**Problem Statement 1:**

How does the revenue of different companies vary over time? What is the trend of revenue for each company? Which company has the highest revenue in the given month? Is there any seasonality in the given data? Visualise and infer your findings.

**Problem Statement 2:**

Compare the market capitalization of different companies in different industries? Which industries have the highest and the lowest market capitalization? Can you visualize the distribution of market capitalization for each industry? Are there any outliers in the market capitalization data? Visualise and infer your findings.

**Problem Statement 3:**

What is the relationship between earnings per share and price-earnings ratio? Can you plot a scatter plot of earning per share against the price-earnings ratio? Is there any correlation between the two variables? Are there any companies with high earnings per share but low price-earnings ratio? What could be the reason? Visualise and infer your findings.

**Problem Statement 4:**

How can we calculate the total profit for each company? Create a new column (attribute) called ‘Total\_Profit’ , that sums the profit for each company. Which company has the highest total profit? Can you calculate the average profit for each industry? Visualise and infer your findings.

**Problem Statement 5:**

How can we calculate debt-to-equity ratio for each company? Create a new column called ‘DebtToEquityRatio’ that calculates the debt-to-equity ratio. Which company has the highest debt-to-equity ratio? Is there a significant difference in the debt-to-equity ratios among different industries? Visualise and infer your findings.

**Problem Statement 6:**

How can we calculate the Return on Investment (RoI) for each company? Can you create a new column called ‘ROI’ that calculates the ROI based on profit and assets? Which company has the highest ROI? Is there a correlation between ROI and market capitalization? Visualise and infer your findings.

**Problem Statement 7:**

Which company has the highest volatility in its stock price? Can you calculate the volatility by measuring the standard deviation of the stock price? Is there any relationship between volatility and market capitalization? How does the company with highest volatility compare to others in terms of revenue and profit?

**Problem Statement 8:**

Are there any outliers in the divided payments? Can you identify any extreme values in the dividend payments column? What could be the reason for these outliers? How do outliers affect the overall distribution of dividend payments?

**Problem Statement 9:**

Is there any correlation between revenue and expenses? Can you calculate the correlation coefficient between revenue and expenses? Does the correlation change when considering different industries separately? Can you visualise the relationship between revenue and expenses using scatter plot? Infer your findings.

**Problem Statement 10:**

Calculate the net income for each company? Create a new column called ‘NetIncome’ by subtracting expenses from revenue. Which company has the highest net income? Is there any correlation between net income and market capitalization? Infer your findings.

**Problem Statement 11:**

How can we calculate Return on Assets (RoA) for each company? Create a new column called ‘RoA’ by dividing profit by the total assets. Which company has the highest RoA? Can you compare the RoA across different industries? Infer your findings.

**Problem Statement 12:**

How can we calculate average Earnings per shape (EPS) for each industry? Group the dataset by industry and calculate the mean of EPS. Which industry has the highest EPS? Is there a significant difference in EPS among different industries? Infer your findings.

**Problem Statement 13:**

How can we rank the companies based on their revenue? Add a new column called ‘Rank’ that assigns a rank to each company based on their revenue (highest to lowest). Which company has the highest rank? Create a Bar plot visualisation for revenue rankings? Infer your findings.

**Problem Statement 14:**

How can we calculate the compound annual growth rate (CAGR) of revenue for each company? Calculate the growth rate of revenue of each year using the formula [(Revenue\_final/Revenue\_initial) ^(1/num\_years)]-1. Calculate the CAGR by taking the geometric mean of the annual growth rates. Can you compare the CAGR across different industries. Infer your findings.

**Problem Statement 15:**

Can you visualize the distribution of profit for each industry? Create any plots to show the distribution of profit for each industry. Are there any outliers in the profit data for each industry? Which industry has the highest median profit? Infer your findings.