

ITP 249 Project 1 Answer Sheet

61 POINTS

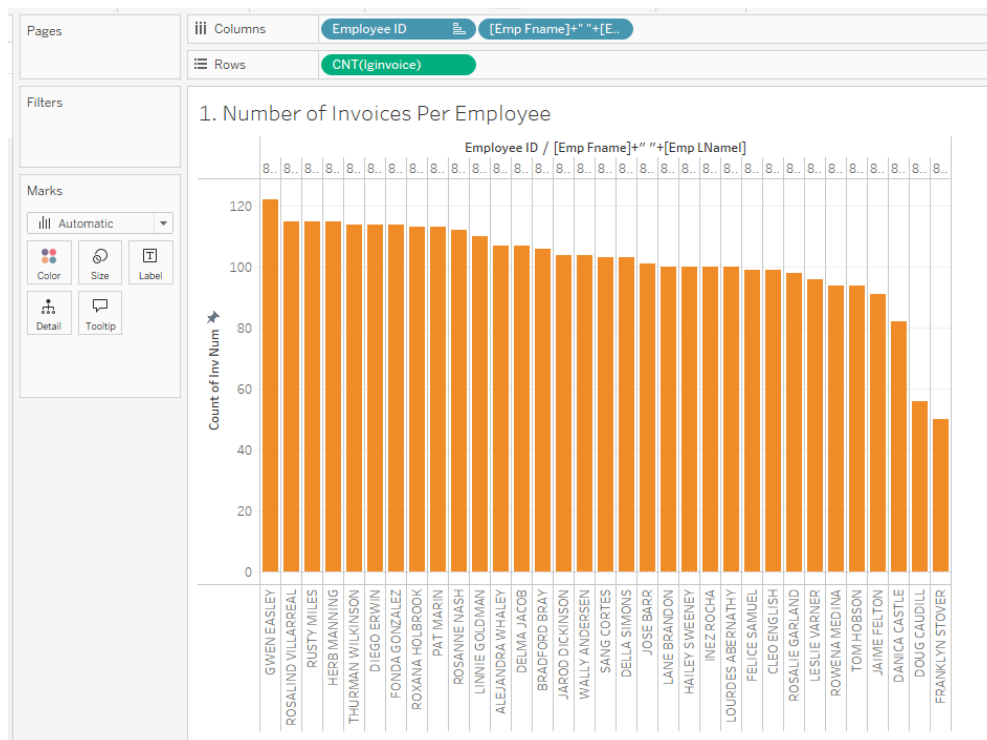
Team Number: 3

Team Member Names: Andrew Zhang (1-6), Jackson Cong (7-12)

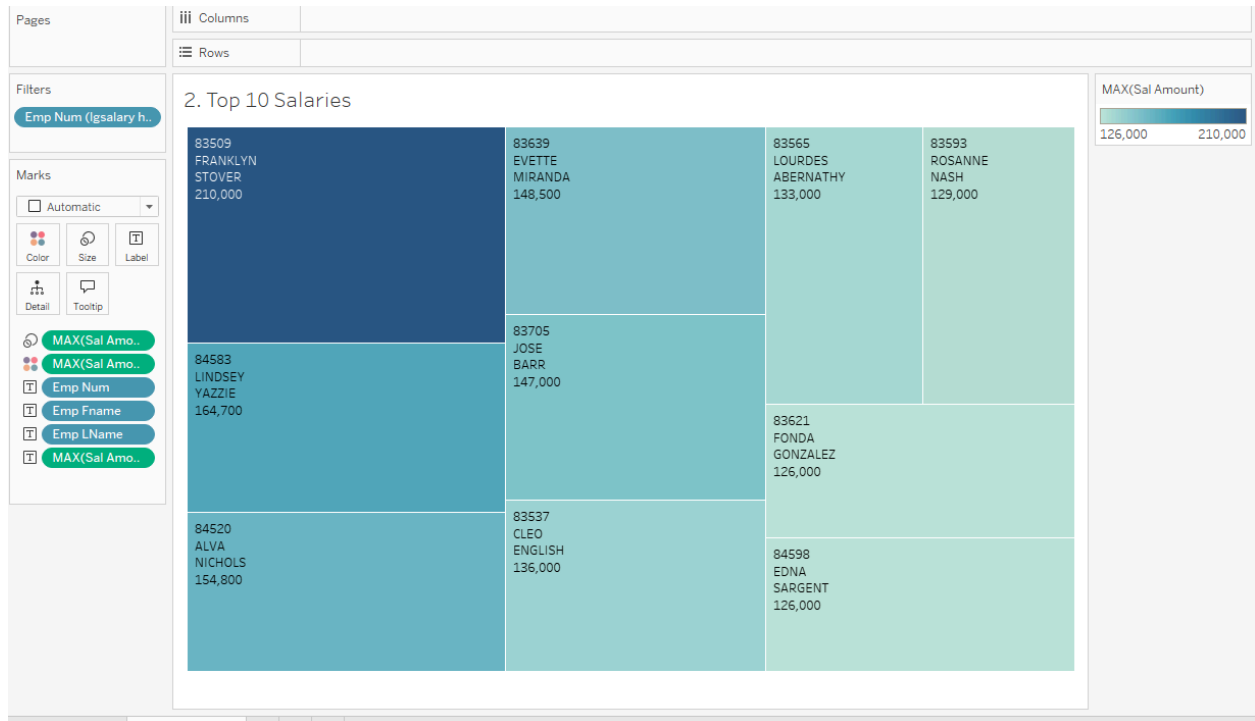
PART 1 (5 POINTS EACH) INSERT SCREENSHOT FOR EACH ANSWER

1. Which Employee wrote the most number of invoices? Note how the employee name is displayed in the chart.

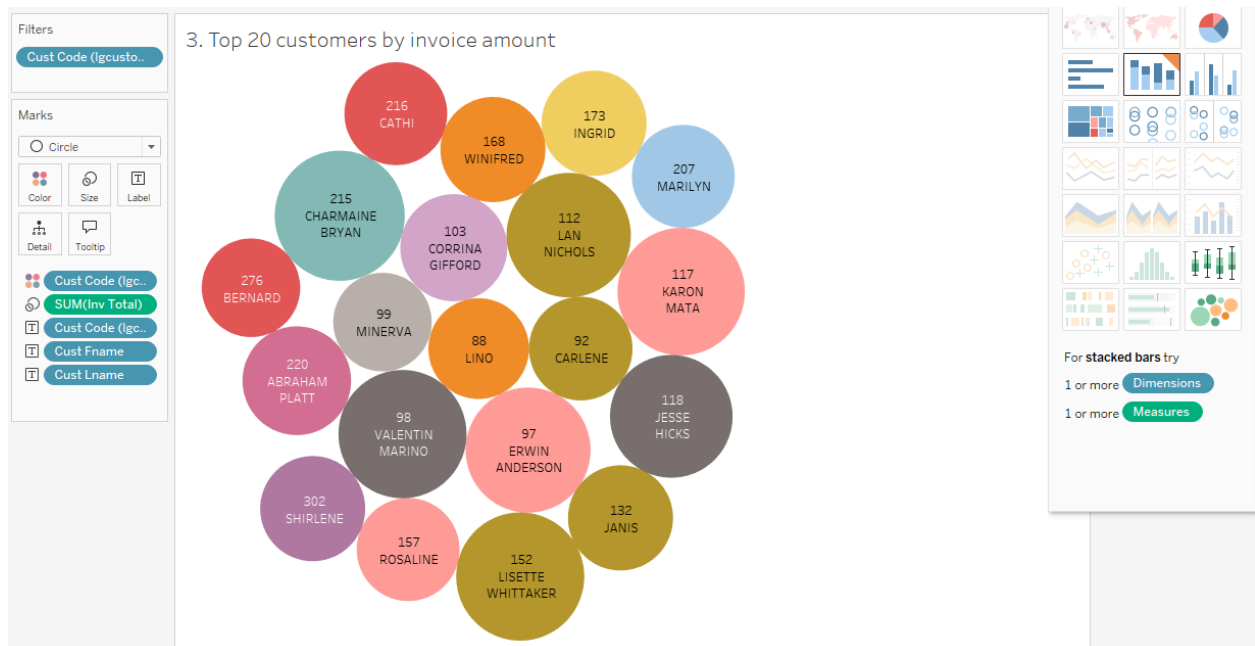
Gwen Easley



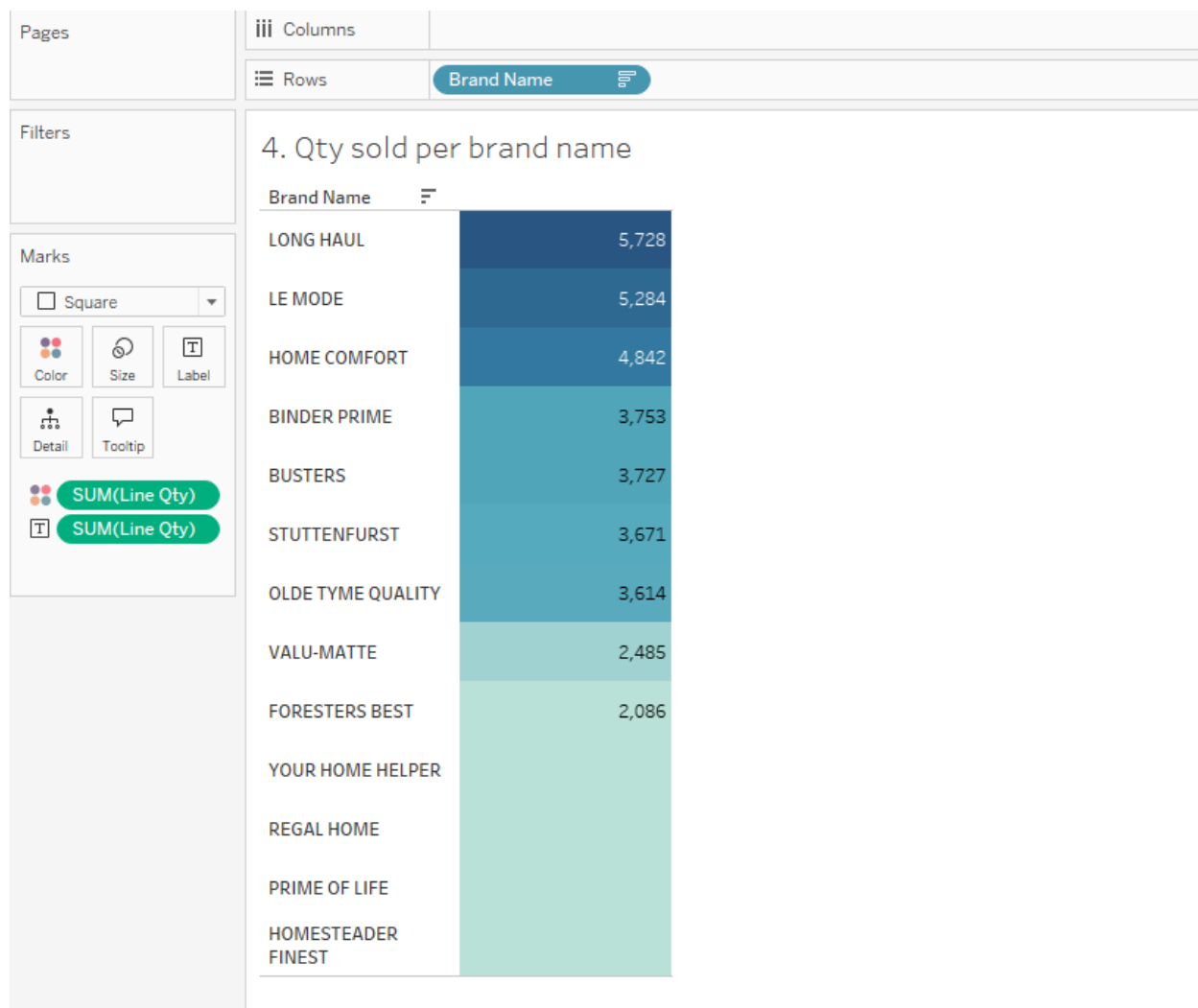
2. Show, as a TreeMap, the top 10 employee salaries. Consider the maximum salary for each employee (since we have the history of each employee's salary history)



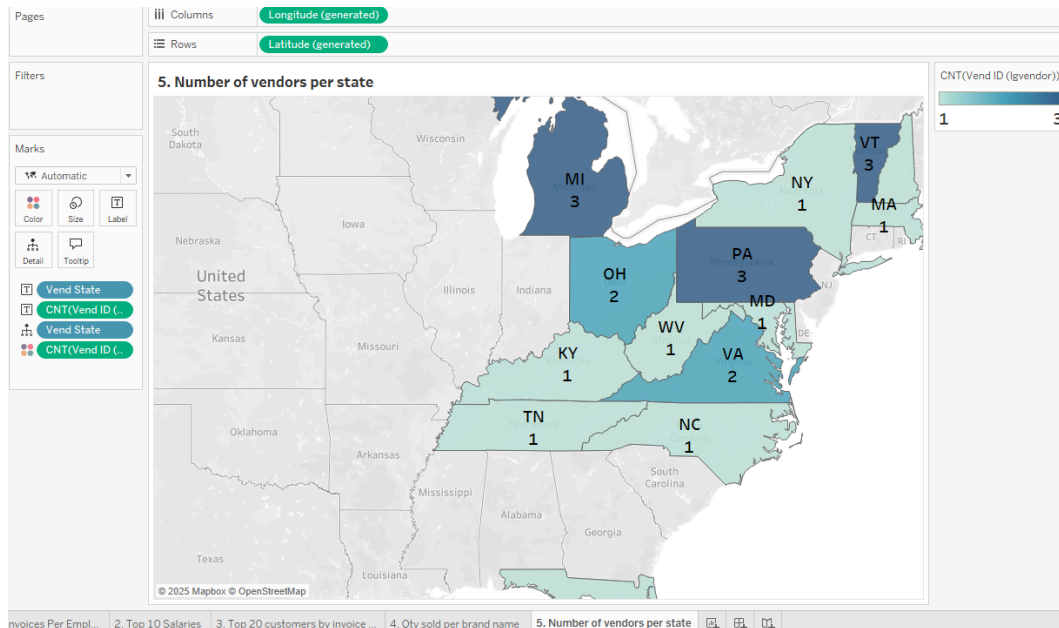
3. Show, as a bubble chart, the top 20 customers by their invoice totals.



4. Display brand names in descending order of quantity of products sold.



5. Show the number of vendors per state on a map.



You will also need to submit your Tableau file as <group#>_Project_II.twb file.

PART 2 (3 POINTS EACH)

Insert the SQL statement and a screenshot of the results for each problem.

- Write a query to display the first name, last name, and e-mail address of employees hired from January 1, 2003, to December 31, 2012. Sort the output by last name and then by first name.

```
SELECT Emp_Fname, Emp_LName, Emp_Email
FROM largeco.lgemployee
WHERE Emp_Hiredate BETWEEN '2003-01-01' AND '2012-12-31'
ORDER BY Emp_LName, Emp_Fname;
```

	Emp_Fname	Emp_LName	Emp_Email
▶	SAMANTHA	ALBRIGHT	S.ALBRIGHT8@LGCOMPANY.COM
	TRISHA	ALVAREZ	T.ALVARE8@LGCOMPANY.COM
	ROSALBA	BAKER	R.BAKER9@LGCOMPANY.COM
	SANTIAGO	BRIGGS	S.BRIGGS10@LGCOMPANY.COM
	WILFORD	BURGOS	W.BURGOS6@LGCOMPANY.COM
	IRENA	BURKETT	I.BURKET9@LGCOMPANY.COM
	AARON	CARROLL	A.CARROL8@LGCOMPANY.COM
	LUCIO	CAUDILL	L.CAUDIL4@LGCOMPANY.COM
	ILEANA	CHURCH	I.CHURCH10@LGCOMPANY.COM
	HANNAH	COLEMAN	H.COLEMA7@LGCOMPANY.COM
	PHILLIS	CONKLIN	P.CONKLI4@LGCOMPANY.COM
	SADIE	COVINGTON	S.COIVING6@LGCOMPANY.COM
	MICKEY	CRAFT	M.CRAFT9@LGCOMPANY.COM

- Write a query to display the first name, last name, phone number, title, and department number of employees who work in department 300 or have the title "CLERK I." Sort the output by last name and then by first name.

```
SELECT Emp_Fname, Emp_LName, Emp_Phone, Emp_Title, Dept_Num
FROM largeco.lgemployee
WHERE Dept_Num = 300 OR Emp_Title = 'CLERK I'
ORDER BY Emp_LName, Emp_Fname;
```

Result Grid					
Filter Rows:					
Export: Wrap Cell Content:					
	Emp_Fname	Emp_LName	Emp_Phone	Emp_Title	Dept_Num
▶	LAVINA	ACEVEDO	862-6787	ASSOCIATE	300
	LAUREN	AVERY	550-2270	SENIOR ASSOCIATE	300
	ROSALBA	BAKER	632-8197	ASSOCIATE	300
	FERN	CARPENTER	735-4820	PURCHASING SPECIALIST	300
	LEEANN	CLINTON	616-9615	CLERK I	600
	TANIKA	CRANE	449-6336	PURCHASING SPECIALIST	300
	SAMMY	DIGGS	525-2101	SENIOR ASSOCIATE	300
	LANA	DOWDY	471-8795	SENIOR ASSOCIATE	300
	STEPHAINE	DUNLAP	618-8203	BUYER - RAW MATERIALS	300
	HAL	FISHER	676-3662	SENIOR ASSOCIATE	300
	LINDSAY	GOOD	337-9570	CLERK I	600
	LEEANN	HORN	828-4361	SENIOR ASSOCIATE	300
	MERLE	JAMISON	750-7714	PURCHASING SPECIALIST	300

- Write a query to display the employee number, last name, first name, salary "from" date, salary end date, and salary amount for employees 83731, 83745, and 84039. Sort the output by employee number and salary "from" date.

```
SELECT s.Emp_Num, e.Emp_LName, e.Emp_Fname,
       s.Sal_From, s.Sal_end, s.Sal_Amount
FROM largeco.lgsalary_history s, largeco.lgemployee e
WHERE s.Emp_Num = e.Emp_Num
AND s.Emp_Num IN (83731, 83745, 84039)
ORDER BY s.Emp_Num, s.Sal_from;
```

	Emp_Num	Emp_LName	Emp_FName	Sal_From	Sal_end	Sal_Amount
▶	83731	VARGAS	SHERON	2010-07-15	2011-07-14	43740.00
	83731	VARGAS	SHERON	2011-07-14	2012-07-13	48110.00
	83731	VARGAS	SHERON	2012-07-14	2013-07-14	49550.00
	83731	VARGAS	SHERON	2013-07-15	NULL	51040.00
	83745	SPICER	DWAIN	2007-08-02	2008-08-01	56020.00
	83745	SPICER	DWAIN	2008-08-02	2009-08-02	57700.00
	83745	SPICER	DWAIN	2009-08-03	2010-08-01	63470.00
	83745	SPICER	DWAIN	2010-08-02	2011-08-01	68550.00
	83745	SPICER	DWAIN	2011-08-01	2012-07-31	71980.00
	83745	SPICER	DWAIN	2012-08-01	2013-08-01	74140.00
	83745	SPICER	DWAIN	2013-08-02	NULL	76360.00
	84039	COLEMAN	HANNAH	2010-06-28	2011-06-27	47380.00
	84039	COLEMAN	HANNAH	2011-06-27	2012-06-26	51170.00

4. Write a query to display the employee number, last name, e-mail address, title, and department name of each employee whose job title ends in the word "ASSOCIATE." Sort the output by department name and employee title.

```

SELECT e.Emp_Num, e.Emp_LName, e.Emp_Email, e.Emp_Title, d.Dept_Name
FROM largeco.lgemployee e, largeco.lgdepartment d
WHERE e.Dept_Num = d.Dept_Num
AND e.Emp_Title LIKE '%ASSOCIATE'
ORDER BY e.Emp_Title, d.Dept_Name;

```

	Emp_Num	Emp_LName	Emp_Email	Emp_Title	Dept_Name
▶	83661	FINN	D.FINN87@LGCOMPANY.COM	ASSOCIATE	ACCOUNTING
	84386	RIVERA	D.RIVERA76@LGCOMPANY.COM	ASSOCIATE	ACCOUNTING
	84526	LASSITER	F.LASSIT8@LGCOMPANY.COM	ASSOCIATE	ACCOUNTING
	83583	ROLLINS	M.ROLLIN99@LGCOMPANY.COM	ASSOCIATE	ACCOUNTING
	83517	ALBRIGHT	SO.ALBRI96@LGCOMPANY.COM	ASSOCIATE	ACCOUNTING
	83378	DUNHAM	F.DUNHAM5@LGCOMPANY.COM	ASSOCIATE	ACCOUNTING
	84383	WASHINGTON	L.WASHIN98@LGCOMPANY.COM	ASSOCIATE	CUSTOMER SERVICE
	84278	TOBIN	I.TOBIN95@LGCOMPANY.COM	ASSOCIATE	CUSTOMER SERVICE
	83728	KERNS	S.KERNS83@LGCOMPANY.COM	ASSOCIATE	CUSTOMER SERVICE
	84265	CASH	P.CASH79@LGCOMPANY.COM	ASSOCIATE	CUSTOMER SERVICE
	83341	CORTEZ	C.CORTEZ85@LGCOMPANY.COM	ASSOCIATE	CUSTOMER SERVICE
	84206	HEALY	N.HEALY82@LGCOMPANY.COM	ASSOCIATE	CUSTOMER SERVICE
	83824	BOUCHARD	P.BOUCHA95@LGCOMPANY.COM	ASSOCIATE	CUSTOMER SERVICE

5. Write a query to display the number of products in each category that have a water base.

```

SELECT Prod_Category, COUNT(*) AS NUMPRODUCTS
FROM largeco.lgproduct
WHERE Prod_Base = 'Water'
GROUP BY Prod_Category
ORDER BY Prod_category asc;

```

	Prod_Category	NUMPRODUCTS
▶	Cleaner	2
	Filler	2
	Primer	16
	Sealer	1
	Top Coat	81

6. Write a query to display the number of products within each base and type combination.

```
SELECT Prod_Base, Prod_Type, COUNT(*) AS NumProducts
FROM largeco.lgproduct
GROUP BY Prod_Base, Prod_Type
ORDER BY Prod_Base asc;
```

	Prod_Base	Prod_Type	NumProducts
▶	Solvent	Exterior	67
	Solvent	Interior	83
	Water	Exterior	39
	Water	Interior	63

7. Write a query to display the brand ID, brand name, and average price of products of each brand. Sort the output by brand name. (Results are shown with the average price rounded to two decimal places.)

```
SELECT
    b.Brand_ID,
    b.Brand_Name,
    ROUND(AVG(p.Prod_Price), 2) AS AVGPRICE
FROM
    largeco.lgbrand b,
    largeco.lgproduct p
WHERE
    b.Brand_ID = p.Brand_ID
GROUP BY
    b.Brand_ID, b.Brand_Name
ORDER BY
    b.Brand_Name;
```

	Brand_ID	Brand_Name	AVGPRICE
▶	33	BINDER PRIME	16.12
	29	BUSTERS	22.59
	23	FORESTERS BEST	20.94
	27	HOME COMFORT	21.80
	35	LE MODE	19.22
	30	LONG HAUL	20.12
	28	OLDE TYME QUALITY	18.33
	25	STUTTENFURST	16.47
	31	VALU-MATTE	16.84

8. Write a query to display the department number and most recent employee hire date for each department. Sort the output by department number.

```

SELECT
    Dept_Num,
    MAX(Emp_Hiredate) AS MOSTRECENT
FROM
    largeco.lgemployee
GROUP BY
    DEPT_NUM
ORDER BY
    DEPT_NUM;

```

	Dept_Num	MOSTRECENT
▶	200	2001-06-08
	250	2011-12-15
	280	2010-04-16
	300	2010-12-12
	400	2011-01-26
	500	2011-04-26
	550	2011-10-22
	600	2011-10-02

9. Write a query to display the department number, department name, department phone number, employee number, and last name of each department manager. Sort the output by department name.

```

SELECT
    D.DEPT_NUM,
    D.DEPT_NAME,
    D.DEPT_PHONE,
    D.EMP_NUM,
    E.Emp_LNameI
FROM
    largeco.lgdepartment D, largeco.lgemployee E
WHERE

```



```

E.Emp_Num = D.Emp_Num
ORDER BY
DEPT_NAME;

```

	DEPT_NUM	DEPT_NAME	DEPT_PHONE	EMP_NUM	Emp_LNameI
▶	600	ACCOUNTING	555-2333	84583	YAZZIE
	250	CUSTOMER SERVICE	555-5555	84001	FARMER
	500	DISTRIBUTION	555-3624	84052	FORD
	280	MARKETING	555-8500	84042	PETTIT
	300	PURCHASING	555-4873	83746	RANKIN
	200	SALES	555-2824	83509	STOVER
	550	TRUCKING	555-0057	83683	STONE
	400	WAREHOUSE	555-1003	83759	CHARLES

10. Write a query to display the largest average product price of any brand.

```

SELECT
  MAX(AvgPrice) AS LARGEST_AVERAGE
FROM (
  SELECT
    Brand_ID,
    ROUND(AVG(Prod_Price), 2) AS AvgPrice
  FROM
    largeco.lgproduct
  GROUP BY
    Brand_ID
) AS B;

```

	LARGEST_AVERAGE
▶	22.59

11. Write a query to display the brand ID, brand name, brand type, and average price of products for the brand that has the largest average product price.

```

SELECT
  b.Brand_ID,
  b.Brand_Name,
  b.Brand_Type,
  ROUND(AVG(p.Prod_Price), 2) AS AVGPRICE
FROM
  largeco.lgbrand b
JOIN
  largeco.lgproduct p ON b.Brand_ID = p.Brand_ID
GROUP BY
  b.Brand_ID, b.Brand_Name, b.Brand_Type
HAVING
  AVGPRICE = (
    SELECT

```

```

        MAX(AvgPrice)
    FROM (
        SELECT
            ROUND(AVG(Prod_Price), 2) AS AvgPrice
        FROM
            largeco.lgproduct
        GROUP BY
            Brand_ID
    ) AS A
);

```

	Brand_ID	Brand_Name	Brand_Type	AVGPRICE
►	29	BUSTERS	VALUE	22.59

12. Write a query to display the manager name, department name, department phone number, employee name, customer name, invoice date, and invoice total for the department manager of the employee who made a sale to a customer whose last name is Hagan on May 18, 2013. For all person names, concatenate the first and last names into a single field.

```

SELECT
    CONCAT(m.Emp_Fname, ' ', m.Emp_LName) AS MANAGERNAME,
    d.Dept_Name,
    d.Dept_Phone,
    CONCAT(e.Emp_Fname, ' ', e.Emp_LName) AS EMPLOYEEName,
    CONCAT(c.Cust_Fname, ' ', c.Cust_LName) AS CUSTOMERNAME,
    i.INV_DATE,
    i.INV_TOTAL
FROM
    largeco.lginvoice i
JOIN
    largeco.lgemployee e ON i.Employee_ID = e.Emp_Num
JOIN
    largeco.lgcustomer c ON i.Cust_Code = c.Cust_Code
JOIN
    largeco.lgdepartment d ON e.Dept_Num = d.Dept_Num
JOIN
    largeco.lgemployee m ON d.Dept_Num = m.Dept_Num
WHERE
    c.Cust_LName = 'HAGAN'
    AND i.Inv_Date = '2013-05-18';

```

	MANAGERNAME	Dept_Name	Dept_Phone	EMPLOYEEName	CUSTOMERNAME	INV_DATE	INV_TOTAL
►	FRANKLYN STOVER	SALES	555-2824	THURMAN WILKINSON	DARELL HAGAN	2013-05-18	315.04

Zip the Tableau file and the answer sheet as <Group#>_Part_II_Answer_Sheet. Submit on Blackboard.