories. It helps to evaluate which discount ranges contribute most to revenue and whether discounts are effectively driving sales. The “No Discount” segment also shows how much revenue comes without promotional offers.

- **Map Visual**

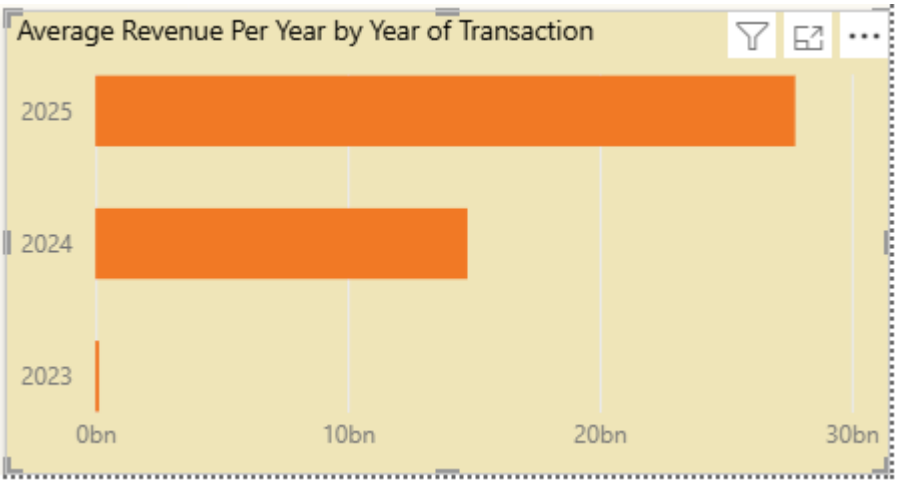
Analysis: This map displays the geographic distribution of customers across various states. The states with darker or more prominent colors represent regions with higher customer concentration. This visualization helps identify key markets, regional behavior patterns, and locations where business expansion efforts may be most effective.

- **Scatter Plot**



Analysis: This scatter plot illustrates the relationship between Number of purchases a customer has made, and Customer tenure (months)
The chart helps identify whether long-term customers tend to buy more frequently.
It also highlights customer loyalty patterns and repeat-purchase behavior.

- **Bar Chart:**



Analysis: This visual represents the average revenue per customer across different years. It helps evaluate changes in user spending behavior and assess how revenue performance evolves annually. The above visual clearly indicates growth of average revenue each year.

TABLE VISUAL

- **Count of Products by Discount Range**:

Discount Range	Count of Product_ID
0% - 10%	1509
11% - 20%	1516
21% - 30%	1562
31% - 40%	1542
41% - 50%	1488
No Discount	572
Total	**8136**

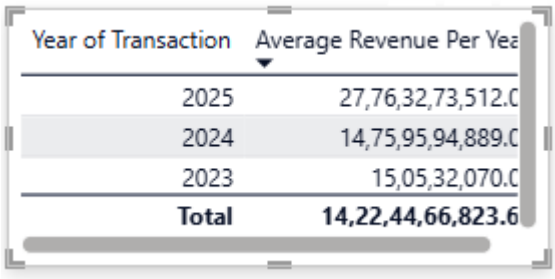
Analysis: This table summarizes the number of products purchased under each discount range. As per the table visual maximum products were purchased under the discount range 21%-30%. By organizing the data into structured rows and columns, the visual provides a clear understanding of discount utilization and helps identify which discount brackets drive higher sales volume.

- **Customer Count by State**

Customer Count	State
53	Unknown
33	Sumatera Utara
25	Sumatera Selatan
32	Sumatera Barat
33	Sulawesi Utara
30	Sulawesi Tenggara
17	Sulawesi Tengah
23	Sulawesi Selatan
18	Sulawesi Barat
29	Riau
31	Papua Barat
35	Papua
23	Nusa Tenggara Timur
32	Nusa Tenggara Barat
27	Maluku Utara
23	Maluku
30	Lampung
1000	

Analysis: A table visual was employed to display the count of customers across various states. This visualization helps in identifying geographic patterns and understanding which regions have higher customer representation. It supports regional analysis and comparison across different locations. The above visual shows maximum customer were from Jawa Timur.

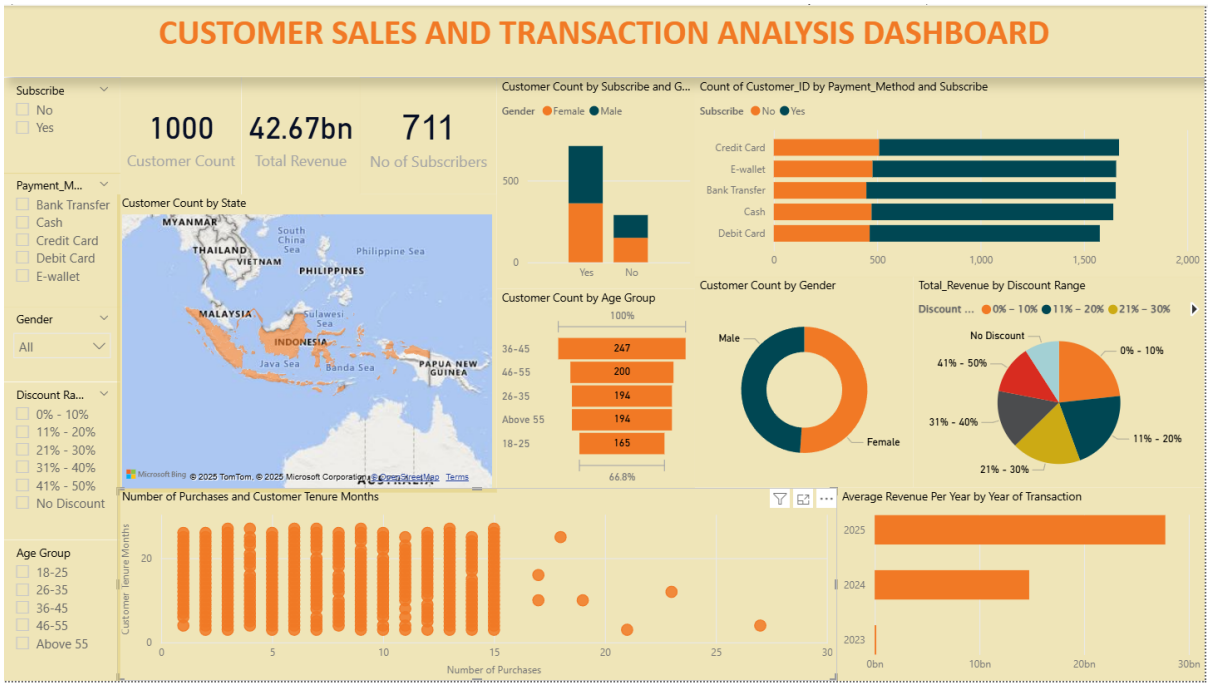
❖ **Average Revenue Per Year of Transaction**



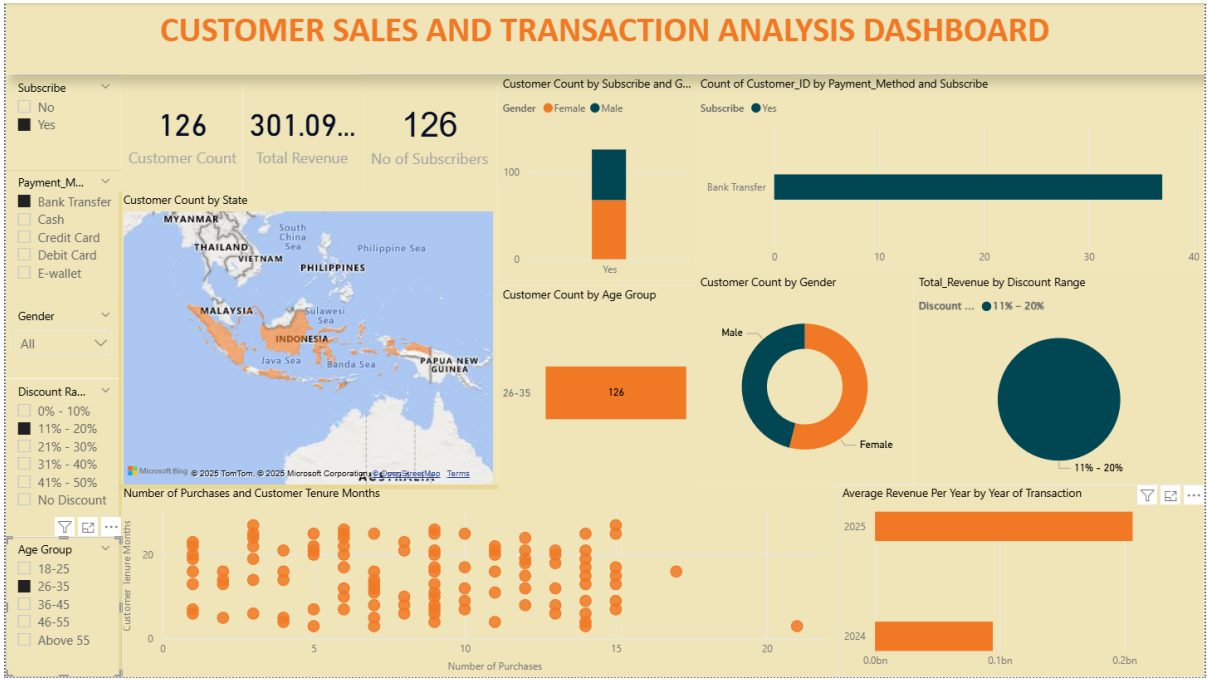
Year of Transaction	Average Revenue Per Yea
2025	27,76,32,73,512.0
2024	14,75,95,94,889.0
2023	15,05,32,070.0
Total	**14,22,44,66,823.6**

Analysis: This table shows the average revenue generated in each transaction year. Presenting the data in a tabular format enables easy identification of revenue trends over time, helping stakeholders track performance growth and compare yearly financial outcomes.

DASHBOARD



DASHBOARD AFTER APPLYING SLICER



INSIGHTS

There is a strong revenue growth and High subscriber conversion. Maximum Customers were from the age group: 36–45. Customers mostly use E-wallet and credit card. Discount products drive higher revenue. High customer density was from SE Asia. Maximum purchase was from the Loyal customers and there is low cancellation rate.

CONCLUSION

The Power BI dashboard effectively visualizes customer behavior and sales trends, enabling better business decisions across marketing, retention, revenue management, and customer engagement. Try to target customers in 26-40 age group and improve conversion from Non-Subscribers It is recommended to promote digital payments and optimize Discount strategy.