Walmart Inc. is one of the largest retail corporations, known for its extensive range of hypermarkets, discount department stores, and grocery stores. In this analysis, we focused on exploring Walmart's weekly sales data to derive insights into store and department performance across different time periods.

We began by importing the required libraries and loading the datasets, which included weekly sales data, store information, and feature data. After cleaning and merging these datasets, we explored the structure of the data, ensuring no missing values, and converted dates into a format that allowed us to extract year and week information for further analysis.

Key analyses included scatter plots to visualize relationships between weekly sales and store or department, identifying patterns such as higher sales in departments between 60 and 80. We also plotted line graphs to examine the average weekly sales across the years 2010, 2011, and 2012, noting trends like the highest sales in week 51 of 2010.

In addition, we used histograms to explore the distribution of weekly sales, showing a skewed distribution, and employed box plots to examine the relationship between store type and size. Bar charts further revealed the top-performing stores and departments, with store 20 and department 92 showing the highest sales.

By segmenting the departments into batches, we visualized sales trends across different time periods for various departments, highlighting peaks in sales during January and May. This analysis offers valuable insights into how different stores and departments perform over time, which can guide decision-making for inventory, marketing, and resource allocation.