TABLEAU PROBLEM STATEMENT - RETAIL/SUPERSTORE

Q.19)

🔹 First: Load the Dataset into Tableau

1. Open **Tableau Public**.
2. Click on **"Text File"** and choose your `SampleSuperstore.csv`.
3. Wait for the data to load, then click on **"Sheet 1"** to start creating visualisations.

✅ a. Top 10 Products Based on Total Sale

Steps:

1. Drag `Product Name` to **Rows**.
2. Drag `Sales` to **Columns**.
3. Click the drop-down on `Sales` and ensure it's **SUM**.
4. Sort the bar chart **in descending order** by `Sales`.
5. On the **Filters** shelf, right-click on `Product Name` → **Top** tab → Select:
   - **By Field** → Top **10** by **SUM(Sales)**
6. (Optional) Change to **horizontal bar chart** using toolbar icons.

✅ This shows top 10 best-selling products.

✅ b. Product Contribution to Total Sale (Pie Chart)

Steps:

1. Drag `Product Name` to **Rows**.
2. Drag `Sales` to **Columns** → Right-click on chart → Change to **Pie chart**:
   - Click **Show Me** → Select **Pie chart**.
3. Drag `Sales` to **Label** and **Angle**.
4. Drag `Product Name` to **Color**.
5. Right-click `Sales` on **Label** → Quick Table Calc → **Percent of Total**.

✅ Now you see each product's contribution as a percentage of total sales.

✅ c. Month-wise Sales in 2010 in Descending Order

Steps:

1. Drag `Order Date` to **Columns** → Right-click → Select **Month**.
2. Drag `Sales` to **Rows`.
3. Drag `Order Date` to **Filters** → Choose **Year = 2010**.
4. Sort the bars in **descending order of sales**.

✅ This shows how each month performed in 2010.

✅ d. Most Loyal Customers (Based on Purchase Orders)

Steps:

1. Drag `Customer Name` to **Rows**.
2. Drag `Order ID` to **Columns** → Right-click → Choose **Measure** → **Count Distinct**.
3. Sort customers by this count in **descending** order.

✅ This highlights customers with the most unique orders (loyal customers).

✅ e. Yearly Sales Comparison

Steps:

1. Drag `Order Date` to **Columns** → Right-click → Choose **Year**.
2. Drag `Sales` to **Rows**.
3. (Optional) Use **Line chart** from **Show Me** panel for better comparison.
4. You can also **color** by Region or Category if deeper insight is needed.

✅ This shows year-over-year sales trends.

✅ f. Country-wise Total Sales (Geospatial Graph)

Steps:

1. Drag `Country` to the **canvas** → Tableau creates a **map**.
2. Drag `Sales` to **Size** or **Color**.
3. Customize map by:
    - Changing colour intensity based on sales.
    - Adding labels for sales values.

✅ This gives a geographical sales distribution view.

Q.20)

a. Find and Plot country-wise popular product

✅ To create a "Rank by Sales" field in Tableau:

1. **Go to the Data pane** on the left.
2. **Right-click** anywhere → **Create Calculated Field.**
3. Name it:

```
csharp                                                    Copy  Edit
Rank by Sales
```

4. Enter this formula:

```
tableau                                                   Copy  Edit
RANK_UNIQUE(SUM([Sales]))
```

> This ranks products by total sales. `RANK_UNIQUE` ensures no ties.

5. Click **OK.**

✅ Correct way (as required by Tableau):

1. Keep the formula **simple**:

```
tableau                                                   Copy  Edit
RANK_UNIQUE(SUM([Sales]))
```

2. After placing `Rank by Sales` on the Filters shelf:
   - Right-click it → **Edit Table Calculation.**
   - Choose **Specific Dimensions.**
     - ✅ Check `Country` and `Product Name`.
   - Tableau will now calculate **rank within each country.**

🔁 Already Covered (or Similar):

Task	Status	Comment
b. Bottom 10 products based on total sale	✅ Similar to Top 10 (already done)	Use same method, but select **Bottom** instead of Top
d. Most popular products based on sales	✅ Duplicate of earlier "Top 10 products by Sales"	Already covered

✅ c. Top 5 Purchase Orders

Assuming each `Order ID` is a purchase order:

Steps:

1. Drag `Order ID` to **Rows**.
2. Drag `Sales` to **Columns**.
3. Sort descending.
4. Right-click on `Order ID` → **Filter** → Top tab → Show **Top 5** by **SUM(Sales)**.

✅ This shows the 5 orders with the highest total sales.

e. Find and plot half-yearly sales for the year 2011

✅ Step 2: Create a Filter for the Year 2011

1. Drag **Order Date** to **Filters**
2. Choose **Years** from the options
3. Select only **2011**
4. Click **OK**

Now, your worksheet only considers data from 2011.

✅ Step 3: Create a Calculated Field for Half-Year

We'll define which order belongs to which half of the year.

1. Go to top menu → **Analysis** → **Create Calculated Field**
2. Name it: `Half Year`
3. Use this formula:

tableau Copy Edit

```
IF MONTH([Order Date]) <= 6 THEN "H1"
ELSE "H2"
END
```

4. Click **OK**

✅ Step 4: Build the Visual

1. Drag the new field `Half Year` to **Columns**
2. Drag `Sales` to **Rows**
3. Optional: Drag `Half Year` to **Color** to visually differentiate

✅ f. Country-wise Sales Quantity (Geospatial)

> Again, this needs **multiple countries** in the `Country` column.

Steps:

1. Drag `Country` to **Rows** → Tableau creates a **map**.
2. Drag `Quantity` to **Color** or **Size**.
3. You can also drag `Quantity` to **Label** to show values on the map.

✅ This creates a geospatial view of total quantities sold per country.

TABLEAU PROBLEM STATEMENT - ADULT DATASET

Q.23)

Dataset Preparation

- Load the **Adult Census Income dataset** (`adult.csv`) into Tableau.
- Confirm key fields: `education`, `workclass`, `sex`, `native-country`, `age`, `income`, etc.

CREATE A CALCULATED FIELD:

Step-by-Step Instructions:

1. Go to the **Data Pane** on the left.
2. Click **Analysis > Create Calculated Field**
3. Name it:

```javascript
Number of Records
```

4. In the formula box, type:

```sql
1
```

5. Click **OK**

a. Income Class of People with Master's and Doctorate

1. Drag `education` to **Filters** → Keep only `Masters` and `Doctorate`.
2. Drag `income` to **Columns**.
3. Drag `Number of Records` to **Rows**.
4. Use **bar chart** (default).
5. Add `education` to **Color** to compare.

b. Income Class of People with Private Jobs

1. Drag `workclass` to **Filters** → Select `Private`.
2. Drag `income` to **Columns`.
3. Drag `Number of Records` to **Rows`.
4. Use **bar chart**.

C. Yearly Sales comparison (here it must be Yearly salary comparison)

1. **Create a calculated field named "Annual Salary Est.," an estimated salary based on the number of hours worked by an individual. Formula: [Hours.Per.Week] * 52 * 10 ($10 per hour for 52 weeks)**
2. **Columns - Occupation**
   Rows - Avg(Annual Salary Est.)
3. **Sort the bar chart in an ascending manner**

THIS CREATES A YEARLY SALARY COMPARISON BETWEEN DIFFERENT OCCUPATIONS

d. Country-Wise Statistics on Geospatial Graph

1. Drag `native-country` to **Detail** (on Marks card).
2. Change chart type to **Map**.
3. Drag `Number of Records` to **Size/Color**.
4. Optional: Drag `income` to **Filter** or **Color** to show `<50K` vs `>=50K`.

E. Age-wise Education vs Salary statistics

1. **COLUMNS: Age (as a Dimension, make this change in the tile after importing it to the column)**
   ROWS: Income and SUM(number of records)
2. **Education in Colour tab**

F. Country-wise Male-Female Ratio (PIE CHART)

1. **Native Country in the Row**
2. **Sex in Colour tab**
3. **Sum(Number of Records) in the Angle tab**

g. Income Class Based on Workclass (Government vs Others)

1. Drag `workclass` to **Columns**.
2. Drag `income` to **Color**.
3. Drag `Number of Records` to **Rows`.
4. (Optional) Filter workclass to only Government-related (e.g., `State-gov`, `Federal-gov`) and `Private`, `Self-emp` for comparison.