SQL Queries:

Question: What is the average number of customers per flight?

There are two variations to this question.

1. The Expected Average Customers Per Flight (Assumes Everyone Is Able To Make Every Flight They Have)

2. The Actual Average Customers Per Flight (Actual Customers On The Flight)

Variations:

Solution For Variation 1:

SELECT

AVG(x.customer\_count) AS "Average Expected Customers Per Flight"

FROM flight f

LEFT JOIN LATERAL (

SELECT

COUNT(\*)

customer\_count FROM itinerary i

WHERE i.flight\_id = f.flight\_id

) x ON true

Solution For Variation 2:

SELECT

AVG(f\_all.num\_customers\_on\_flight) AS "Average Actual Customers Per Flight"

FROM(

SELECT

f1.first\_leg\_flight\_id AS "flight\_id",

f1.flight1 AS "num\_customers\_on\_flight"

FROM (

SELECT

first\_leg.flight\_id AS first\_leg\_flight\_id,

CASE

WHEN first\_leg.actual\_arrival\_time > '1600-01-01' THEN 1

ELSE 0

END AS flight1

FROM customer c

JOIN lateral (

SELECT

xi.flight\_id,

xf.actual\_arrival\_time

FROM itinerary xi

JOIN flight xf ON xf.flight\_id = xi.flight\_id

WHERE xi.customer\_id = c.customer\_id

ORDER BY xf.projected\_departure\_time ASC

LIMIT 1

) first\_leg on true

) AS f1

UNION ALL

SELECT

f2.second\_leg\_flight\_id AS "flight\_id",

f2.flight2 AS "num\_customers\_on\_flight"

FROM(

SELECT

second\_leg.flight\_id AS second\_leg\_flight\_id,

CASE

WHEN (second\_leg.actual\_departure\_time > '1600-01-01') AND (first\_leg.actual\_arrival\_time IS NOT NULL) AND (first\_leg.flight\_id != second\_leg.flight\_id) THEN 1

ELSE 0

END AS flight2

FROM customer c

JOIN lateral (

SELECT

xi.flight\_id,

xf.actual\_arrival\_time

FROM itinerary xi

JOIN flight xf ON xf.flight\_id = xi.flight\_id

WHERE xi.customer\_id = c.customer\_id

ORDER BY xf.projected\_departure\_time ASC

LIMIT 1

) first\_leg on true

JOIN lateral (

SELECT

xi.flight\_id,

xf.actual\_departure\_time

FROM itinerary xi

JOIN flight xf ON xf.flight\_id = xi.flight\_id

WHERE xi.customer\_id = c.customer\_id

ORDER BY xf.projected\_departure\_time DESC

LIMIT 1

) second\_leg ON true

) AS f2

) AS f\_all