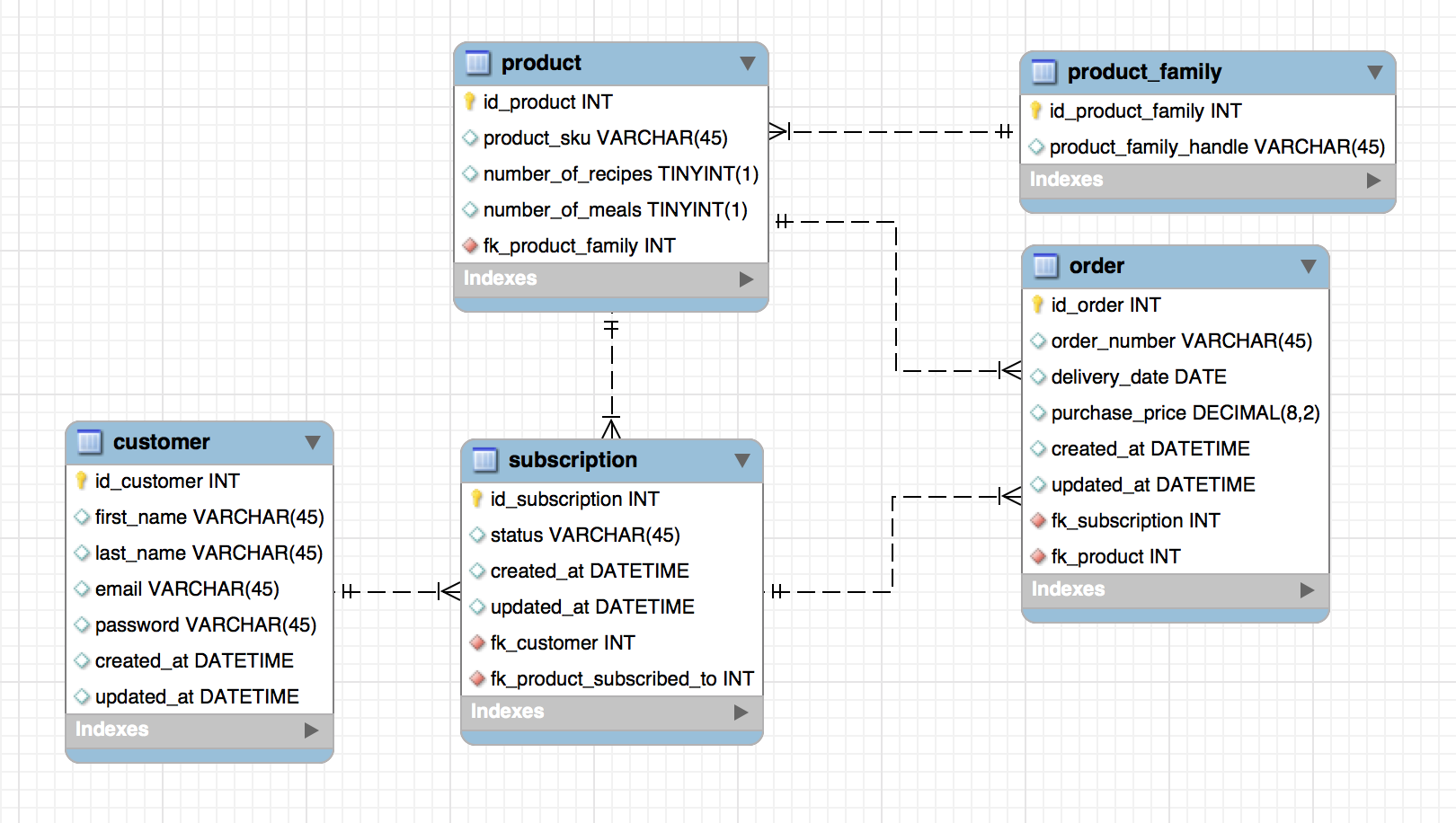
Given the following ER diagram:



And given the following information:

* created\_at fields have a timestamp of the time at which a row was inserted in a table for the first time.
* product\_sku is unique for every product.
* product\_family\_handle is unique for every product family.
* Subscription status can be: ‘paused’, ‘cancelled’ or ‘active’.
* The fk\_product field in the order table indicates the product that was purchased in an order. The fk\_product\_subscribed\_to in the subscription table indicates the product a subscription is currently subscribed to. A subscription can change the product it is subscribed to at any moment.
* An order is generated when a box is shipped to a customer

Write SQL statements to retrieve the following information:

1. For the customer with email address ‘fancygirl83@hotmail.com’ show all product\_skus the customer has an active subscription for.
2. Get all the customers that have an active subscription to a product that corresponds to a product family with product\_family\_handle = ‘classic-box’
3. Get all the paused subscriptions that have only received one box.
4. How many subscriptions do our customers have on average?
5. How many customers have ordered more than one product?
6. How many customers have ordered more that one product with the same subscription?
7. Get a list of all customers which got a box delivered to them two weeks ago, and the count of boxes that had been delivered to them up to that week (loyalty)
8. For all our customers, get the date of the latest order delivered to them and include associated product\_sku, delivery\_date and purchase price. If there were two orders delivered to the same customer on the same date, they should both appear.

Answers

1. For the customer with email address ‘fancygirl83@hotmail.com’ show all product\_skus the customer has an active subscription for.

SELECT subscription.fk\_product\_subscribed\_to

FROM subscription

JOIN customer

ON customer.id\_customer = subscription.fk\_customer

WHERE customer.email = fancygirl83@hotmail.com;

2. Get all the customers that have an active subscription to a product that corresponds to a product family with product\_family\_handle = ‘classic-box’

SELECT subscription.fk\_customer

FROM subscription

JOIN order.

ON subscription.id\_subscription = order.fk\_subscription

JOIN product.

ON order.fk\_product = product.id\_product

JOIN product\_family

ON product.fk\_product\_family = product\_family.id\_product\_family

WHERE product\_family .product\_family\_handle = ‘classic-box’

ORDER BY 1;

3. Get all the paused subscriptions that have only received one box.

SELECT subscription.id\_subscription

FROM subscription

JOIN order

ON subscription.id\_subscription = order.fk\_subscription

WHERE subscription.status = ‘paused’

HAVING count(order.order\_id) = 1;

4. How many subscriptions do our customers have on average?

SELECT count(subscription.fk\_customer)/count(subscription.id\_subscription)

FROM subscription

HAVING subscription.status = ‘active’;

5. How many customers have ordered more than one product?

SELECT count(subscription.fk\_customer)

FROM subscription

JOIN order

ON subscription.id\_subscription = order.fk\_subscription

HAVING count(order.id\_order) > 1;

6. How many customers have ordered more that one product with the same subscription?

SELECT count(subscription.fk\_customer)

FROM subscription

JOIN order

ON subscription.id\_subscription = order.fk\_subscription

HAVING count(order.fk\_product) > 1 AND count(order.id\_order) < count(order.fk\_product);

7. Get a list of all customers which got a box delivered to them two weeks ago, and the count of boxes that had been delivered to them up to that week (loyalty)

SELECT subscription.fk\_customer, count(product.product\_sku)

FROM subscription

JOIN order

ON subscription.id\_subscription = order.fk\_subscription

JOIN product

ON order.fk\_product = product.id\_product

HAVING order.delivery date > ‘05/02/2017

GROUP BY 1

ORDER BY 2 DESC;

8. For all our customers, get the date of the latest order delivered to them and include associated product\_sku, delivery\_date and purchase price. If there were two orders delivered to the same customer on the same date, they should both appear.

SELECT subscription.fk\_customer, max(order.delivery\_date) AS ‘last\_delivery\_date’, product.product\_sku, order.purchase\_price

FROM subscription

FULL JOIN order

ON subscription.id\_subscription = order.fk\_subscription

JOIN product

ON order.fk\_product = product.id\_product

GROUP BY 1

ORDER BY 2 DESC;