-- #1 For each year, return the names of companies with the top 10th percentile revenue.

-- Also return years and revenues.

SELECT company, year, revenue

FROM (

-- Within each year, rank companies based on their revenue in a descending order

SELECT company, year, revenue,

ROW\_NUMBER() OVER(PARTITION BY year ORDER BY revenue DESC) AS rank,

COUNT(\*) OVER(PARTITION BY year) AS number\_of\_companies

FROM revenue\_analytics

) t

WHERE (rank \* 1.0 / number\_of\_companies) <= 0.10;

-- #2 Return the names of companies that grew their YoY revenue by at least 5%, consecutively every year.

WITH yoy\_growth AS (

-- Calculate YoY growth for each company by dividing the revenue of

-- current year by last year.

SELECT company, year,

revenue \* 1.0 / revenue\_last\_year yoy

FROM (

-- Shift the last year's revenue to the current year snapshot

SELECT company, revenue, year,

LAG(revenue, 1) OVER(PARTITION BY company ORDER BY year) AS revenue\_last\_year

FROM revenue\_analytics

) t

),

growth\_companies AS (

-- For each company, count the number of consecutive years that achieved 5% growths and

-- the number of years that the company existed. If the number\_of\_years - 1 == consecutive

-- growths, then the company matches the criteria

SELECT company,

SUM(CASE WHEN yoy >= 1.05 THEN 1 ELSE 0 END) AS consecutive\_growths,

COUNT(\*) AS number\_of\_years

FROM yoy\_growth

GROUP BY 1

)

-- Return the list of companies that always achieved 5% growths in revenue.

SELECT company

FROM growth\_companies

WHERE consecutive\_growths = number\_of\_years - 1;