EXECUTED QUIRES:

---- Aishwarya poman

```
/* 1. How many customers ever had Foodie-Fi ? */

SELECT
  COUNT(DISTINCT customer_id) AS unique_customer
FROM subscriptions;

-- 1000 UNIQUE CUSTOMERS HAD USED FODDIE-FI TILL NOW.

/* 2. What is the monthly distribution of trial plan start_date values for our dataset
— use the start of the month as the group by value. */

SELECT
 DATE_PART('month',start_date) AS month_date, -- Cast month as integer
 TO_CHAR(start_date, 'MMMM') AS month_name, -- Cast month as string
  COUNT(*) AS trial_subscriptions
FROM subscriptions s
JOIN plans p
  ON s.plan_id = p.plan_id
WHERE s.plan_id = 0
GROUP BY 1, 2
ORDER BY month_date ;

-- MARCH HAS THE HIGGEST NO. OF TRIAL PLANS, WHEREAS FEB HAS THE LOWEST NUMBER OF
TRIAL PLANS


/* 3. What plan  values occur after the year 2020 for our dataset?
 Show the breakdown by count of events for each plan_name. */

SELECT
  p.plan_id,
  p.plan_name,
  COUNT(*) AS events
FROM subscriptions s
JOIN plans p
  ON s.plan_id = p.plan_id
WHERE s.start_date >= '2021-01-01'
GROUP BY p.plan_id, p.plan_name
ORDER BY p.plan_id;

-- BASIC MONTHLY    8
-- PRO MONTHLY      60
-- PRO ANNUAL       63
-- CHURN            71
```

-- WE CAN OBSERVE THAT MOST OF THE CUSTOMERS ARE LEAVING ARE PLAN.

/* 4. What is the customer count and percentage of customers who have churned (rounded to 1 decimal place)? */

```
SELECT
  COUNT(*) AS churn_count,
  ROUND(100 * COUNT(*) / (
    SELECT COUNT(DISTINCT customer_id)
    FROM subscriptions),1) AS churn_percentage
FROM subscriptions s
JOIN plans p
  ON s.plan_id = p.plan_id
WHERE s.plan_id = 4;
```

-- OVERALL 307 CUSTOMERS WHO HAS CHURNED WHICH IS ALLMOST 30.7 % OF FOODIE-FI CUSTOMER BASE.

/* 5. How many customers have churned straight after their initial free trial.
Find ranking of plans by customer and plan type */

```
WITH ranking AS (
SELECT
  s.customer_id,
  s.plan_id,
  p.plan_name,
  ROW_NUMBER() OVER (
    PARTITION BY s.customer_id
    ORDER BY s.plan_id) AS plan_rank
FROM subscriptions s
JOIN plans p
  ON s.plan_id = p.plan_id)

SELECT
  COUNT(*) AS churn_count,
  ROUND(100 * COUNT(*) / (
    SELECT COUNT(DISTINCT customer_id)
    FROM subscriptions),0) AS churn_percentage
FROM ranking
WHERE plan_id = 4 -- Filter to churn plan
  AND plan_rank = 2 ;-- Filter to rank 2 as customers who churned immediately after trial have churn plan ranked as 2
```

-- 92 CUSTOMERS CHURNED STRAIGHT AFTER THE INITRIAL FREE TRIAL WHICH IS 9% OF ENTIRE CUSTOMER BASE.

/* 6. What is the number and percentage of customer who has taken plans after their initial free trial? */

```
-- To retrieve next plan's start date located in the next row based on current row
WITH next_plan_cte AS (
SELECT
  customer_id,
  plan_id,
  LEAD(plan_id, 1) OVER(
    PARTITION BY customer_id
    ORDER BY plan_id) as next_plan
FROM subscriptions)

SELECT
  next_plan,
  COUNT(*) AS conversions,
  ROUND(100 * COUNT(*) / (
    SELECT COUNT(DISTINCT customer_id)
    FROM subscriptions),1) AS conversion_percentage
FROM next_plan_cte
WHERE next_plan IS NOT NULL
  AND plan_id = 0
GROUP BY next_plan
ORDER BY next_plan;

-- FOR NEXT PLAN 1 WE CAN OBSERVE MOST CONVERSION PERCENTAGE FOLLOWED BY NEXT PLAN
2.


/* 7. What is the customer count and percentage, breakdown of all 5 plan_name values after
2020–12–31? */

WITH next_plan AS(
SELECT
  customer_id,
  plan_id,
  start_date,
  LEAD(start_date, 1) OVER(PARTITION BY customer_id ORDER BY start_date) as next_date
FROM subscriptions
WHERE start_date <= '2020-12-31'
),
customer_breakdown AS (
  SELECT
    plan_id,
    COUNT(DISTINCT customer_id) AS customers
  FROM next_plan
  WHERE
    (next_date IS NOT NULL AND (start_date < '2020-12-31'
      AND next_date > '2020-12-31'))
    OR (next_date IS NULL AND start_date < '2020-12-31')
  GROUP BY plan_id)

SELECT plan_id, customers,
  ROUND(100 * customers / (
```

```
   SELECT COUNT(DISTINCT customer_id)
   FROM subscriptions),1) AS percentage
FROM customer_breakdown
GROUP BY plan_id, customers
ORDER BY plan_id;

-- PLAN 4 HAS MOST CUSTOMERS WHICH IS 23.5% OF TAOTAL CUSTOMER BASE.


/* 8. How many customers have upgraded to an annual plan in 2020? */
SELECT
  COUNT(DISTINCT customer_id) AS unique_customer
FROM subscriptions
WHERE plan_id = 3
  AND start_date <= '2020-12-31';

  -- 195 CUSTOMERS HAVE UPGRADED TO ANNUAL PLAN IN 2020.


/* 9. How many days on average does it take for a customer to upgrade to  an annual plan from
the day they join Foodie-Fi? */

WITH trial_plan AS
  (SELECT
    customer_id,
    start_date AS trial_date
  FROM subscriptions
  WHERE plan_id = 0
),
annual_plan AS
  (SELECT
    customer_id,
    start_date AS annual_date
  FROM subscriptions
  WHERE plan_id = 3
)

SELECT
  ROUND(AVG(annual_date - trial_date),0) AS avg_days_to_upgrade
FROM trial_plan tp
JOIN annual_plan ap
  ON tp.customer_id = ap.customer_id;

  -- IT TAKES  2489 DAYS WHICH IS ALMOST 83 MONTHS FOR AN AVERAGE CUSTOMER TO UPGRADE
TO ANNUAL PLAN FROM THE JOINING DAY.


/* 10. How many customers downgraded from a pro monthly to a basic monthly plan in 2020? */

WITH next_plan_cte AS (
  SELECT
```

```
    customer_id,
    plan_id,
    start_date,
    LEAD(plan_id, 1) OVER(
      PARTITION BY customer_id
      ORDER BY plan_id) as next_plan
  FROM subscriptions)

SELECT
  COUNT(*) AS downgraded
FROM next_plan_cte
WHERE start_date <= '2020-12-31'
  AND plan_id = 2
  AND next_plan = 1;

  -- NONE OF THE CUSTOMER DOWNGRADED FROM A PRO MONTHLY TO BASIC MONTHLY PLAN IN
2020.
```