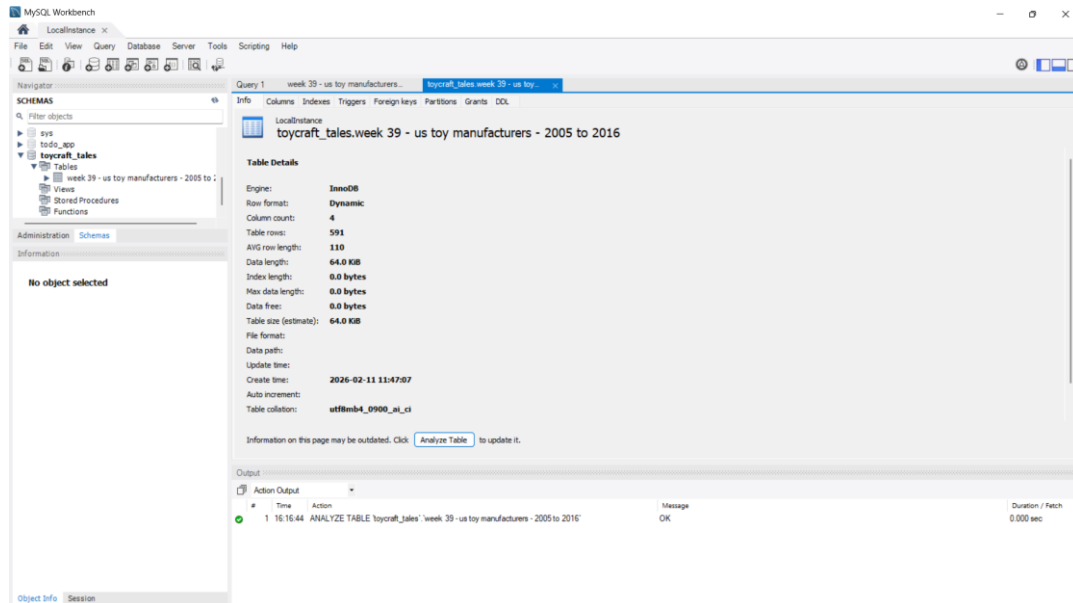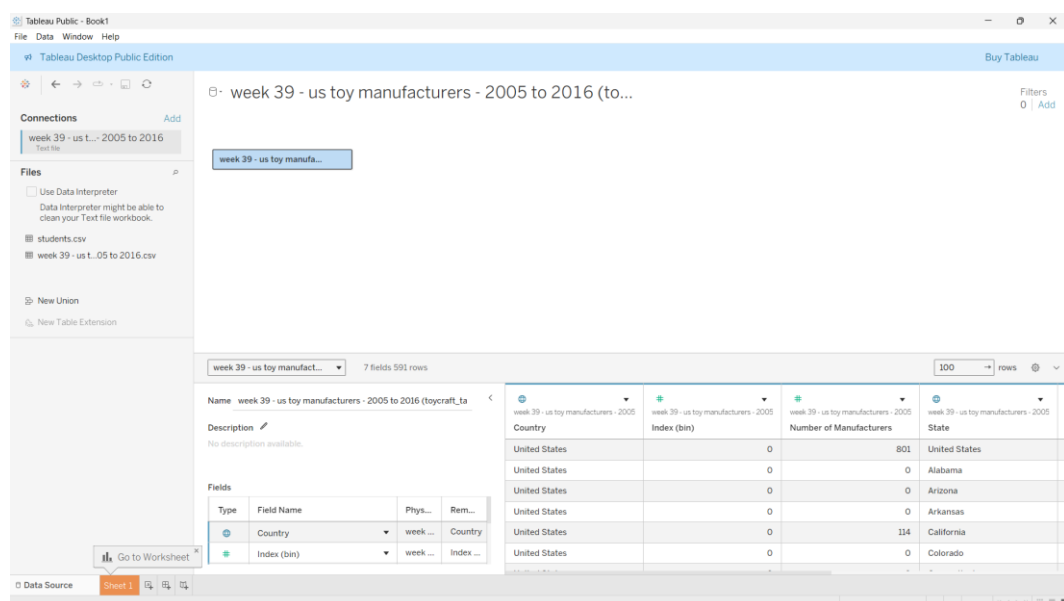# 1. Data Connectivity

The US Toy Manufacturers dataset (2005–2016) was connected to Tableau Desktop using a CSV/Excel file. The data source was verified for correct field types (Year as dimension, Number of Manufacturers as measure, State as dimension). Live connection mode was used for dashboard creation.

The data is loaded dynamically from MySQL workbench and then it is live connection to the tableau and used for visualization.
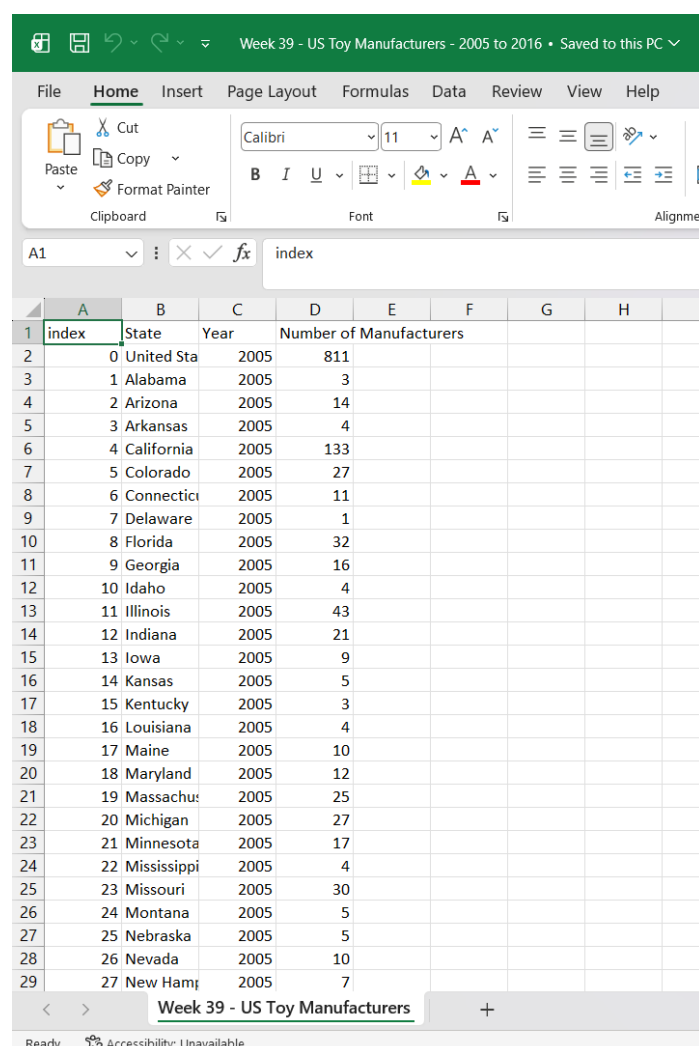
2.Data Preparation

Before creating the dashboard, several preprocessing steps were performed to ensure data accuracy and consistency. Duplicate records were checked and removed where necessary. Missing or null values were identified and handled appropriately. Column names were standardized to improve clarity and consistency.

Data types were verified to ensure correct aggregation during analysis. The Year field was formatted correctly, and the Number of Manufacturers field was confirmed as a numeric measure.

Several calculated fields were created in Tableau to enhance analytical capabilities. These included fields to identify the Peak Year (year with maximum manufacturers), Peak Year Value (maximum manufacturer count), Total Manufacturers (sum of all manufacturers), Total States (distinct count of states), and Top State (state with highest manufacturer concentration). These calculated fields helped in generating dynamic KPIs and insights.

3.Business Questions Addressed

The dashboard was developed to answer key analytical questions such as:
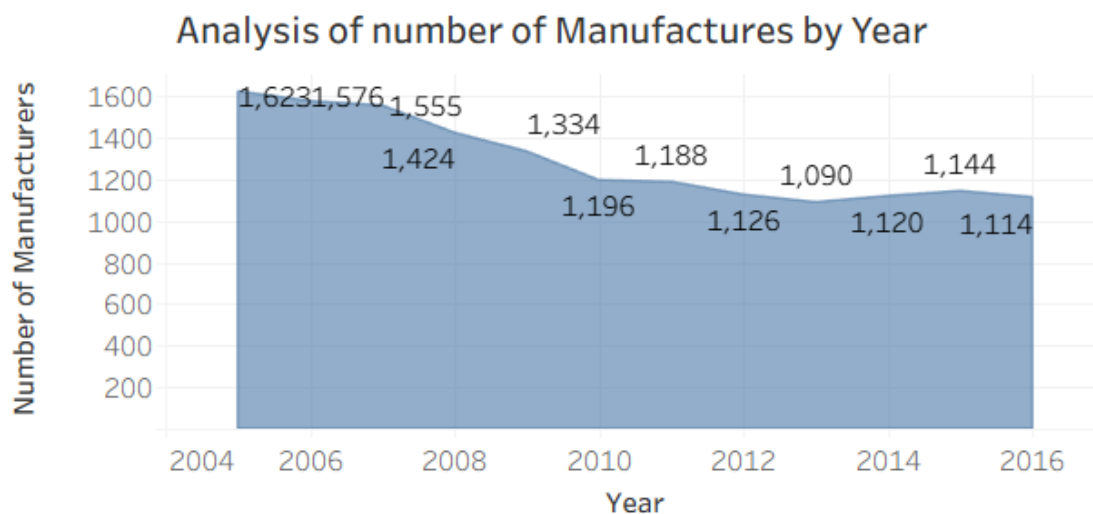Which year recorded the highest number of toy manufacturers?
What is the overall trend of toy manufacturing from 2005 to 2016?
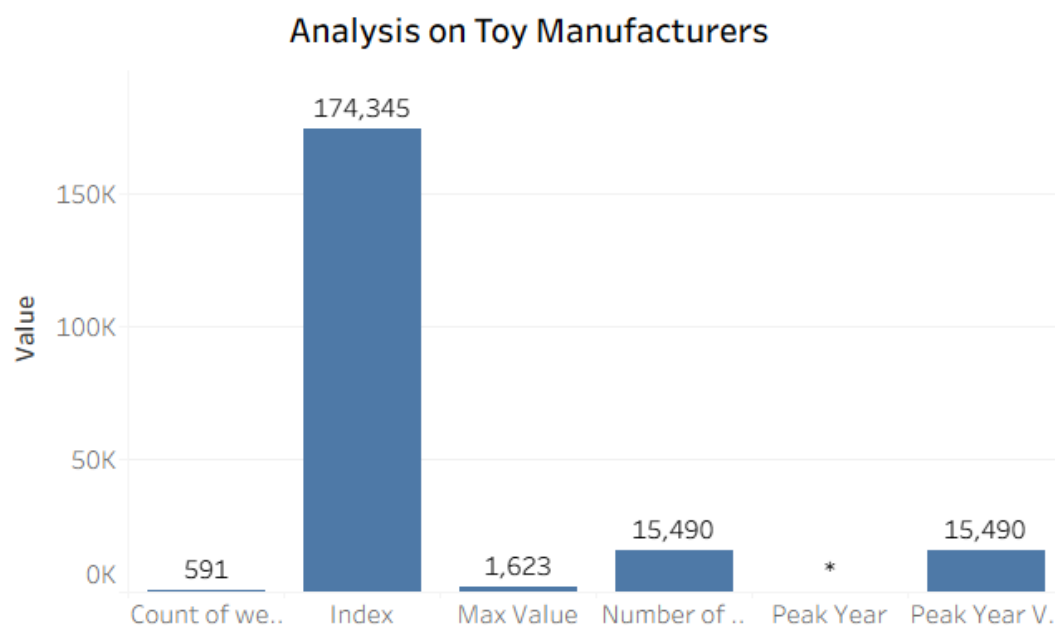Which state has the highest concentration of toy manufacturers?
How many total manufacturers exist in the dataset?
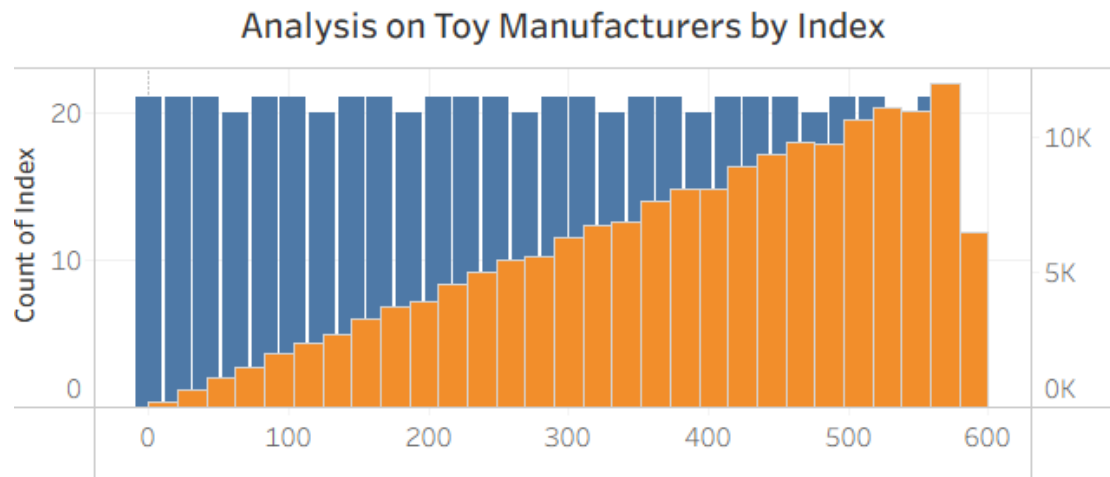How many states are represented in the dataset?

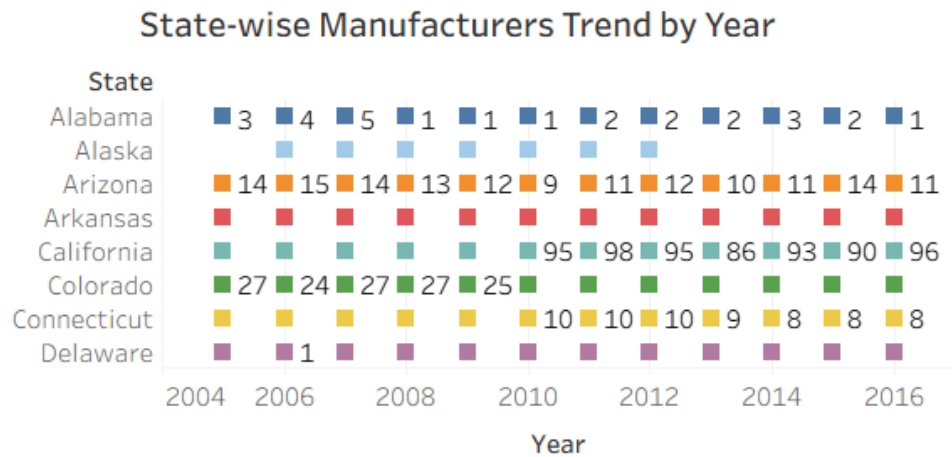These questions guided the design and structure of the dashboard.

Analysis of number of Manufactures by Year

This is the Area Chart which is used for analysis of number of manufacturers by Year.
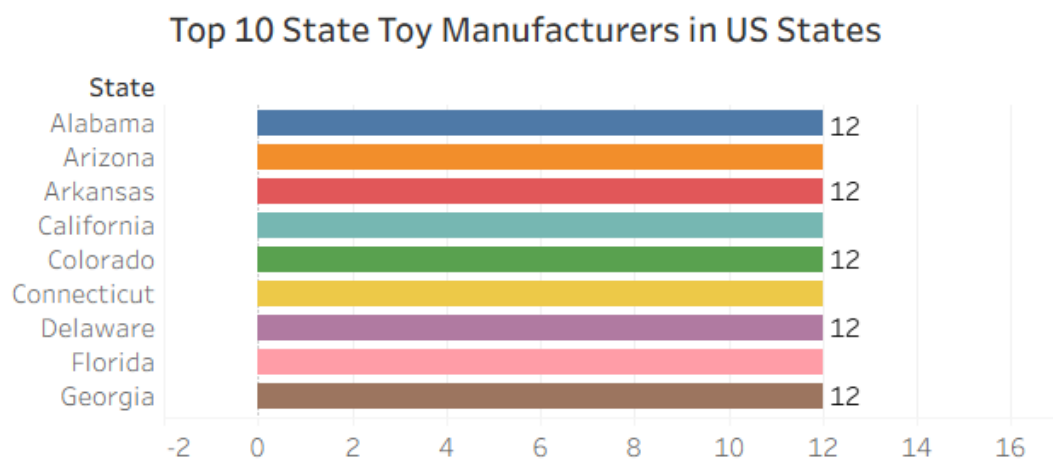
Analysis on Toy Manufacturers

This is Bar Chart for the Analysis if Toy Manufacturers based on entire dataset
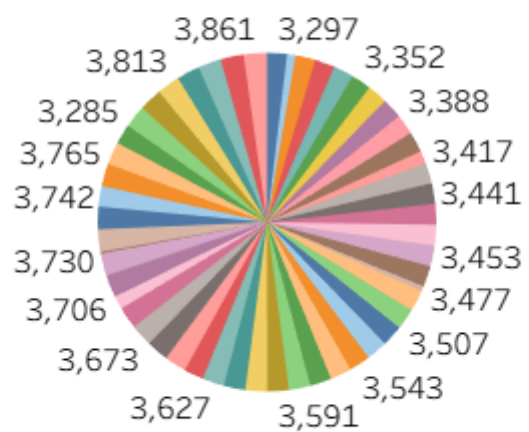
Analysis on Toy Manufacturers by Index

This Graph is about the Analysis on Toy Manufacturers by Index

State-wise Manufacturers Trend by Year

This Graph is State – wise manufacturers Trend by Year

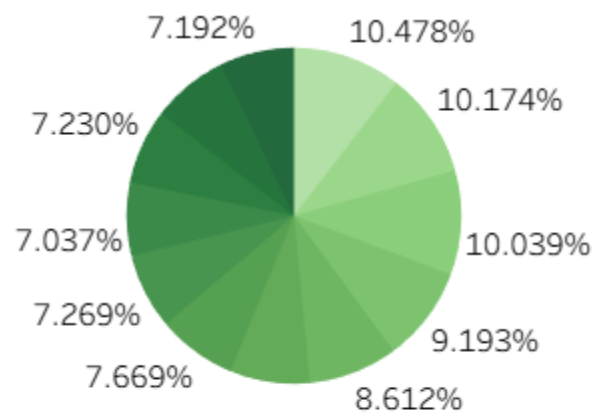**Top 10 State Toy Manufacturers in US States**

This Graph is about the Top 10 State Toy Manufacturers in US States

Analysis of Manufactureers in the US State by Index

This Pie Chart is about the Analysis of Manufacturers in the US State

Year-wise Share of Toy Manufacturers (2005–2016)

This Pie Chart is about the Year – wise Share of Toy Manufacturers