Lesson Task

You are working as a data analyst at a car dealership. You have the following information on the last 30 cars sold:

- **Colour:** Red, Blue, Black, White, and Silver are the available colours.
- **Type:** The cars sold are either Sedans, SUVs, or Hatchbacks.
- **Price:** The cars were sold for between 100,000 and 800,000 NOK.

Colour	Type	Price
Black	Sedan	547580.14
Silver	Hatchback	82071.31
Silver	Hatchback	795637.68
White	Sedan	235178.18
Black	Sedan	556497.08
Blue	SUV	506469.01
White	Sedan	817508.64
Red	Sedan	201352.85
Blue	Hatchback	185742.39
Red	SUV	487342.31
Black	SUV	737560.52
Red	Sedan	427256.95
Red	Hatchback	794689.65
Blue	Hatchback	825052.28
Red	SUV	424513.15
Silver	Sedan	560639.02
Black	Sedan	695753.64
Blue	Sedan	890996.07
Blue	Sedan	513299.89
Red	Hatchback	622831.78
Black	Sedan	830280.41
Red	Sedan	730409.92
White	Sedan	700767.37
Red	Sedan	107812.88
Red	Sedan	776974.04
White	Sedan	877868.63
Red	SUV	573939.16
White	SUV	121725.58
Black	Hatchback	271786.76
Red	Sedan	594293.78

Your task is to conduct the following analysis on this dataset:

Frequency Count

1. Count the frequency of each colour of car sold.

Colour	
Red	11
Blue	5
Black	6
White	5
Silver	3
Total	30

2. Count the frequency of each type of car sold.

Type	
Sedan	17
SUV	6
Hatchback	7
Total	30

Relative Frequencies

3. Calculate the relative frequency of each colour of car sold.

Colour	
Red	36.6666667
Blue	16.6666667
Black	20
White	16.6666667
Silver	10
Total	100

4. Calculate the relative frequency of each type of car sold.

Type	
Sedan	56.6666667
SUV	20
Hatchback	23.3333333
Total	100

Cumulative Frequencies

5. Calculate the cumulative frequency of car colours, in alphabetical order.

Colour		
Class	Frequency Count	Cumulative Frequency
Black	6	6
Blue	5	11
Red	11	22
Silver	3	25
White	5	**30**
Total	30	

6. Calculate the cumulative frequency of car types, in alphabetical order.

Type		
Class	Frequency Count	Cumulative Frequency
Hatchback	7	7
Sedan	17	24
SUV	6	**30**
Total	30	

Binning

7. Categorise the car prices into four bins:

- Affordable: Under 200 000 NOK
- Mid-range: 200 000 - 350 000 NOK
- Expensive: 350 000 – 500 000 NOK
- Luxury: Over 500 000 NOK

8. Provide a frequency count for each category.

Car prices	
Bin name	Frequency count
Affordable: Under 200 000 NOK	4
Mid-range: 200 000 - 350 000 NOK	3
Expensive: 350 000 – 500 000 NOK	3
Luxury: Over 500 000 NOK	20
Total	30

9. Using only your intuition, would you consider the car dealership to be serving a neighbourhood that's low-income, average income or wealthy?

The dealership seems to be serving a wealthy neighbourhood, as most of the cars sold are Luxury models.