**Project Title: Analysis of Bike Sales**

**Objective:** To analyse a dataset of a company's bike sales, clean the data, generate insights, and present these insights in an easy-to-understand dashboard.

**1. Data Collection:**

The dataset was sourced from Kaggle, a popular platform for data science projects that provides a wide variety of datasets for analysis.

**2. Data Cleaning:**

The first step in the analysis was to clean the data. This process ensured the data was accurate and ready for analysis. The cleaning process involved:

Removing duplicate entries

Handling missing data by removing rows with missing data or filling in missing values

Correcting inconsistent entries to ensure data uniformity

Categorizing or grouping data for easier analysis

Removing irrelevant data

**3. Exploratory Data Analysis:**

Before proceeding to further analysis, the cleaned data was explored to understand:

The nature of the columns (numerical, categorical, datetime, etc.)

The distribution of numerical and categorical columns

Correlations between different columns

Outliers in the data

**4. Pivot Table Creation:**

Pivot tables were used to summarize and analyze the cleaned dataset. The pivot tables provided a structured breakdown of the data and helped identify trends and patterns more easily. The data was summarized by different variables such as type of bike, sales by month, and demographic information.

**5. Dashboard Creation:**

The insights gained from the pivot tables were visually represented in a dashboard created in Excel. This included:

A bar chart showing the total quantity of each type of bike sold

A line graph showing total sales over time

A pie chart showing the proportion of sales from different customer demographic groups

The dashboard provided an easy-to-understand summary of the data and allowed for quick visual analysis of the key findings.

**6. Interpretation and Presentation of Findings:**

The final step was interpreting the findings from the dashboard and presenting them in a clear, concise manner. The implications of the findings were discussed and potential actions for the company suggested.

This project demonstrates a comprehensive application of data analysis skills, from data cleaning and pivot table creation to dashboard creation and interpretation of findings.