/\*QUERY 1\*/

SELECT lname AS last\_name, fname AS first\_name, 'premier' AS "customer type", 'individual' AS "individual / corp", phone, email

FROM privates

INNER JOIN customers USING (cust\_id)

INNER JOIN nonprospectives USING (cust\_id)

INNER JOIN premiers USING (cust\_id)

UNION

SELECT lname AS last\_name, fname AS first\_name, 'steady' AS "customer type", 'individual' AS "individual / corp", phone, email

FROM privates

INNER JOIN customers USING (cust\_id)

INNER JOIN nonprospectives USING (cust\_id)

INNER JOIN steadys USING (cust\_id)

UNION

SELECT lname AS last\_name, fname AS first\_name, 'prospect' AS "customer type", 'individual' AS "individual / corp", phone, email

FROM privates

INNER JOIN customers USING (cust\_id)

INNER JOIN prospectives USING (cust\_id)

UNION

SELECT corp\_name AS last\_name, '' AS first\_name, 'premier' AS "customer type", 'corporation' AS "individual / corp", phone, email

FROM corporations

INNER JOIN customers USING (cust\_id)

INNER JOIN nonprospectives USING (cust\_id)

INNER JOIN premiers USING (cust\_id)

UNION

SELECT corp\_name AS last\_name, '' AS first\_name, 'steady' AS "customer type", 'corporation' AS "individual / corp", phone, email

FROM corporations

INNER JOIN customers USING (cust\_id)

INNER JOIN nonprospectives USING (cust\_id)

INNER JOIN steadys USING (cust\_id)

UNION

SELECT corp\_name AS last\_name, '' AS first\_name, 'prospect' AS "customer type", 'corporation' AS "individual / corp", phone, email

FROM corporations

INNER JOIN customers USING (cust\_id)

INNER JOIN prospectives USING (cust\_id)

ORDER BY last\_name, first\_name;

/\*QUERY 2\*/

SELECT lname AS last\_name, fname AS first\_name, logTime, SUM(laborMarkUp +

(SELECT SUM(p.price \* mp.quantity)

FROM parts p

INNER JOIN maintenance\_parts mp USING (suppName, partName)

GROUP BY mp.name

HAVING mp.`name` = m1.`name`)

) AS "visit total"

FROM privates

INNER JOIN customers USING (cust\_id)

INNER JOIN vehicles USING (cust\_id)

INNER JOIN visitOrders USING (VIN)

INNER JOIN servicelineitems USING (VIN, logTime)

INNER JOIN serviceItems ON (servName = name)

INNER JOIN maintenance\_items m1 USING (name)

GROUP BY last\_name, first\_name, logTime

UNION

SELECT corp\_name AS last\_name, '' AS first\_name, logTime, SUM(laborMarkUp +

(SELECT SUM(p.price \* mp.quantity)

FROM parts p

INNER JOIN maintenance\_parts mp USING (suppName, partName)

GROUP BY mp.name

HAVING mp.`name` = m1.`name`)

) AS "visit total"

FROM corporations

INNER JOIN customers USING (cust\_id)

INNER JOIN vehicles USING (cust\_id)

INNER JOIN visitOrders USING (VIN)

INNER JOIN servicelineitems USING (VIN, logTime)

INNER JOIN serviceItems ON (servName = name)

INNER JOIN maintenance\_items m1 USING (name)

GROUP BY last\_name, first\_name, logTime

ORDER BY last\_name, first\_name, logTime;

/\*QUERY 3\*/

SELECT c.cust\_id, SUM(parts.price\*mp.quantity+mi.laborMarkUp-sli.discount-sli.loyaltyPointUsed\*2) AS spent

from customers c

inner join vehicles v on (c.cust\_id = v.cust\_id)

inner join vehicleMakeModels vmm on (v.vmm\_id = vmm.vmm\_id)

inner join visitOrders vo on (v.VIN = vo.VIN)

inner join servicelineitems sli on (sli.VIN = vo.VIN AND sli.logTime = vo.logTime)

inner join serviceItems si on (sli.servName = si.name)

inner join maintenance\_items mi on (si.name = mi.name)

inner join maintenance\_parts mp on (mp.name = mi.name)

inner join parts on (parts.partName = mp.partName)

WHERE vo.logTime >= DATE\_SUB(CURDATE(), INTERVAL 2 YEAR)

GROUP BY c.cust\_id

ORDER BY spent DESC

LIMIT 3;

/\*QUERY 4\*/

SELECT employ\_lname AS last\_name, employ\_fname AS first\_name, COUNT(skillName) AS "number of skills"

FROM mechanics

INNER JOIN employees USING (employ\_id)

INNER JOIN employee\_skill USING (employ\_id)

GROUP BY last\_name, first\_name

HAVING COUNT(skillName) >= 3

ORDER BY last\_name, first\_name;

/\*QUERY 5\*/

SELECT e1.employ\_id, e2.employ\_id

FROM employee\_skill e1

INNER JOIN employee\_skill e2 USING (skillName)

WHERE e1.employ\_id != e2.employ\_id

GROUP BY e1.employ\_id, e2.employ\_id

HAVING COUNT(skillName) >= 3;

/\*QUERY 6\*/

SELECT p1.name AS "package name", maintenance\_items.name AS "maintenance item", (SELECT SUM(parts.price \* maintenance\_parts.quantity \* packagecomps.quantity)

FROM packages p2

INNER JOIN packagecomps ON (packagecomps.package\_name = p2.name)

INNER JOIN maintenance\_items ON (maintenance\_items.name = packagecomps.maintenance\_name)

INNER JOIN maintenance\_parts ON (maintenance\_parts.name = maintenance\_items.name)

INNER JOIN parts USING (partName)

WHERE p2.name = p1.name

GROUP BY p2.name) AS "total price"

FROM packages p1

INNER JOIN packagecomps ON (packagecomps.package\_name = p1.name)

INNER JOIN maintenance\_items ON (maintenance\_items.name = packagecomps.maintenance\_name)

ORDER BY p1.name;

/\*QUERY 7\*/

SELECT DISTINCT employ\_lname, employ\_fname

FROM mechanics

INNER JOIN employees USING (employ\_id)

WHERE employ\_id NOT IN

(SELECT employ\_id

FROM itemSkills

INNER JOIN employee\_skill USING (skillName)

GROUP BY employ\_id

HAVING COUNT(skillName) =

(SELECT COUNT(skillName)

FROM itemSkills))

ORDER BY employ\_lname, employ\_fname;

/\*QUERY 8\*/

SELECT lname AS last\_name, fname AS first\_name, 'individual' AS "individual / corp", loyaltyBal

FROM privates

INNER JOIN customers USING (cust\_id)

INNER JOIN nonprospectives USING (cust\_id)

INNER JOIN steadys USING (cust\_id)

UNION

SELECT corp\_name AS last\_name, '' AS first\_name, 'corporation' AS "individual / corp", loyaltyBal

FROM corporations

INNER JOIN customers USING (cust\_id)

INNER JOIN nonprospectives USING (cust\_id)

INNER JOIN steadys USING (cust\_id)

ORDER BY loyaltyBal DESC, last\_name ASC, first\_name ASC;

/\*QUERY 9\*/

SELECT \* FROM Premier\_Saving\_v

ORDER BY ABS(saved) DESC;

/\*QUERY 10\*/

SELECT np.cust\_id, SUM(parts.price\*mp.quantity+mi.laborMarkUp-sli.discount-sli.loyaltyPointUsed\*2) AS spent

from customers c

inner join nonprospectives np on (c.cust\_id = np.cust\_id)

inner join steadys p on (np.cust\_id = p.cust\_id)

inner join vehicles v on (c.cust\_id = v.cust\_id)

inner join vehicleMakeModels vmm on (v.vmm\_id = vmm.vmm\_id)

inner join visitOrders vo on (v.VIN = vo.VIN)

inner join servicelineitems sli on (sli.VIN = vo.VIN AND sli.logTime = vo.logTime)

inner join serviceItems si on (sli.servName = si.name)

inner join maintenance\_items mi on (si.name = mi.name)

inner join maintenance\_parts mp on (mp.name = mi.name)

inner join parts on (parts.partName = mp.partName)

WHERE vo.logTime >= DATE\_SUB(CURDATE(), INTERVAL 1 YEAR)

GROUP BY np.cust\_id

ORDER BY spent DESC;

/\*QUERY 11\*/

SELECT suppName, COUNT(ol.partName) AS number\_of\_parts\_supplied

FROM suppliers

INNER JOIN parts USING (suppName)

INNER JOIN orderlines ol USING (suppName, partName)

GROUP BY suppName

ORDER BY number\_of\_parts\_supplied DESC

LIMIT 3;

/\*QUERY 12\*/

SELECT suppName AS "supplier name", SUM(parts.price \* orderlines.quantity)

FROM suppliers

INNER JOIN parts USING (suppName)

INNER JOIN orderlines USING (suppName, partName)

GROUP BY suppName

ORDER BY SUM(parts.price \* orderlines.quantity) DESC

LIMIT 5;

/\*QUERY 13\*/

SELECT DISTINCT certName

FROM mentorRelationships

WHERE mentor\_id =

(SELECT mentor\_id

FROM mentorRelationships

WHERE endDate IS NULL

GROUP BY mentor\_id

ORDER BY COUNT(mentee\_id) DESC

LIMIT 1)

AND endDate IS NULL

ORDER BY certName;

/\*QUERY 14\*/

SELECT skillName, COUNT(employ\_id)

FROM employee\_skill

GROUP BY skillName

ORDER BY COUNT(employ\_id), skillName

LIMIT 3;

/\*QUERY 15\*/

SELECT employ\_lname, employ\_fname

FROM mechanics

INNER JOIN employees USING (employ\_id)

INNER JOIN serviceTechnicians USING (employ\_id)

ORDER BY employ\_lname, employ\_fname;

/\*QUERY 16A (all mentoring relationships require qualifications)\*/

SELECT DISTINCT mentor.employ\_lname AS "mentor last name", mentor.employ\_fname AS "mentor first name", mentee.employ\_lname AS "mentee last name", mentee.employ\_fname AS "mentee first name", certName

FROM mentorRelationships mr

INNER JOIN mechanics m1 ON (mr.mentor\_id = m1.employ\_id)

INNER JOIN employees mentor ON (m1.employ\_id = mentor.employ\_id)

INNER JOIN mechanics m2 ON (mr.mentee\_id = m2.employ\_id)

INNER JOIN employees mentee ON (m2.employ\_id = mentee.employ\_id)

ORDER BY mentor.employ\_lname, mentor.employ\_fname, mentee.employ\_lname, mentee.employ\_fname, certName;

/\*QUERY 16B (customer can bring a maximum of 3 cars a day)\*/

SELECT cust\_id, DATE(logTime) AS "date", COUNT(logTime) AS "number of times visited on a given day"

FROM customers

INNER JOIN vehicles USING (cust\_id)

INNER JOIN visitOrders USING (VIN)

GROUP BY cust\_id, DATE(logTime)

ORDER BY DATE(logTime);

/\*QUERY 16C (a mechanic can only be assigned to at most 1 service per visit per car)\*/

SELECT employ\_lname, employ\_fname, logTime, VIN, COUNT(servName)

FROM employees

INNER JOIN mechanics USING (employ\_id)

INNER JOIN servicelineitems USING (employ\_id)

GROUP BY employ\_lname, employ\_fname, logTime, VIN

ORDER BY employ\_lname, employ\_fname, logTime, VIN;