/\* Create a query that returns the name of the most popular item in every state and the state.

state, name of the most popular item

products: product name

transactions: customer\_id

customers: customer\_id, state

\*/

WITH prod\_name AS (

SELECT

products.product\_name,

transactions.customer\_id

FROM products

JOIN transactions

ON products.product\_id = transactions.product\_id

),

state\_names AS(

SELECT

prod\_name.product\_name,

prod\_name.customer\_id,

customers.state

FROM prod\_name

JOIN customers

ON prod\_name.customer\_id = customers.customer\_id

)

SELECT

state,

product\_name,

amount\_sold

FROM (

SELECT

state,

product\_name,

amount\_sold,

RANK() OVER (PARTITION BY state

ORDER BY amount\_sold DESC) AS rn

FROM (

SELECT state, product\_name, COUNT(product\_name) AS amount\_sold

FROM state\_names

GROUP BY state, product\_name) t

) tmp

WHERE tmp.rn = 1

ORDER BY amount\_sold DESC;

/\* Create a query that returns the name and purchase amount of the

five customers in each state who have spent the most money. \*/

WITH trns\_amt AS (

SELECT

customers.name,

transactions.transact\_amt,

customers.state

FROM transactions

JOIN customers

ON transactions.customer\_id = customers.customer\_id

)

SELECT

state,

name,

transact\_amt

FROM (

SELECT

state,

name,

transact\_amt,

RANK() OVER (PARTITION BY state

ORDER BY transact\_amt DESC) AS rank

FROM trns\_amt

) tmp

WHERE rank <= 5;

/\*

Create a query that returns the five most popular items for users with a ‘gmail’ email

in the past 30 days, based on number of sales. \*/

WITH gmail AS (

SELECT

\*

FROM customers

WHERE email LIKE '%gmail.com'

),

gmail\_prods AS (

SELECT

gmail.name,

gmail.email,

transactions.transact\_at,

transactions.product\_id

FROM gmail

JOIN transactions

ON gmail.customer\_id = transactions.customer\_id

ORDER BY DATE(transactions.transact\_at) DESC

),

prod\_names AS (

SELECT

gmail\_prods.name,

gmail\_prods.email,

gmail\_prods.transact\_at,

products.product\_name

FROM gmail\_prods

JOIN products

ON gmail\_prods.product\_id = products.product\_id

)

SELECT

name,

email,

DATE(transact\_at) transact\_at,

product\_name,

amount\_sold

FROM (

SELECT

name,

email,

transact\_at,

product\_name,

amount\_sold,

RANK() OVER (PARTITION BY name

ORDER BY amount\_sold DESC) AS rn

FROM (

SELECT name, email, transact\_at, product\_name, COUNT(product\_name) AS amount\_sold

FROM prod\_names

GROUP BY name, email, transact\_at, product\_name) t

) tmp

WHERE tmp.rn <= 5 AND tmp.transact\_at > '2004-04-15';