<u>Q1. SQL Query:</u>   [Weightage: 30]

Calculating Quarter on Quarter Retention:

Tables: (1) Cx details, (2) Order Details, (3) Order Status

Cx details	Order details	Order status
Customer ID	Order ID	Order Status Tracking ID
Age	Active	Modified By ID
Age Group ID	Address ID	Modified On
Created By ID	Created On	Order ID
Created On	Customer ID	Order Status ID
Customer Name	Maker Modified By ID	
Email Address	Modified On	
Gender	Order Value	
Is Verified	Saving Value	
	Orderstatus	
	Order Type Status	
	Payment Status	
	Payment Type	
	Delivery Charge	
	Is Reversed	
	Organisation ID	
	Discount Applied	
	Offer ID	
	Delivery Date	

Note: Take Order status as '55' for Order delivered.

Write an SQL query to calculate the quarter on quarter retention for the last one year & visualise this in the same format below:
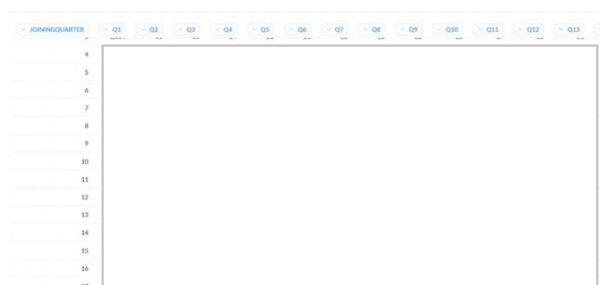
Q2.Business analysis & insight generation: [Weightage: 70]

Find the dataset attached, and the analysis query below:

Dataset below for an e-pharma company with a specific focus on generic medicines. Whenever a customer has an intent to buy medicines, the company via its advisors asks the customers to *switch* to the trusted generic medicines which are comparatively cheaper for the same composition and efficacy. Naturally, customers who are value seekers are more likely to opt for this switch..

Definitions:

Events:

(i) app_order_placed: customer places an order on the app
(ii) box_verified: order is packed and ready to ship.
(iii) order_delivered: customer has an order delivered.

Funnel: App_order_placed -> box_verified -> order_delivered

Install time: Time when the install occurred.
Event time: Time when the event (refer above) occurred.
Media Sources: Two Media sources 'Rocketship' & 'Trophywise' , channels within Media sources shared below

Campaign ID: Campaigns running within the media sources

Parameters definition:
Has_coupon_code - if the customer has used a coupon code.
No_of_items - number of items added to cart in placing the order or later
Is_switch_added - if customer has accepted the switch of the product
Is_addons_added - if customer has added additional segment of products termed 'add ons'
Is_core_customer - if Cx is categorised as core: Core customers are those who have the highest probability to *switch* given their income group, but might not necessarily switch.

Carefully clean & analyse the dataset before answering the queries below:

1. Which media source has the biggest delta between install time & event time? What is the average time from install to the 3 events? Given the three events and funnel shared, can you provide a reasoning for this delay from install?
2. What is the most revenue driving channel? Put a case forward for where you can accurately visualise the revenue driven vs quality factors ('core customers' who accepts the 'switch', 'does not use coupon' can be considered as quality metrics)
3. Location level analysis: Given the current dataset, which are the top locations in terms of coupon usage, switch medicines, & gets max core customers)
4. If you were to advise the marketing team to double down on spending on such campaigns, which are the top campaigns to increase spending and why?
5. Summarise key learning and business insight in brief.