Q1. Show the 10 customers with the highest single transaction amount.

SELECT distinct c.id

FROM Customer c, Transaction t

WHERE c.id = t.cid

ORDER BY t.amount desc

LIMIT 10;

Q2. Show all customers ordered by the total amount of all their transactions. Show the name of the customer and the total. Start with the customer with the highest total.

SELECT c.name, SUM(t.amount)

FROM Customer c, Transaction t

WHERE c.id = t.cid

GROUP BY t.cid, c.name

ORDER BY SUM(t.amount) desc;

Q3. Show vendors that have transactions with every single credit card.

create View allTransactions as

SELECT T.vendorId, COUNT(distinct T.ccNumber) as count

From Transaction T;

Select V.vendorName, V.id

From Vendor V, allTransactions T

Where V.id = T.vendorId and T.count = (Select count(\*) from creditcard) Group by V.vendorName, V.id;

drop view allTransactions;

Q4. Show vendors that have transactions with every single credit card type.

Create View CCTypes as

Select Distinct type

FROM Credit Card;

SELECT name

FROM Venders v

WHERE NOT EXISTS ( SELECT \*

FROM CCTypes cc

WHERE cc.type = t.CCNum AND

NOT EXISTS ( SELECT \*

FROM Transaction t

WHERE t.vid = v.id));

Q5. Print the 5 richest vendors. These are the vendors that have made the most money from transactions. Start with the richest vendor.

SELECT v.name, SUM(t.amount)

FROM Vender v, Transaction t

WHERE v.id = t.vid

GROUP BY t.vid, v.name

ORDER BY SUM(t.amount) desc

LIMIT 5;

\*Q6. Print the names of vendors that have more than 1000 transactions in a single month. Remember that you call the methods **month** and **year** on a date and you can group by these values.

SELECT v.name

FROM Vender v, Transaction t

WHERE v.id = t.vid AND

(SELECT COUNT(\*) FROM Transaction t2 WHERE t2.vid = v.id) > 1000;

Q7. Print the names of customers that own more than 10 credit cards.

SELECT c.name

FROM Customer c, Ownership o

WHERE o.CustomerId = c.id AND

(SELECT COUNT(\*) FROM Ownership o2 WHERE o2.CustomerId = o.CustomerId) > 10;

Q8. Print the names of customers that have posted a payment every single month in 2014. You may need to create a table that contains all the month numbers.

Create View Month AS

SELECT Distinct month(date)

FROM Payment p;

SELECT c.name

FROM Customer c, Payment p

WHERE p.cid = c.id AND

NOT EXISTS(SELECT \* FROM Month m WHERE

NOT EXISTS(SELECT \* FROM Payment p WHERE p.id = m.id));

Q9. Print the names of customers that have posted more than one payment in a single month.

Create View Month AS

SELECT Distinct month(date)

FROM Payment p;

Create View MonthPayment AS

SELECT p.CCNum, p.COUNT(\*) as count

FROM Payment p

GROUP BY month(date), month(year)

SELECT c.name

FROM Customer c, Payment p, Ownership o

WHERE o.CCNum = p.CCNum AND

o.CustomerId = c.id AND

EXISTS( SELECT count

FROM MonthPayment mp

WHERE mp.CCNum = p.CCNum

mp.count > 1)

Q10. Print the names of customer that have a month without a payment in 2014.

Create View CustMonth AS

SELECT p2.id, p2.date, COUNT(\*) as count

FROM Payment p2

WHERE p2.id = p.id AND

year(p2.date) = ‘2014’

GROUP BY p2.id, p2.date;

SELECT c.name

FROM Customer c, Payment p, Ownership o

WHERE o.CCNum = p.CCNum AND

o.CustomerId = c.id AND

EXISTS(SELECT COUNT(\*)

FROM CustMonth cm

WHERE cm.id = p.id AND

cm.count = 0);

Show during lab time. As last resource, follow directions below.

If your last name is A-G, e-mail Vivian Fong [vfong01@calpoly.edu](mailto:vfong01@calpoly.edu)  
If your last name is H-P, e-mail Esha Joshi <[ejoshi@calpoly.edu](mailto:ejoshi@calpoly.edu" \t "_blank)>  
If you last name is Q-Z, e-mail Derek Chan <dchan17@calpoly.edu>

Due date: November 19th, 2015