Here are 15 different SQL query assignments for you to practice analyzing this dataset:

1. **Retrieve all companies with a market capitalization greater than 1 trillion dollars.**
2. **Find the top 5 companies with the highest percentage change (per\_change).**
3. **Get the average price of all stocks.**
4. **List all companies where p\_e\_ratio is null (missing).**
5. **Find the total trading volume of all stocks combined.**
6. **Retrieve all companies whose symbol starts with 'A'.**
7. **Find the company with the lowest price.**
8. **Calculate the total number of companies with a negative year\_percent\_change.**
9. **Sort companies by avg\_volume in descending order and limit the result to 10 companies.**
10. **Get the company with the highest market\_cap.**
11. **Find the average p\_e\_ratio of all companies that have a non-null p\_e\_ratio.**
12. **Find the total volume of all stocks traded for companies with a p\_e\_ratio greater than 20.**
13. **Find companies that have a per\_change greater than the average per\_change of all companies.**
14. a year\_percent\_change greater than 50%.

**Filtering and Sorting**

1. Retrieve the top 5 stocks with the highest volume traded.
2. Retrieve the symbol, name, and per\_change of stocks where the per\_change is between 5% and 10%.

**Advanced Queries**

1. Retrieve the symbol, name, and price of stocks where the price is greater than the average price of all stocks.
2. Calculate the difference between volume and avg\_volume for each stock and display the symbol, name, and the calculated difference.

Here are some intermediate to moderately complex SQL query questions for your dataset:

1. **Find Highly Volatile Stocks:**  
   Retrieve the top 5 companies with the highest absolute percentage change (per\_change) in stock price.
2. **Identify Overperformers and Underperformers:**  
   List the top 5 companies with the highest year\_percent\_change, and the bottom 5 companies with the lowest year\_percent\_change.
3. **Compare Trading Volume with Average Volume:**  
   Find all companies where the volume is at least 50% higher than their avg\_volume.
4. **Find Stocks with the Biggest Single-Day Gains and Losses:**  
   Identify the company with the highest change and the company with the lowest change in stock price.
5. **Filter Companies with High Trading Activity and Strong Performance:**  
   Find all companies where the volume is greater than avg\_volume, and year\_percent\_change is greater than 50%.
6. **Find Stocks That Are Consistently Performing Poorly:**  
   List all companies with year\_percent\_change less than -20% and per\_change less than -2%.
7. **Group Companies by Market Capitalization Range:**  
   Categorize companies into three groups based on market\_cap:
   * Small-cap (below $2 billion)
   * Mid-cap ($2 billion - $10 billion)
   * Large-cap (above $10 billion)

**Intermediate Queries**

1. Retrieve the companies with a market\_cap greater than $500 billion and a P/E ratio less than 20.
2. Retrieve the companies with a price greater than the average price of all companies and a per\_change greater than the average per\_change.
3. Find the companies with a volume greater than twice their avg\_volume.

**Advanced Analytical Queries**

1. Find the companies with a market\_cap greater than the median market\_cap and a P/E ratio less than the average P/E ratio.
2. Retrieve the companies with a year\_percent\_change in the bottom 25% but a per\_change in the top 25%.
3. Retrieve the companies with a per\_change greater than 15% and a volume greater than 250,000,000, grouped by their market\_cap range (e.g., < 1billion,1*billion*,1-10 billion, > $10 billion).