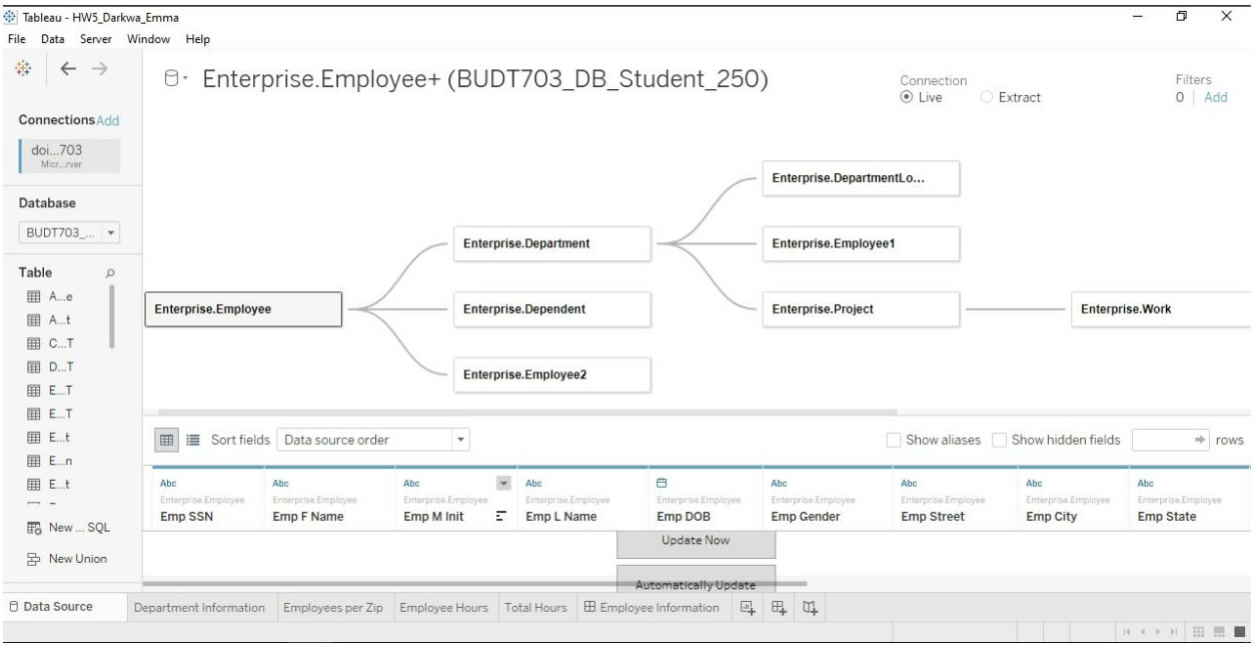
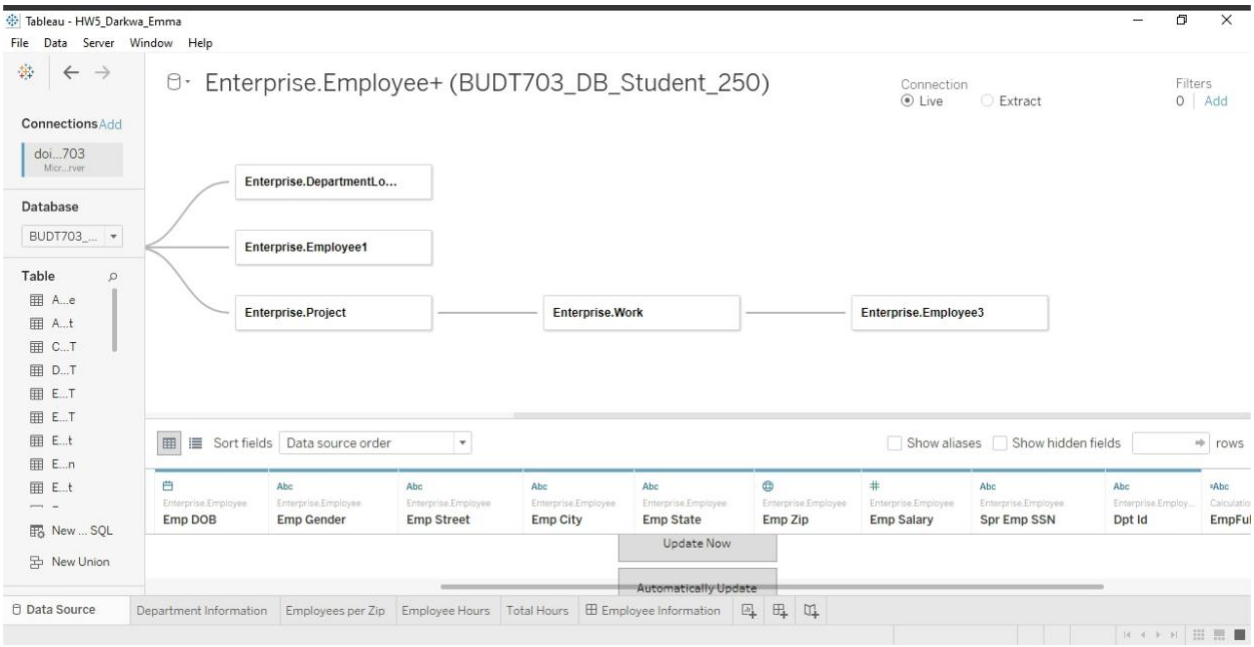
Data Source: Connect all six data tables with eight relationships using one relationship for each foreign key.

1. Insert an image showing your completed Data Source.



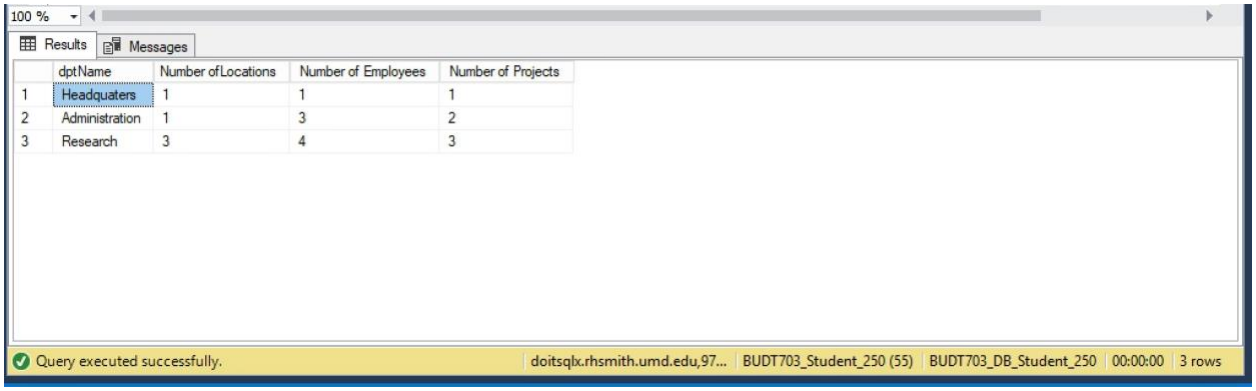


Sheet 1: How many locations, how many employees, and how many projects for each department name?

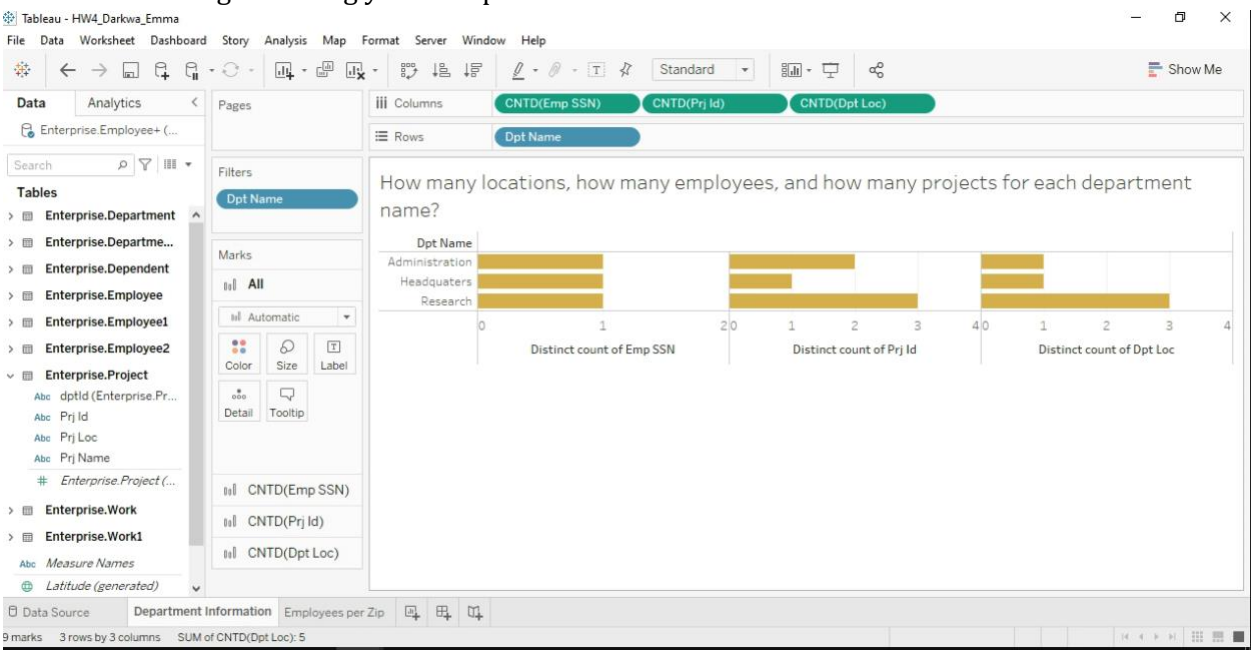
Answer your SELECT statement here.

```
SELECT d.dptName, COUNT (DISTINCT l.dptLoc) AS 'Number ofLocations',
                  COUNT(DISTINCT e.empSSN) AS ' Number of Employees',
                  COUNT(DISTINCT  p.prjId) AS ' Number of Projects'
FROM [Enterprise.DepartmentLocation] l,[Enterprise.Department] d,[Enterprise.Employee]
e,[Enterprise.Project] p
WHERE l.dptId=d.dptId
    AND e.dptId=d.dptId
    AND p.dptId=d.dptId
GROUP BY d.dptId,d.dptName
```

2. Insert an image showing the query result from the SQL Server Management Studio.



3. Answer using coupled horizontal bars plot on Tableau.
   Set the bar color to gold.
   Rename sheet name and title.
   Insert an image showing your completed Sheet 1.

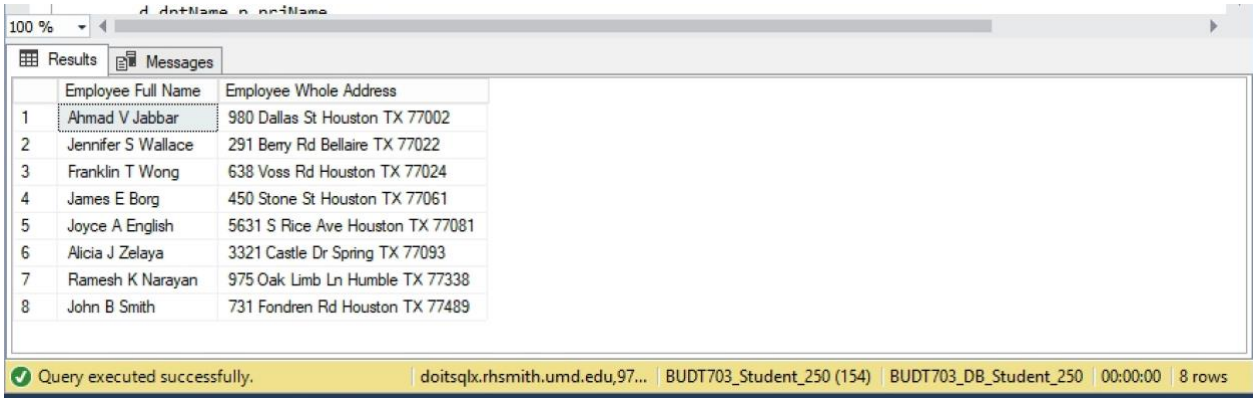


Sheet 2: What are the full name and whole address for each employee in the order of zip codes?

4. Answer your SELECT statement here.

```
SELECT CONCAT(e.empFName,' ',e.empMInit,' ',e.empLName) AS 'Employee Full Name',
CONCAT(e.empStreet,' ',e.empCity,' ',e.empState,' ',e.empZip) AS 'Employee Whole Address'
FROM [Enterprise.Employee] e
GROUP BY e.empFName,e.empMInit,e.empLName,e.empStreet,e.empCity,e.empState,e.empZip
ORDER BY e.empZip
```

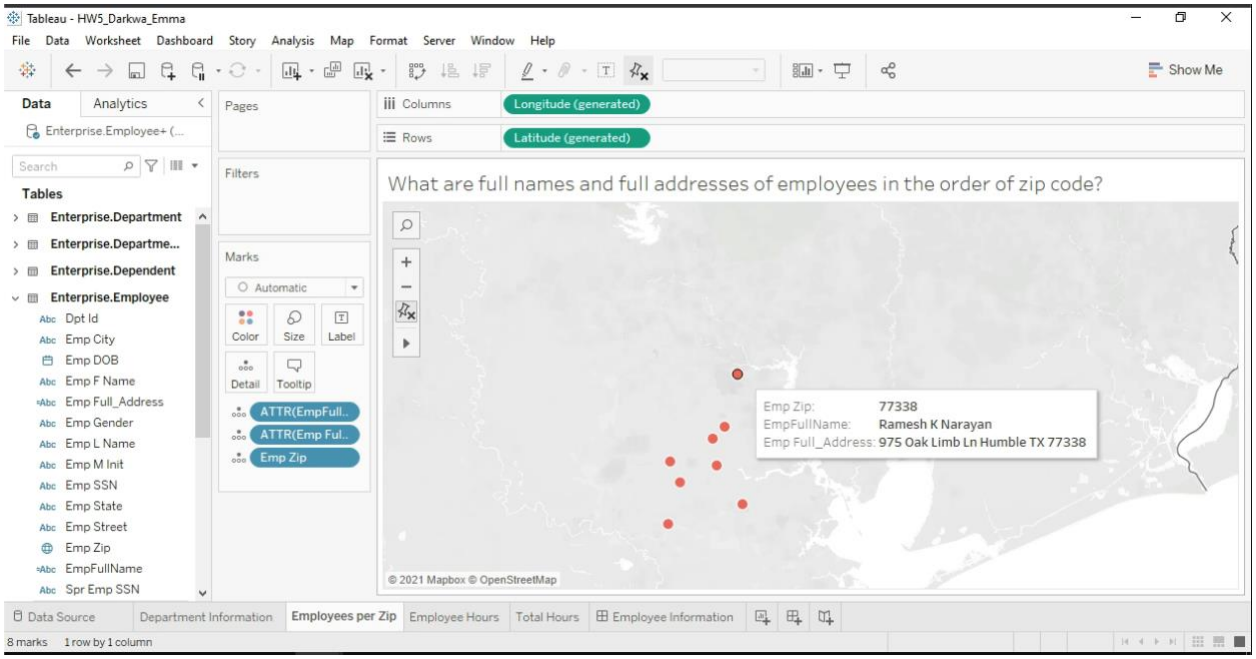
5. Insert an image showing the query result from the SQL Server Management Studio.



	Employee Full Name	Employee Whole Address
1	Ahmad V Jabbar	980 Dallas St Houston TX 77002
2	Jennifer S Wallace	291 Berry Rd Bellaire TX 77022
3	Franklin T Wong	638 Voss Rd Houston TX 77024
4	James E Borg	450 Stone St Houston TX 77061
5	Joyce A English	5631 S Rice Ave Houston TX 77081
6	Alicia J Zelaya	3321 Castle Dr Spring TX 77093
7	Ramesh K Narayan	975 Oak Limb Ln Humble TX 77338
8	John B Smith	731 Fondren Rd Houston TX 77489

b.

Answer using a US symbol map plot on Tableau.
Use zip code as a geographic role. (Hint: Columns = Longitude & Rows = Latitude)
Insert employee name and address into tooltip.
Rename sheet name and title.
Insert an image showing your completed Sheet 2.

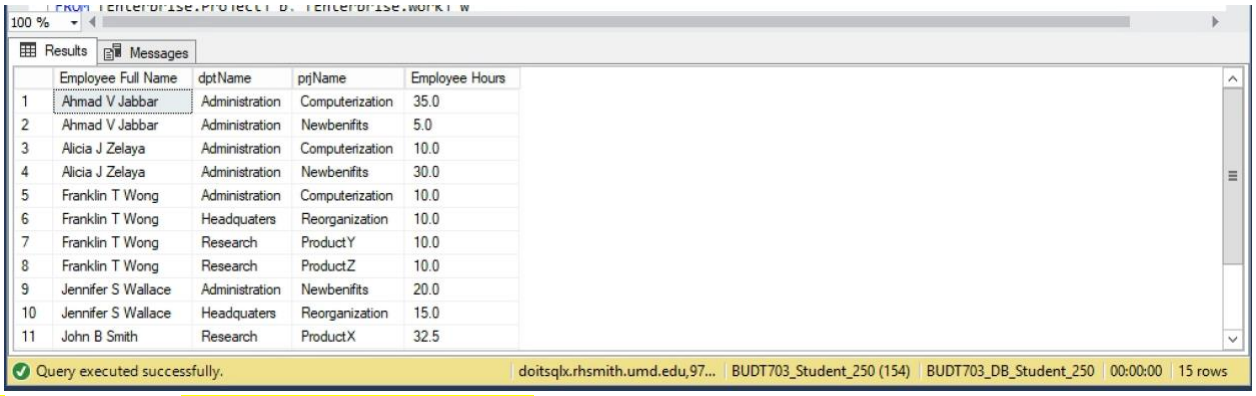


Sheet 3: How many hours did each employee work on each project organized by each department in the order of employee full name, department name then project name?

Answer your SELECT statement here.

```
SELECT CONCAT(e.empFName,' ',e.empMInit,' ',e.empLName) AS 'Employee Full Name',
            d.dptName,p.prjName,
            SUM (DISTINCT w.hours) AS 'Employee Hours'
FROM [Enterprise.Work] w,[Enterprise.Employee] e,[Enterprise.Department]
d,[Enterprise.Project] p
WHERE w.empSSN=e.empSSN
    AND w.prjId=p.prjId  AND w.hours IS NOT NULL
    AND d.dptId=p.dptId
GROUP BY e.empFName,e.empMInit,e.empLName,d.dptId,d.dptName,p.dptId,p.prjName
ORDER BY e.empFName,e.empLName,d.dptName,p.prjName
```

1. Insert an image showing the query result from the SQL Server Management Studio.



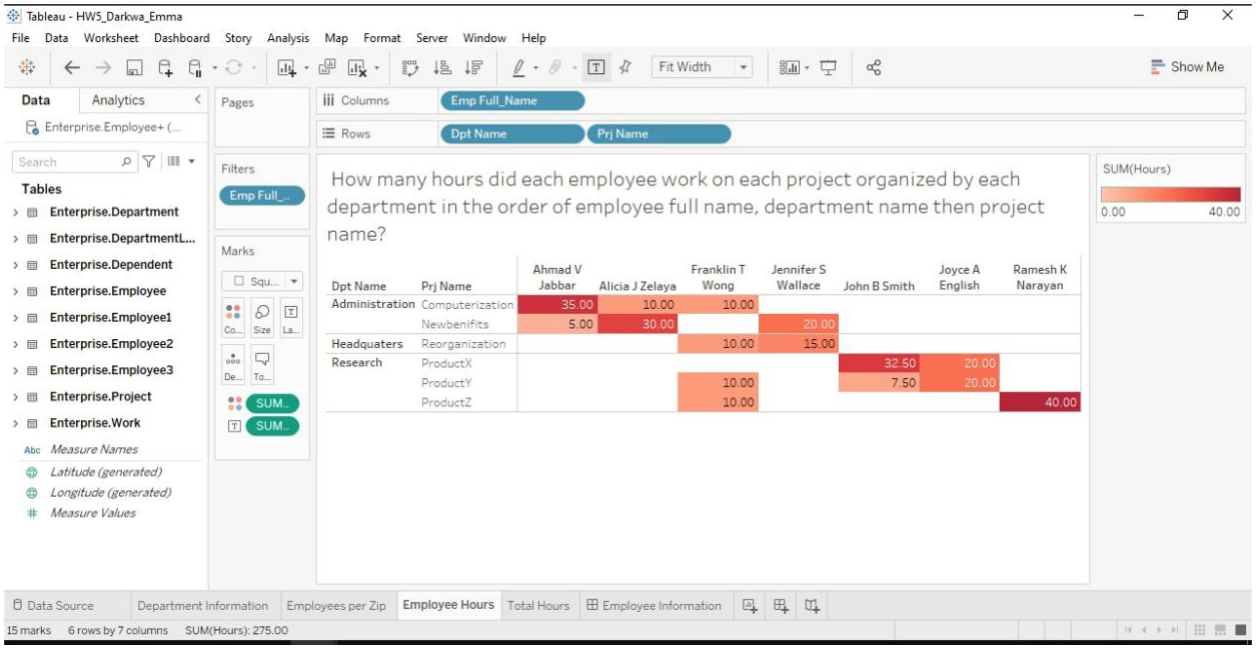
100 %

Results | Messages

	Employee Full Name	dptName	prjName	Employee Hours
1	Ahmad V Jabbar	Administration	Computerization	35.0
2	Ahmad V Jabbar	Administration	Newbenifits	5.0
3	Alicia J Zelaya	Administration	Computerization	10.0
4	Alicia J Zelaya	Administration	Newbenifits	30.0
5	Franklin T Wong	Administration	Computerization	10.0
6	Franklin T Wong	Headquaters	Reorganization	10.0
7	Franklin T Wong	Research	ProductY	10.0
8	Franklin T Wong	Research	ProductZ	10.0
9	Jennifer S Wallace	Administration	Newbenifits	20.0
10	Jennifer S Wallace	Headquaters	Reorganization	15.0
11	John B Smith	Research	ProductX	32.5

Query executed successfully. | doitsqlx.rhsmith.umd.edu,97... | BUDT703_Student_250 (154) | BUDT703_DB_Student_250 | 00:00:00 | 15 rows

2. Answer using a highlight table on Tableau.
   Filter out no hours, if any.
   Set the palette color to red, and set the min in legend to 0.00.
   Rename sheet name and title.
   Insert an image showing your completed Sheet 3.

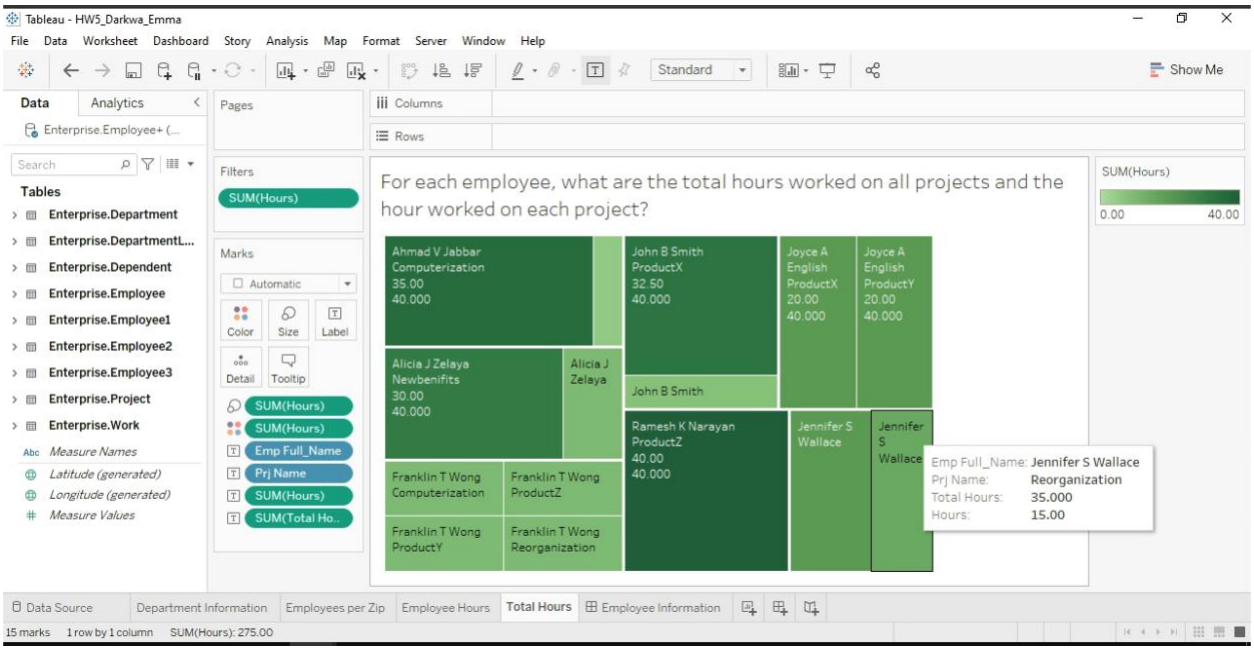


Sheet 4: For each employee, what are the total hours worked on all projects and the hour worked on each project?

3. Answer your SELECT statement here.

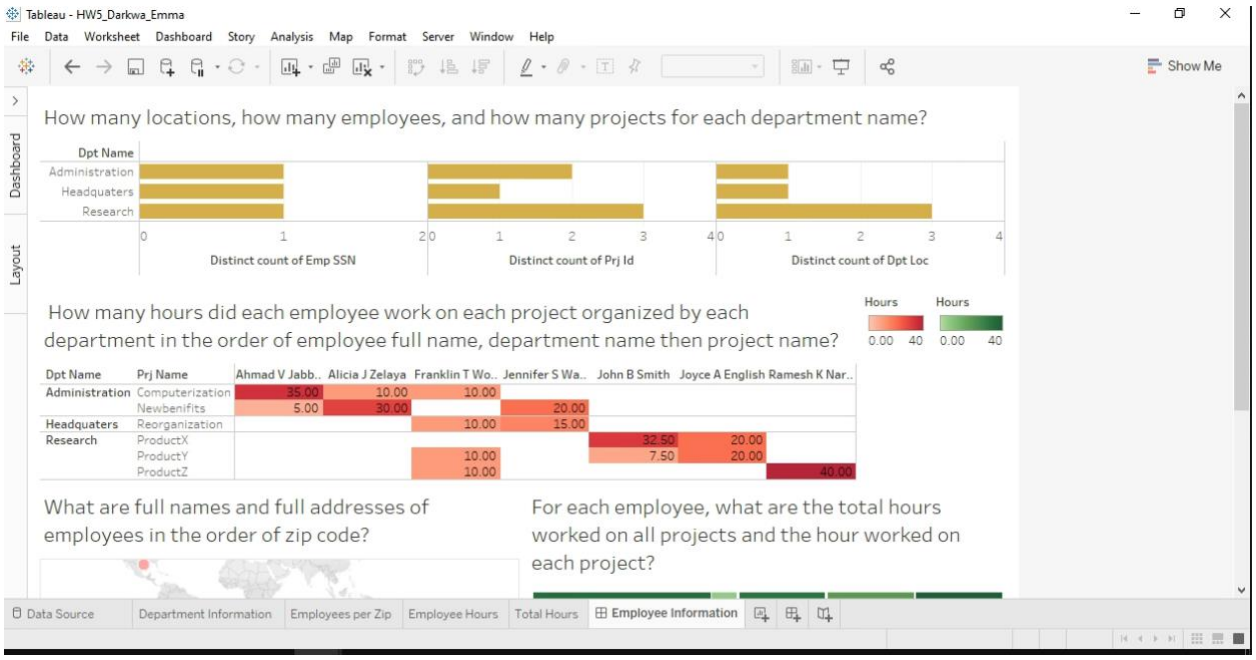
```
SELECT w.*
FROM [Enterprise.Work] w
WHERE w.hours IS NOT NULL
UNION
SELECT w.empSSN, 'All Projects',SUM(w.hours)
FROM [Enterprise.Work] w
WHERE w.hours IS NOT NULL
GROUP BY w.empSSN
```

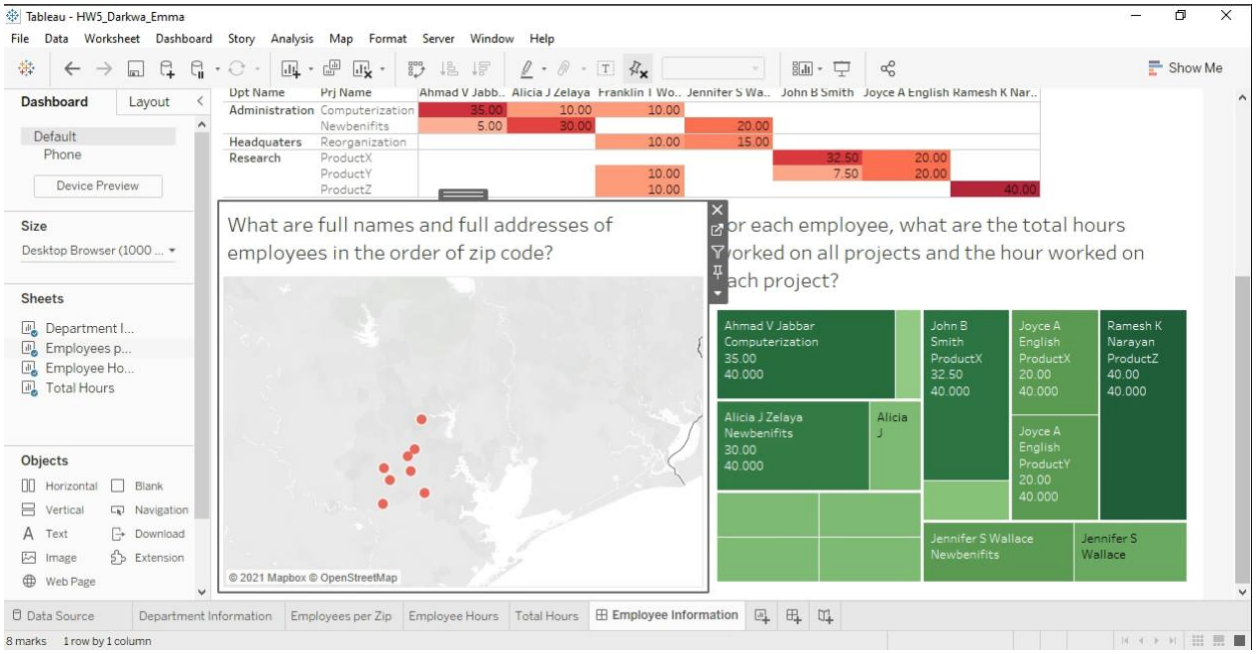
4. Insert an image showing the query result from the SQL Server Management Studio.
5. Answer using a treemap plot on Tableau.
   Set the palette color to green, and set the min in legend to 0.00.
   Rename sheet name and title.
   Insert an image showing your completed Sheet 4.



Dashboard 1:

6. Create a dashboard of single vertical layout panels.
   Insert Sheet 1 onto the top, and add two horizontal layout panels below.
   Insert Sheet 2 onto the left of the middle panel.
   Insert Sheets 3 and 4 onto the left and the right of the bottom panel.
   Move tow legends onto the right of the middle panel.
   Adjust dashboard and panel sizes to avoid any vertical or horizontal scrollbar inside any panel.
   Rename dashboard name.
   Insert an image showing your completed Dashboard 1.





Data Source: Remove the relationships that were not used.

7. Insert an image showing your completed Data Source.

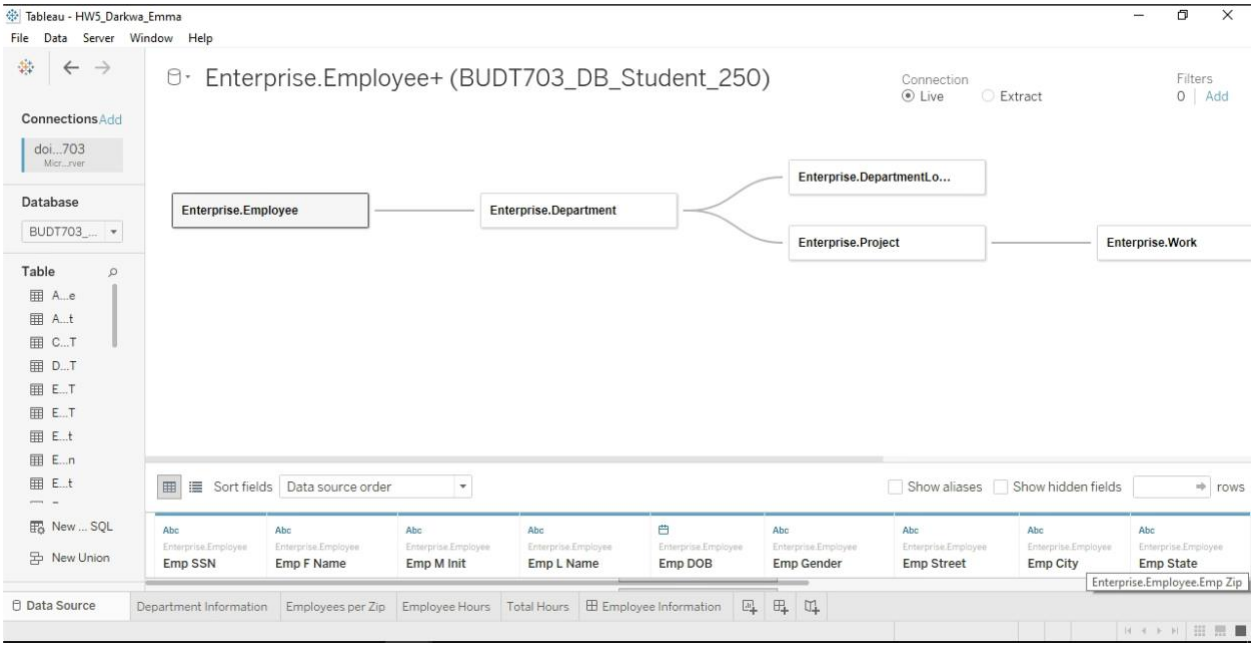


Tableau - HW5_Darkwa_Emma
File Data Server Window Help
Enterprise.Employee+ (BUDT703_DB_Student_250)
Connection
Live
Extract
Filters
0 Add
Connections Add
Database
Table
New ... SQL
New Union
Enterprise.Employee
Enterprise.Department
Enterprise.DepartmentLo...
Enterprise.Project
Enterprise.Work
Sort fields
Data source order
Show aliases
Show hidden fields
rows
Emp SSN
Emp F Name
Emp M Init
Emp L Name
Emp DOB
Emp Gender
Emp Street
Emp City
Emp State
Enterprise.Employee.Emp Zip
Data Source
Department Information
Employees per Zip
Employee Hours
Total Hours
Employee Information

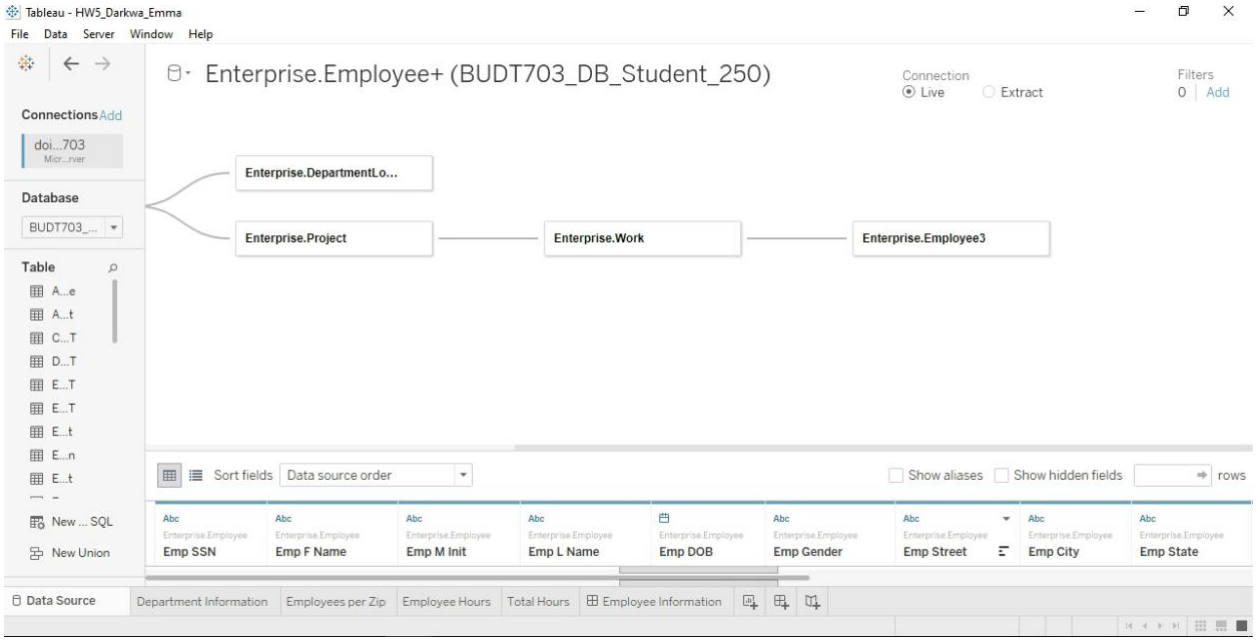


Tableau - HW5_Darkwa_Emma
File Data Server Window Help
Enterprise.Employee+ (BUDT703_DB_Student_250)
Connection
Live
Extract
Filters
0 Add
Connections Add
Database
Table
New ... SQL
New Union
Enterprise.DepartmentLo...
Enterprise.Project
Enterprise.Work
Enterprise.Employee3
Sort fields
Data source order
Show aliases
Show hidden fields
rows
Emp SSN
Emp F Name
Emp M Init
Emp L Name
Emp DOB
Emp Gender
Emp Street
Emp City
Emp State
Data Source
Department Information
Employees per Zip
Employee Hours
Total Hours
Employee Information