Data Project: AtliQ

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Background

- AtliQ is a B2B hardware & peripheral manufacturer that provides computer and network equipments for other businesses.
- AtliQ has a headquarter in Mumbai and many regional branches across India.
- In the previous quarters, the company was reported to have **declining sales.**
- Bhavin Patel, AtliQ's Sales Director is having trouble tracking where the business is falling in the local Indian market.
- His team reported to him by providing him excel data screen captures, which are difficult to find issue and determine important trends

Project goals

- **Purpose**

Discover insights from the data to figure out sales dropping issue.

- **Expected results**

Provide a real-time dashboard to support data driven decision making.

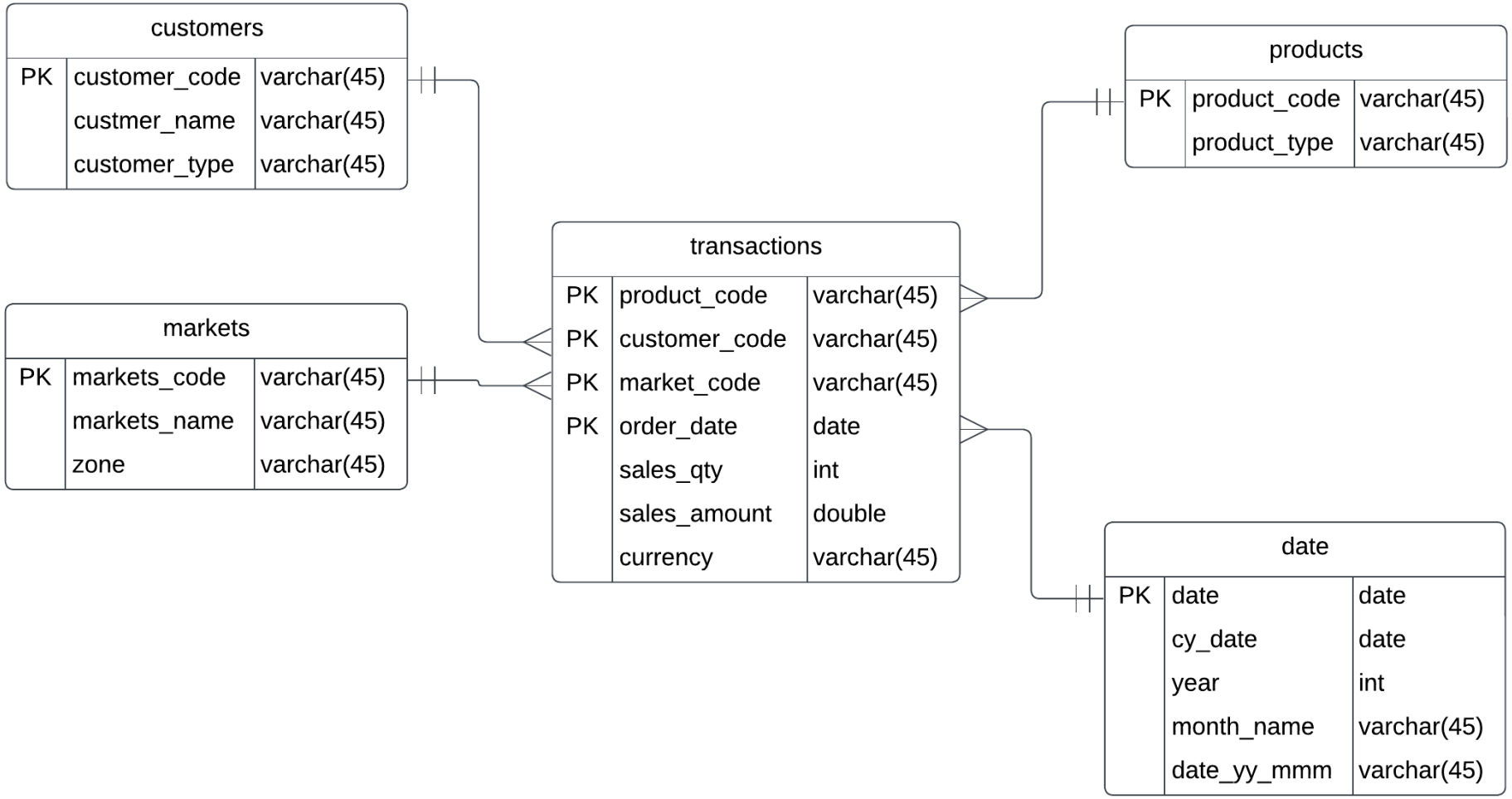
- **Stakeholders**
  - Sales director
  - Marketing team
  - Customer service team
  - Data & analytics team
  - IT

- **Success criteria**
  - The dashboard is able to provide up-to-date sales data automatically.
  - Sales team is able to make better decision, cut down cost and gain more sales by a %.
  - Data team: data collecting and visualizing change to automatic, thus save more time & resources.

Data overview

- In this project, we will work on AtliQ’s sales data from 2017 to 2020.
- Data was manually extracted from the company’s Data warehouse, which was orignally stored in the company’s Sales database management system.
- The data will be stored in a local MySQL database, then extracted and analyzed with SQL.
- Data will be visualized using Tableau.

ER diagram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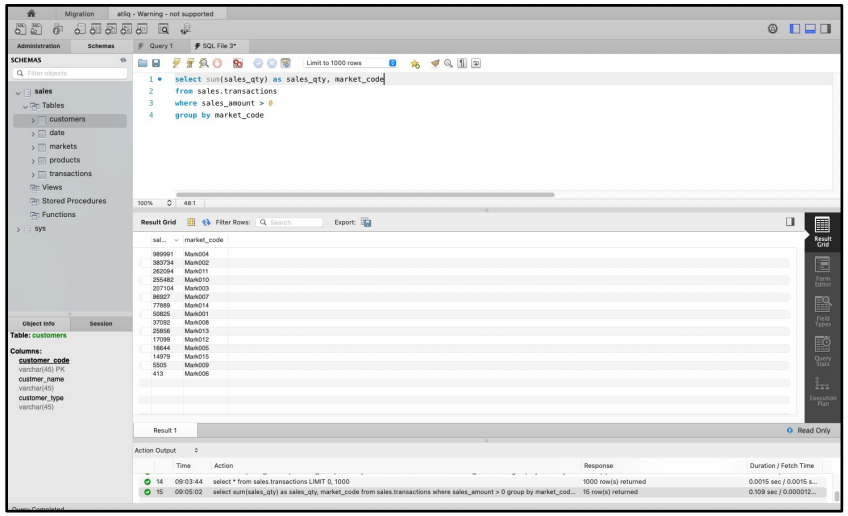
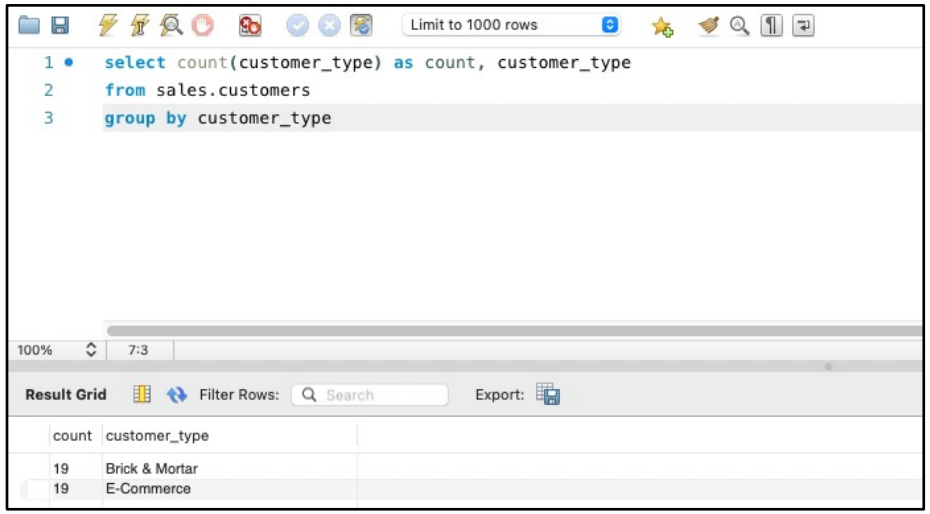
custmer_name varchar(45)
customer_type varchar(45)
products
PK product_code varchar(45)
product_type varchar(45)
transactions
PK product_code varchar(45)
PK customer_code varchar(45)
PK market_code varchar(45)
PK order_date date
sales_qty int
sales_amount double
currency varchar(45)
markets
PK markets_code varchar(45)
markets_name varchar(45)
zone varchar(45)
date
PK date date
cy_date date
year int
month_name varchar(45)
date_yy_mmm varchar(45)

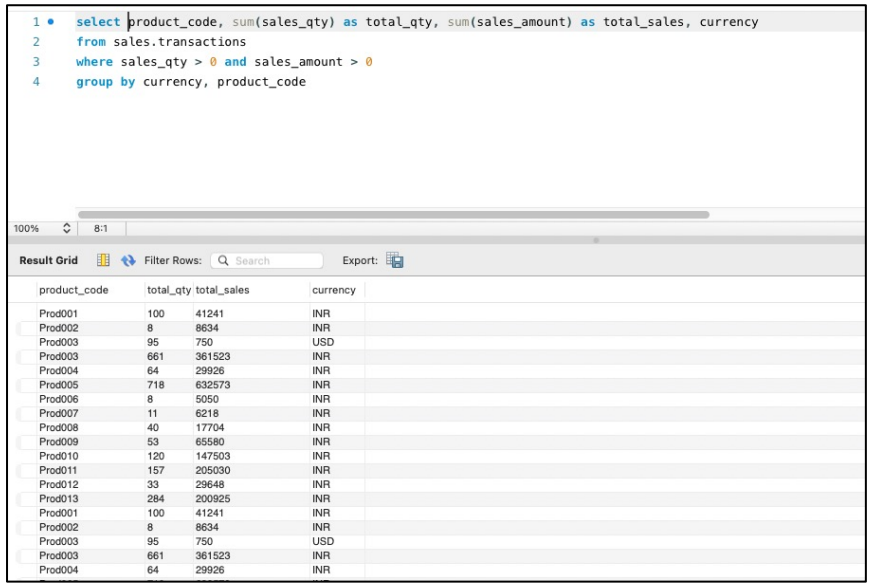
Data analysis with MySQL

- The data dump file is loaded by SQL workbench and imported into the database
- SQL queries will be executed in MySQL workbench.
- SQL will be used to analyze the data, find insights and useful information and to make sure Tableau data visualization is correct.

Data analysis with MySQL







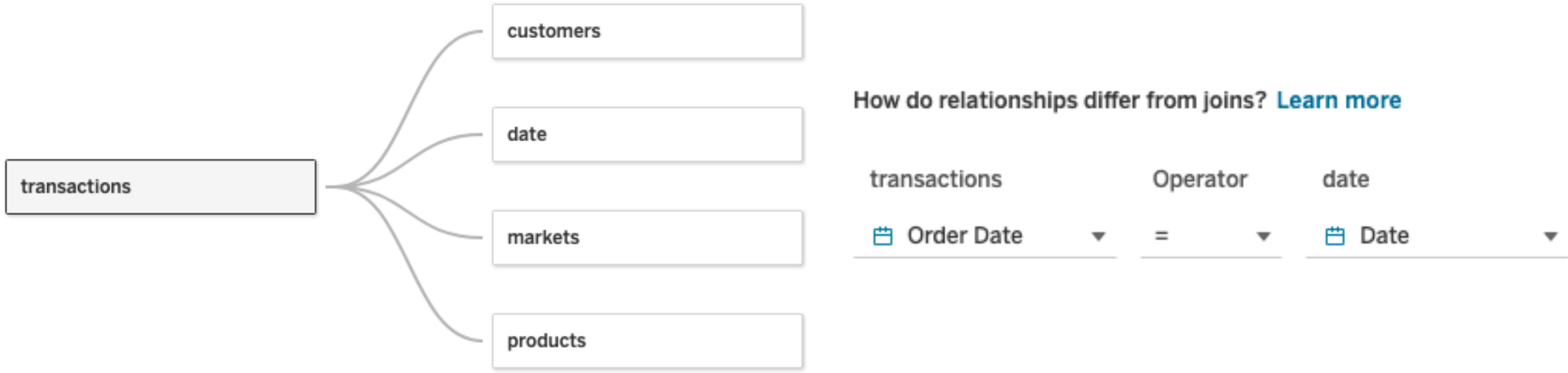
Data visualization with Tableau

- Log in to the local MySQL database with Tableau
- Data will be visualized in a interactive, real-time Tableau dashboard
- Each components of the dashboard will be created in a seperated sheet

Data visualization with Tableau

Table relationship connection

Set up the connections between the tables in the dataset based on the ER diagram



Data visualization with Tableau

Data cleaning

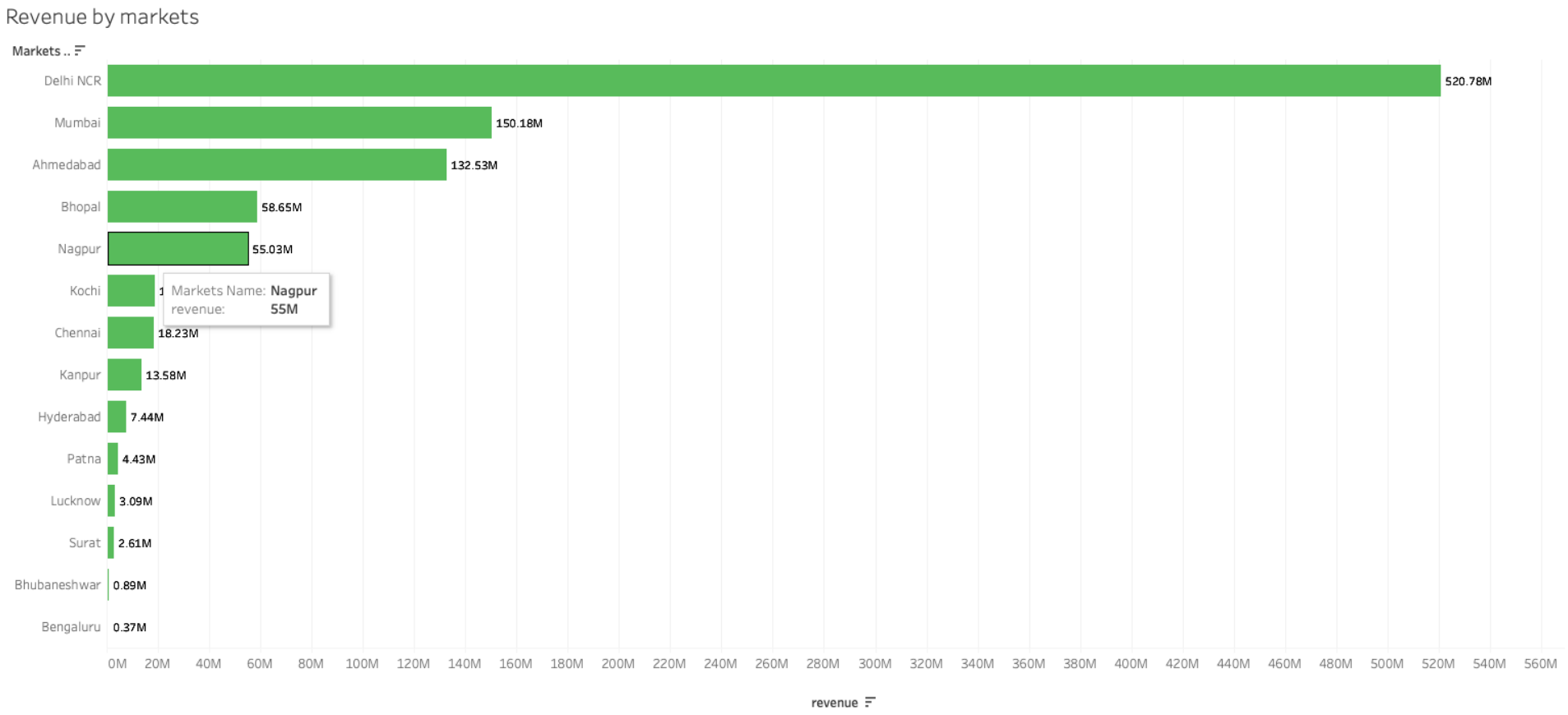
After determining which variable will be presented in the dashboard, we will clean the dataset in Tableau using its filter. Remove:

- **Value that doesn't make sense**: Sales Amount's values are sometimes '0' or '-1'.
- **Values that are not required/needed by the analysis**: 'Mark097' and 'Mark999' is New York and Paris city, these cities are not local India.
- Convert data unit by using ***'Create calculated field'.*** In the dataset, both INR and USD are used, therefore we will convert them into INR. (IF [Currency] == "USD" THEN [Sales Amount] * 74 ELSE [Sales Amount] END – 74 is the exchange rate of USD and INR)

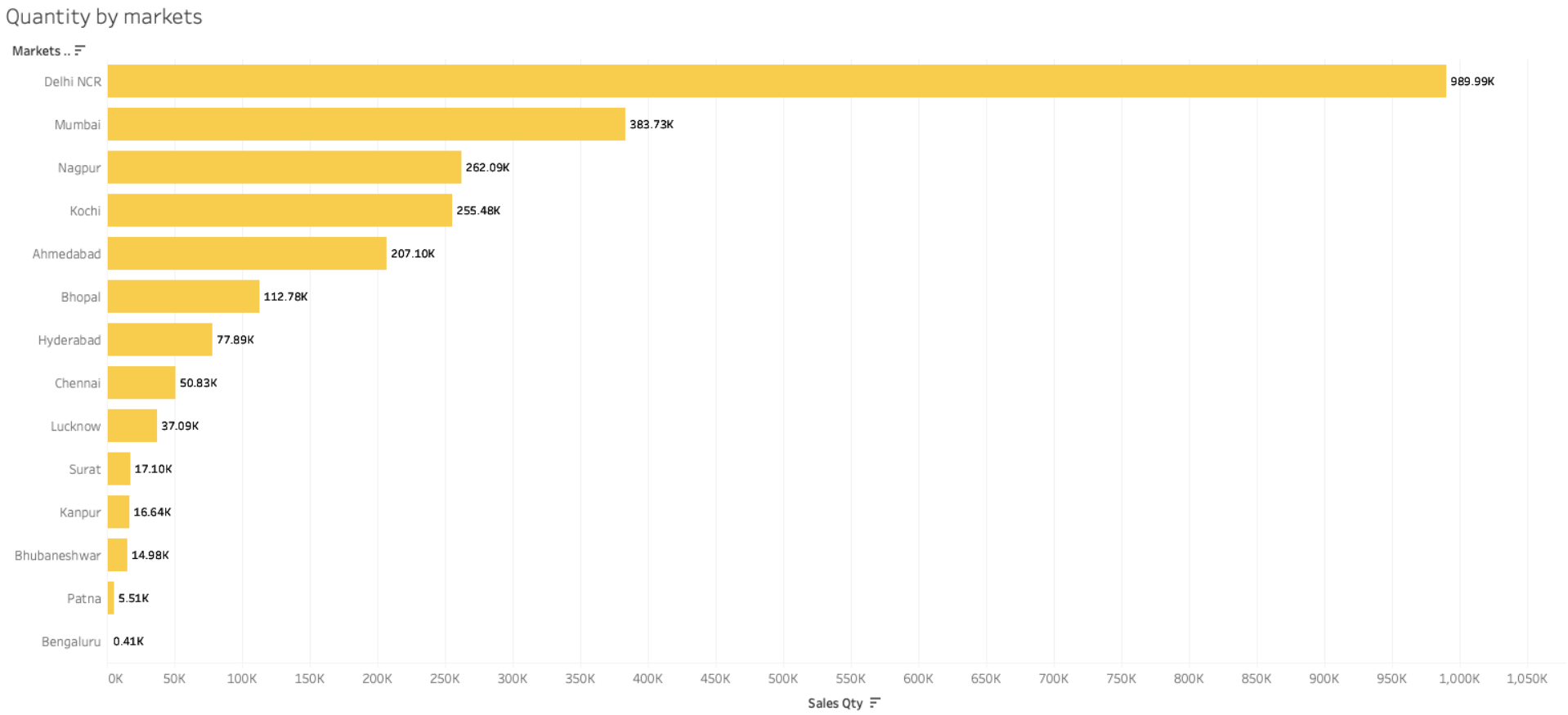
Filter	Details
Sales Amount	includes values greater than or equal to 1
Markets Code	excludes Mark097, Mark999 and Null

Data visualization with Tableau

Then, the data is visualized chart by chart by different characteristics

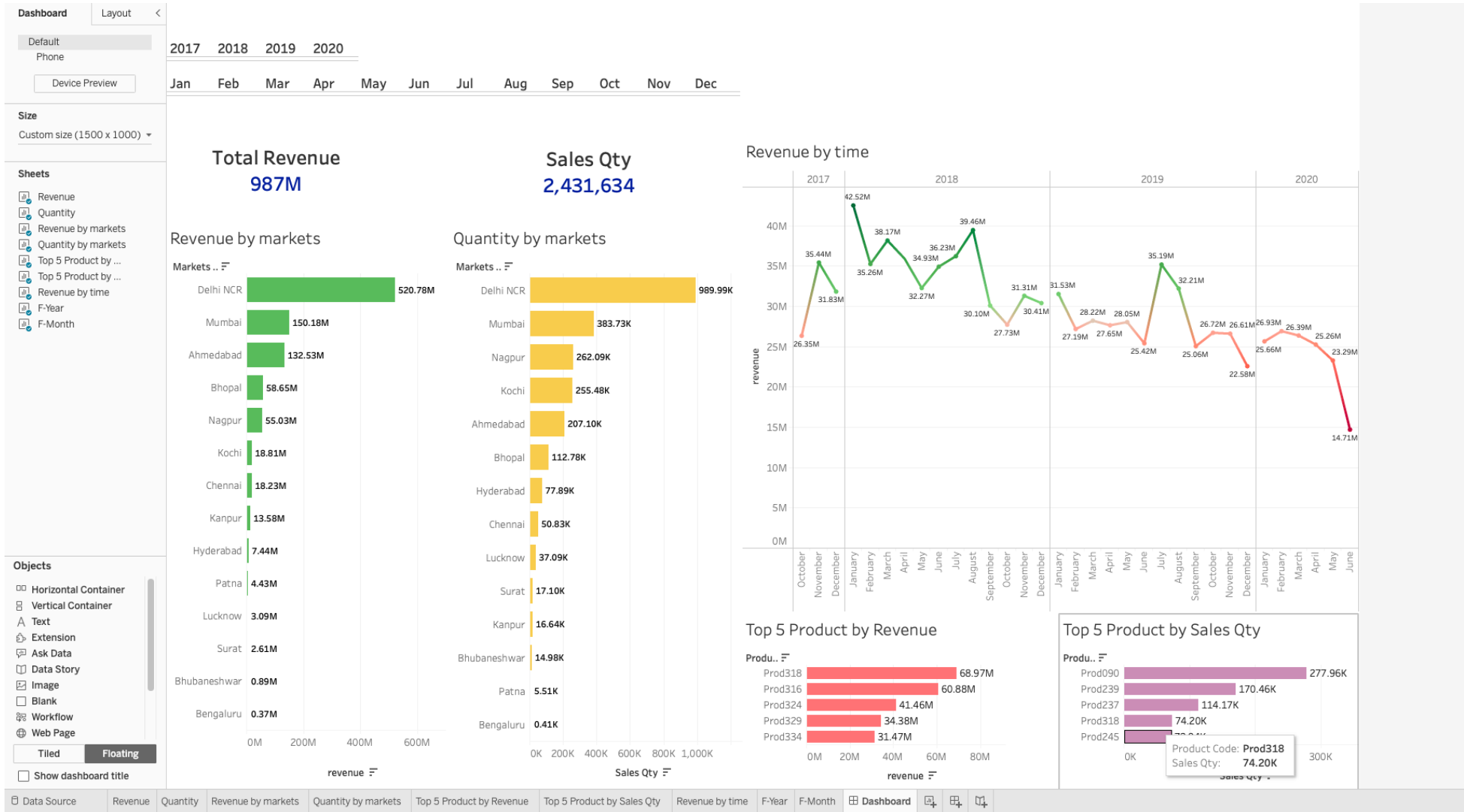


Data visualization with Tableau



Data visualization with Tableau

Final dashboard



Final dashboard

- The dashboard is interactive, further details can be found when hover on the tables, lines, and bars.
- The year/month bars on the top of the dashboard can be use to filter the dashboard data. When a certain time range is chosen, the whole dashboard will change according to the time range.
- Regions can also be filtered when clicked on the corresponding bars in the bar chart. When a certain region is chosen, the whole dashboard will change according to the region.
- The data is updated in real-time with the database.