SQL solution:

I found some mistakes in the data model where the relations couldn’t be made. Hence, I made some changes in data model.

* Adding card\_id to card\_master table
* Adding customer\_id to customer table

**Task 3 :**

Q1.

SELECT COUNT(ORDERS) AS TOTAL\_ORDERS,SUM(ORDER\_VALUE),ORDER\_DATE FROM ODERS WHERE

DATEPART(MONTH,ORDER\_DATE) + DATEPART(YEAR,ORDER\_DATE) = ‘MAR2018’ GROUP BY ORDER\_DATE ORDER BY ORDER\_DATE;

Q2.

SELECT COUNT(ORDERS) AS TOTAL\_ORDER,SUM(ORDER\_VALUE),ORDER\_DATE,ORDER\_TYPE FROM ORDERS WHERE DATEPART(MONTH,ORDER\_DATE) + DATEPART(YEAR,ORDER\_DATE) = ‘MAR2018’ GROUP BY ORDER\_DATE, ORDER\_TYPE ORDER BY ORDER\_DATE ORDER TYPE;

Q3.

SELECT AVG(ORDER\_VALUE),ORDER\_TYPE FROM ORDERS WHERE ORDERSTATUS = ‘SUCCESS’ AND DATEPART(MONTH,ORDER\_DATE) + DATEPART(YEAR,ORDER\_DATE) = ‘MAR2018’

GROUP BY ORDER\_TYPE ORDER BY ORDER\_TYPE;

**TASK2 :**

Q1.

DIFFERENT TYPE OF JOINS : Inner Join, Left Join, Right Join,Full Join,Self Join

Q2.

Question -> Faq\_id has left join (fact -> dim – left join)

Faq\_id -> partner has inner join (dim -> fact – inner join)

Q3.

Inner join + Left Join

Q4.

Full join

Task1:

Q1.

SELECT CUSTOMER.CUSTOMER\_NAME,CUSTOMER\_CARDS.CUSTOMER\_ID, CUSTOMER\_CARDS CARD\_ID, CUSTOMER\_CARDS.BALANCE\_LEFT FROM CUSTOMER\_CARDS JOIN CUSTOMER USING(ID)

WHERE CUSTOMER.CUSTOMER\_TYPE = “PREMIUM”;

Q2.

SELECT CUSTOMER.CUSTOMER\_ID,CARD\_MASTER.CARD\_TYPE,CARD\_MASTER.CARD\_NAME,SUM(CARD\_RENEWALS.RENEW\_AMOUNT) AS TOTAL\_RENEWED\_AMOUNT FROM CUSTOMER JOIN CUSTOMER.ID ON CARD\_MASTER.ID JOIN CUSTOMER.ID ON CARD\_RENEWALS.ID;

Q3.

SELECT COUNT(CALL\_RECORDS.CARD\_USED) AS TOTAL\_CALLS,DATEPART(DATE,CALL\_RECORDS.CALL\_START\_TIME) FROM CALL\_RECORDS JOIN CALL\_RECORDS.ID ON CARD\_MASTER.ID JOIN CARD\_MASTER.ID ON CARD\_DENOMINATIONS.ID WHERE CARD\_DENOMINATION.CALL\_TALKTIME > 10,CUSTOMER.CUSTOMER\_TYPE = “PREMIUM” AND START\_ IN BETWEEN ‘4TH APRIL 2018’ AND ‘5TH MAY 2018’;

Tableau Link:

<https://public.tableau.com/profile/mohamed.anas#!/>