**Data Visualization Task**

**1. Customer Spending Distribution**  
**Scenario:** You’re analyzing monthly spending data for customers at an online store.  
**Question:** Using a univariate plot, explore the distribution of monthly spending. What kind of plot (histogram/boxplot/KDE) would you use, and what does it reveal about customer spending behavior (e.g., skewness, outliers)?

**2. Exam Scores Analysis**  
**Scenario:** A university professor collected the final exam scores of 100 students.  
**Question:** Visualize the score distribution using an appropriate univariate plot. Identify if the data is normally distributed and check for any unusually low or high scores.

**3. Product Review Ratings**  
**Scenario:** You are analyzing review ratings (1 to 5 stars) for a product on an e-commerce platform.  
**Question:** Use a bar plot or histogram to understand the distribution of ratings. What does the plot tell you about customer satisfaction?

**Bivariate Plot Scenario-Based Questions**

**4. Study Hours vs. Exam Scores**  
**Scenario:** A school collects data on how many hours students studied and their corresponding exam scores.  
**Question:** Create a scatter plot to visualize the relationship between study hours and scores. Is there a visible correlation? If yes, is it positive or negative?

**5. Advertising Budget vs. Sales**  
**Scenario:** A company tracked how much money it spent on advertising and the resulting sales for three months.  
**Question:** Use a line plot or scatter plot to visualize the effect of advertising on sales. Does spending more result in better sales?

**6. Age vs. Blood Sugar Level**  
**Scenario:** In a hospital dataset, each patient's age and blood sugar level is recorded.  
**Question:** Draw a scatter plot to analyze the relationship between age and blood sugar level. Are there trends or anomalies?

**Multivariate Plot Scenario-Based Questions**

**7. House Price Prediction**  
**Scenario:** You're exploring data with house size, number of bedrooms, and price.  
**Question:** Use a 3D scatter plot or pair plot to analyze how multiple features affect house price. What trends or relationships do you observe?

**8. Car Attributes Analysis**  
**Scenario:** You have data on cars including horsepower, weight, fuel efficiency, and engine size.  
**Question:** Use a heatmap or pair plot to visualize the relationships between all variables. Which variables show the strongest correlation?

**9. Student Performance Analysis**  
**Scenario:** A dataset contains students' hours of study, sleep duration, and final exam scores.  
**Question:** Use a multivariate plot to explore how study and sleep together affect performance. Is there a visible pattern or optimal combination?

**10. Iris Flower Dataset**  
**Scenario:** You're analyzing the famous Iris dataset with petal length, petal width, sepal length, and species.  
**Question:** Create a pairplot to analyze how the measurements vary across different species. Which features separate the species best?