**QUAY BANKING REPORT**

**Objective: Integrate CRM data into the Quay Banking Database, ready for querying and analysis. Draw meaningful insights for Regional Operations Managers regarding branch performance to inform strategy in order to mitigate data silo-isation.**

**SCHEMA DIAGRAM**



**JOINING TABLES**

ALTER TABLE CRM\_Call\_Center\_Logs

ADD CONSTRAINT FK\_CRM\_Call\_Center\_Logs

FOREIGN KEY (Complaint\_ID)

REFERENCES CRM\_Events(Complaint\_ID);

ALTER TABLE CRM\_Events

ADD CONSTRAINT fk\_client\_id

FOREIGN KEY (client\_id)

REFERENCES Client(client\_id);

ALTER TABLE CRM\_Reviews

ADD CONSTRAINT fk\_district\_id

FOREIGN KEY (district\_id)

REFERENCES District(district\_id);

ALTER TABLE Client

ADD CONSTRAINT fk\_district\_id

FOREIGN KEY (district\_id)

REFERENCES District(district\_id);

**QUERIES**

-1) Performance:

--a. Which 20% of branches are underperforming? – evident in “closed complaints without relief” and negative customer service feedback

SELECT TOP 20 percent d.bank\_branch

, COUNT(r.Rating) AS negative\_rating

FROM District d

left join Client cl on d.district\_id = cl.district\_id

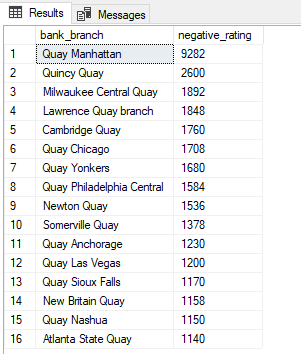
inner join CRM\_Events cr on cl.client\_id = cr.Client\_ID

inner join CRM\_Reviews r on r.District = d.district\_id

WHERE cr.Company\_response\_to\_consumer = 'Closed without relief' AND Rating <=1

Group by d.bank\_branch

ORDER BY negative\_rating desc



--i. Can we rank the Call Centre Servers’ performance according to Call duration and outcome ? (Advanced)

SELECT [server],

AVG(DATEDIFF(SECOND, ser\_start, ser\_exit)) as avg\_duration,

SUM (CASE WHEN Company\_response\_to\_consumer = 'Untimely response' THEN 1 END) AS NEGATIVE,

SUM (CASE WHEN Company\_response\_to\_consumer = 'In progress' THEN 1 END) AS IN\_PROGRESS,

SUM (CASE WHEN Company\_response\_to\_consumer NOT IN ('In progress','Untimely response') THEN 1 END) AS POSITIVE

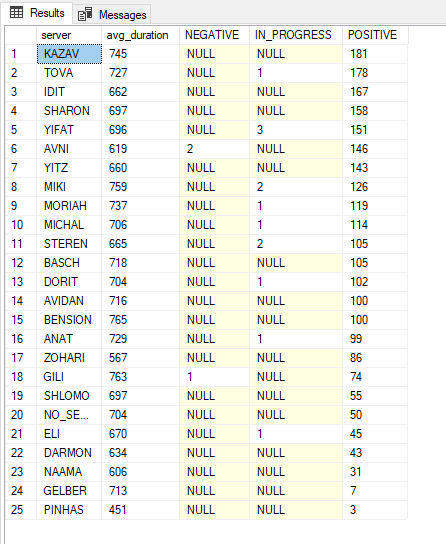
FROM CRM\_logs L

JOIN CRM\_Events E ON L.Complaint\_ID = E.Complaint\_ID

WHERE server is not null

GROUP BY [server]

ORDER BY POSITIVE desc, avg\_duration asc



According to Number of Disputes

SELECT L.[server],

AVG(DATEDIFF(SECOND, ser\_start, ser\_exit)) as avg\_duration,

SUM(CASE WHEN E.Consumer\_disputed = '1' THEN 1 ELSE 0 END) AS number\_disputes

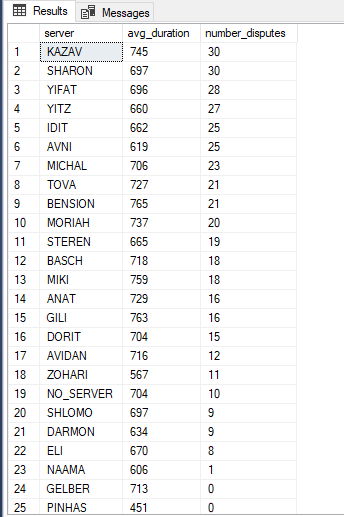
FROM CRM\_logs L

JOIN CRM\_Events E ON L.Complaint\_ID = E.Complaint\_ID

WHERE server is not null

GROUP BY [server]

ORDER BY number\_disputes desc



(According to Timely Response)

SELECT L.[server],

AVG(DATEDIFF(SECOND, ser\_start, ser\_exit)) as avg\_duration,

SUM(CASE WHEN E.Timely\_response = '1' THEN 1 ELSE 0 END) AS timely\_response

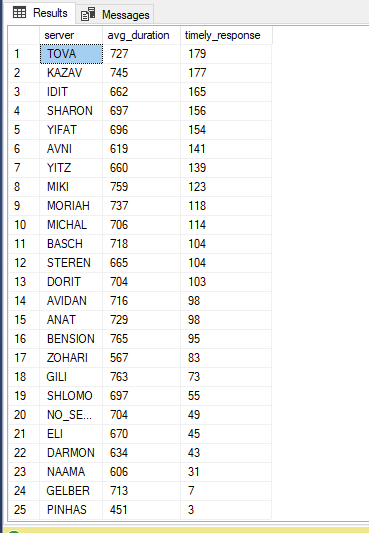
FROM CRM\_logs L

JOIN CRM\_Events E ON L.Complaint\_ID = E.Complaint\_ID

WHERE server is not null

GROUP BY [server]

ORDER BY timely\_response desc



--b. Which are the top 5 branches per positive customer feedback?

SELECT TOP 5 d.bank\_branch,

COUNT(r.Review\_id) AS Number

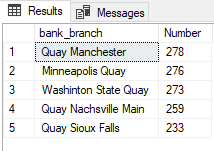
FROM District d

inner join CRM\_Reviews r on r.District = d.district\_id

WHERE r.Rating = 5

GROUP BY d.bank\_branch

ORDER BY Number desc



--i. What are the characteristics of these branches that could contribute to this positivity ?Advanced)

SELECT TOP 5 D.bank\_branch,

COUNT(R.Rating) AS avg\_rating,

D.city,

D.state\_name,

D.region,

D.division

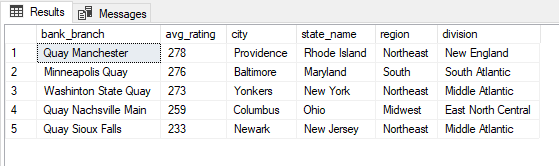
FROM CRM\_Reviews AS R

JOIN District AS D ON R.District = D.district\_id

WHERE R.rating = 5

GROUP BY D.bank\_branch, D.city, D.state\_name, D.region, D.division

ORDER BY avg\_rating DESC



Characteristics- most are in the Northeast regions, in urban areas

--2) Reporting CRM data:

--a. Which branches may be under-reporting their customer feedback? Highlight anything less than 2 standard deviations away from the mean

WITH Branch\_count AS (

SELECT D.bank\_branch,

COUNT (R.District) AS complaints

FROM District D JOIN CRM\_Reviews R ON D.district\_id = R.District

GROUP BY D.bank\_branch),

Stats AS (SELECT

AVG (complaints) AS Mean,

STDEV(complaints) AS StandardDeviation

FROM Branch\_count)

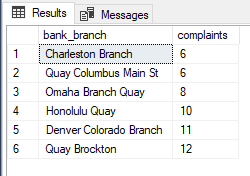
SELECT Branch\_count.bank\_branch, Branch\_count.complaints

FROM Branch\_count

JOIN Stats ON 1=1

WHERE Branch\_count.complaints < (Mean- (2 \* StandardDeviation)) OR Branch\_count.complaints > (Mean \* StandardDeviation)

ORDER BY complaints;



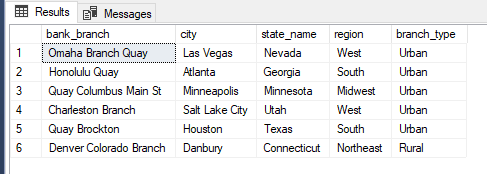
--i. Dive deeper into this pattern by separating branches in urban from those in more rural areas, as best you can. (Advanced)

SELECT bank\_branch, city, state\_name, region,

CASE WHEN city IN ('Danbury') THEN 'Rural' ELSE 'Urban' END AS branch\_type

FROM District

WHERE bank\_branch IN ('Charleston Branch', 'Quay Columbus Main St', 'Omaha Branch Quay', 'Honolulu Quay', 'Denver Colorado Branch', 'Quay Brockton')



--3) Customer Complaints:

--a. How well are branches and customer service staff handling customer complaints?

--i. Which customer service staff are closing the most queries either as “Closed without relief” or “Closed with Explanation”?

SELECT L.server, COUNT(\*) AS num\_queries\_closed

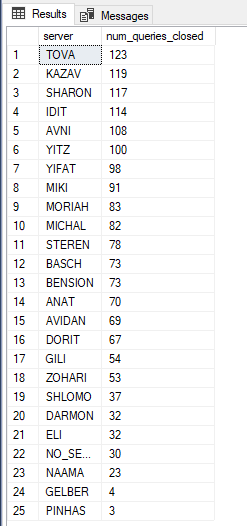
FROM CRM\_Events AS E

INNER JOIN CRM\_logs AS L ON E.Complaint\_ID = L.Complaint\_ID

WHERE E.Company\_response\_to\_consumer IN ('Closed without relief', 'Closed with explanation')

GROUP BY L.server

ORDER BY num\_queries\_closed desc



--ii. Which branches are proportionally receiving the most complaints regarding “Account opening, closing, or management”?

SELECT D.bank\_branch,

COUNT(\*) AS total\_complaints,

COUNT(\*) \* 100.0 / SUM(COUNT(\*)) OVER() AS complaint\_proportion

FROM CRM\_Events AS E

JOIN Client AS C ON E.client\_id = C.client\_id

JOIN District AS D ON C.district\_id = D.district\_id

WHERE E.issue = 'Account opening, closing, or management'

GROUP BY D.bank\_branch

ORDER BY complaint\_proportion DESC;

