Lab 9 – Data Visualisation
Visual Analytics using Tableau

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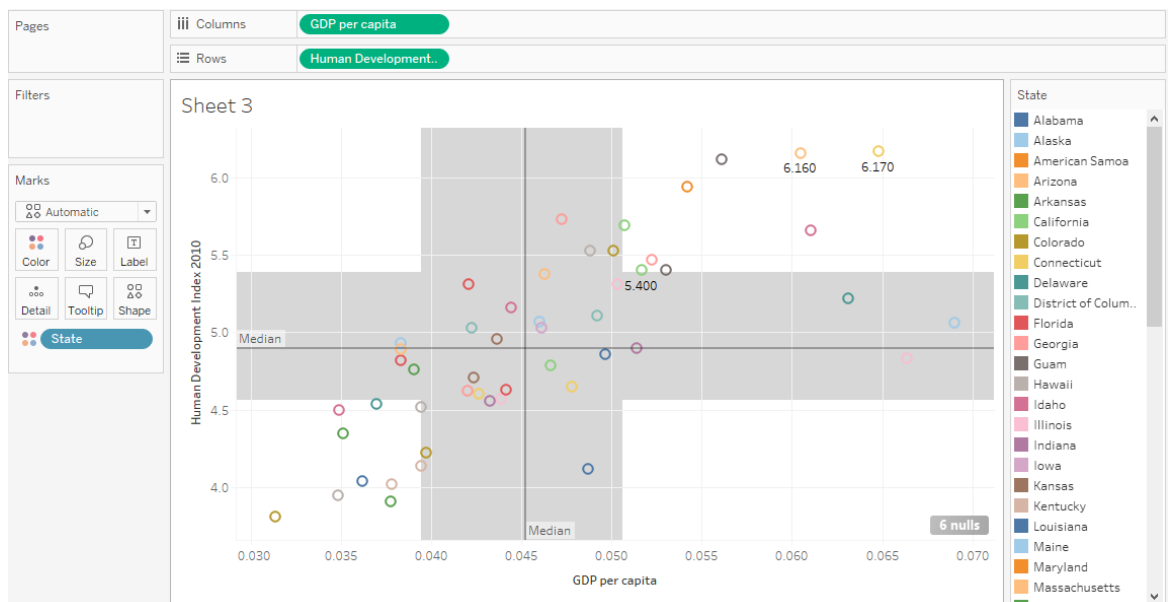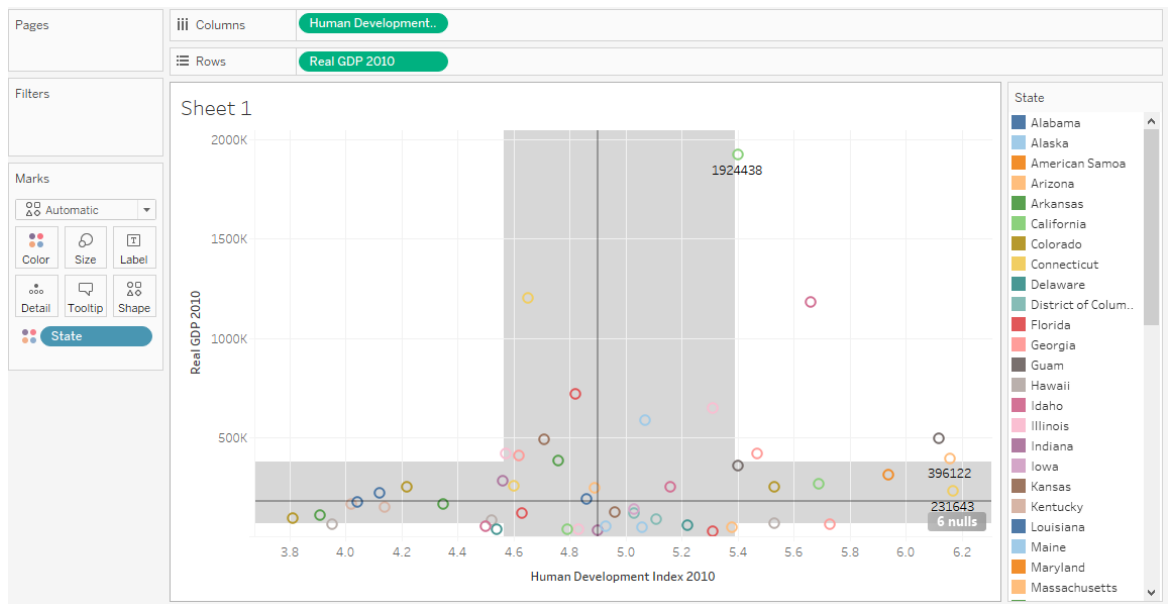**Faculty:** Dr. Priyadarshini J

Practice Exercise I

1. **Do states with higher GDPs have higher Human Development Indexes? This graph will show that California has the highest real GDP, but not the highest GDP per capita. This distinction makes any difference?**

Answer: We can infer from the graph that California has the highest Real GDP but the GDP Per Capita of California is less when compared to other countries. Alaska has the highest GDP Per Capita but the Real GDP of Alaska is less than other. The value of real GDP of 2010 of California is 1924438 and it increases to 2009936 in the year 2012. We can see that the GDP of California is highest among all states throughout the four years.
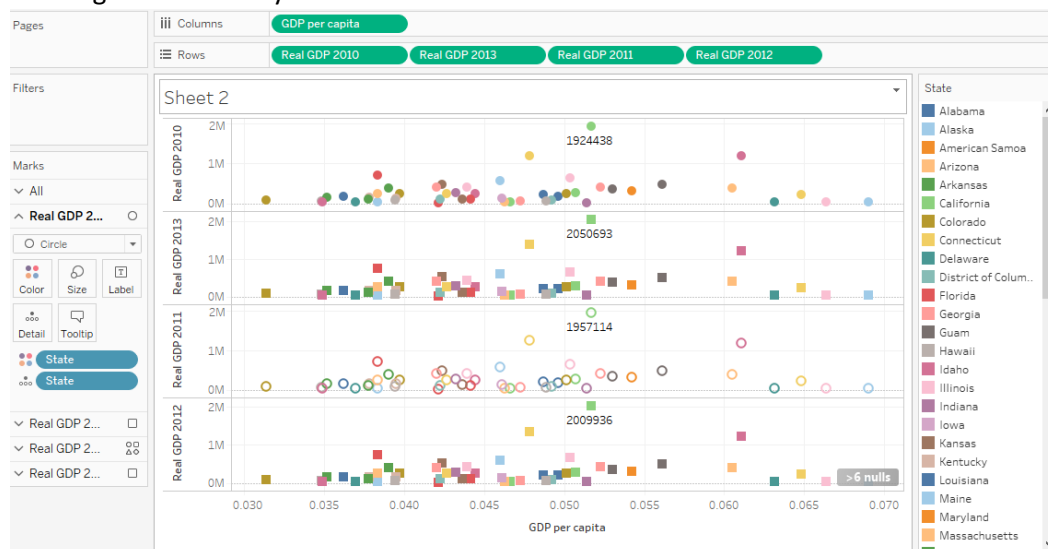
2. **Let's compare the 2010 real GDP with the Human Development Index for each state. It is instantly clear that CA has the highest GDP, but not the highest HDI. Connecticut and Massachusetts have the highest HDIs, but not the highest GDPs. They both have GDPs that are higher than the median GDP. But how will this change if we look at GDP per capita instead?**

Answer: The visualization of Real GDP of 2010 and Human Development Index is done over here. We can see that Real GDP of California (1924438) is high but the Human Development Index is less when compared to Connecticut (231643) and Massachusetts (396122). Both of them have a higher human development index.

Sheet 1

Columns: Human Development..
Rows: Real GDP 2010

Real GDP 2010

2000K

1924438

1500K

1000K

500K

396122

231643

6 nulls

3.8 4.0 4.2 4.4 4.6 4.8 5.0 5.2 5.4 5.6 5.8 6.0 6.2

Human Development Index 2010

State
Alabama
Alaska
American Samoa
Arizona
Arkansas
California
Colorado
Connecticut
Delaware
District of Colum..
Florida
Georgia
Guam
Hawaii
Idaho
Illinois
Indiana
Iowa
Kansas
Kentucky
Louisiana
Maine
Maryland
Massachusetts

Sheet 3

Columns: GDP per capita
Rows: Human Development..

Human Development Index 2010

6.0   6.160   6.170

5.5

5.400

5.0   Median

4.5

4.0

Median   6 nulls

0.030 0.035 0.040 0.045 0.050 0.055 0.060 0.065 0.070

GDP per capita

State
Alabama
Alaska
American Samoa
Arizona
Arkansas
California
Colorado
Connecticut
Delaware
District of Colum..
Florida
Georgia
Guam
Hawaii
Idaho
Illinois
Indiana
Iowa
Kansas
Kentucky
Louisiana
Maine
Maryland
Massachusetts

The visualization of Human Development Index and GDP per Capita is done over here. We can see that the states having a higher GDP Per Capita also have high Human Development Index.

So we conclude that states with good GDP Per Capita have good Human Development Index.
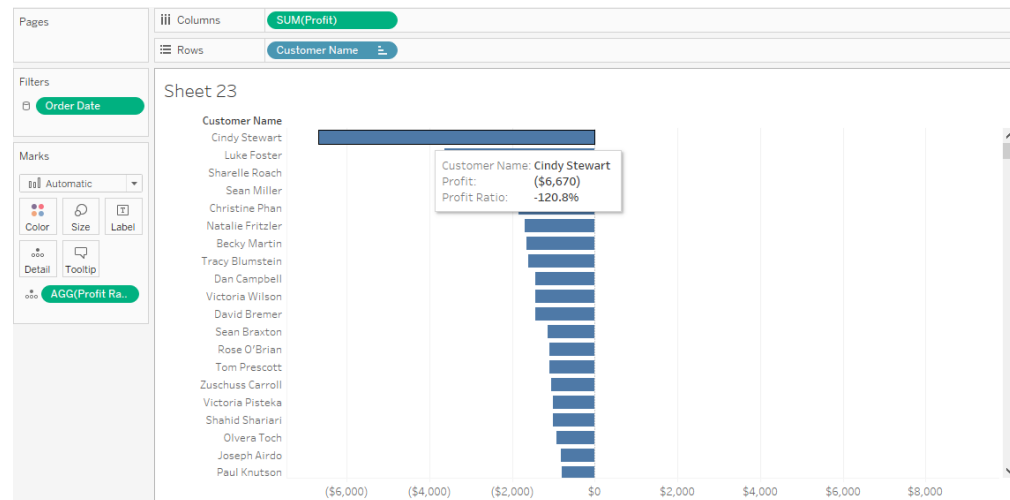
Practice Exercise II

3. What is the percent of total Sales for Home Office in July of 2014?

Answer: Home Office Sales% = (Home office sales / Total Sales) * 100 = 10.95%
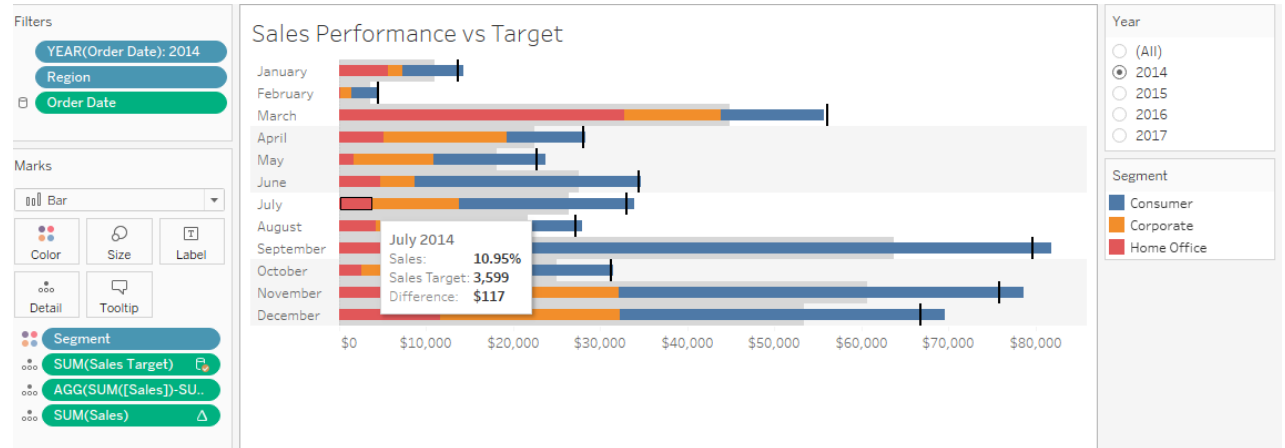
4. Find the customer with the lowest overall profit. What is his/her profit ratio?

Answer: Cindy Stewart with a profit ratio of -120.8

5. Look at the sum of profits for each category. Which category is -$31,550 below the average profit across all categories?

Answer: Category=Furniture; Sub-Category= Tables