Question

1. **Which city has the highest average price for private rooms?**
2. **What is the total number of shared rooms available in the dataset?**
3. **Which superhost has the most listings with multiple rooms?**
4. **How many listings have a person capacity greater than or equal to 4, and what is their average price?**
5. **Which city has the highest percentage of listings that are marked as "Business"?**
6. **For each city in the dataset, calculate the top 5 most common room types and their corresponding average prices. Additionally, for each room type, calculate the percentage of listings in the dataset that have that room type, and display this information alongside the corresponding average price.**
7. **For each combination of city and room type in the dataset, calculate the median price and the 25th and 75th percentiles of the price. Display the results in a table with multi-level row and column headers.**
8. **Calculate the average price for each day of the week, and for each city in the dataset. Display the results in a heatmap, where the x-axis corresponds to the day of the week, the y-axis corresponds to the city, and the color of each cell corresponds to the average price.**
9. **Create a function that takes a list of cities as input, and returns a summary table that shows the average price, minimum price, and maximum price for each city, broken down by room type. The function should also display a scatter plot that shows the relationship between the number of listings and the average price for each room type in each city.**
10. **Identify the top 10% of hosts in the dataset based on the number of listings they have, and calculate the average price for each of these hosts. Then, calculate the correlation between the number of listings and the average price for these hosts, and display the results in a scatter plot.**