Furnishing Status Analysis

1) Furnished :

   Number of furnished houses : 140

   Q1: 3.876.250

   Median : 5.075.000

   Q3: 6.650.000

   IQR: 2.773.750

   Upper Bound : 10.881.250

   Outliers : 13.300.000, 12.250.000, 12.215.000, 11.410.000

   Conclusion : Furnished homes tend to be the most expensive in this dataset. The prices are highly variable, with a significant range between Q1 and Q3, and several outliers that significantly exceed the upper bound. The presence of high-priced outliers suggests a few exceptional properties in this category, potentially luxurious or large homes.

2) Semi – Furnished :

   Number of semi-furnished houses : 227

   Q1: 3.850.000

   Median: 4.585.000

   Q3: 5.582.500

   IQR: 1.732.500

   Upper Bound : 8.181.250

   Outliers : 12.250.000, 10.850.000, 10.150.000, 9.681.000, 9.310.000, 9.240.000, 9.100.000, 8.855.000, 8.750.000

   Conclusion: Semi-furnished homes show a moderate range of prices with a smaller IQR compared to furnished homes. However, there are several outliers exceeding the upper bound, indicating that some semi-furnished

homes are priced much higher than most in this category. These outliers could represent higher-end semi-furnished properties, but most homes are in the mid-price range.

3) Unfurnished :

Number of unfurnished houses : 178

Q1: 2.870.000

Median (Q2): 3.430.000

Q3: 4.821.250

IQR: 1.951.250

Upper Bound : 7.748.125

Outliers : 10.150.000, 9.800.000, 9.100.000 8.680.000, 8.400.000 8.400.000, 8.190.000, 7.962.500

Conclusion: Unfurnished homes generally have the lowest prices in the dataset, with a smaller IQR compared to the other categories. However, there are still some high-priced outliers that suggest a few unfurnished homes are significantly more expensive, indicating that not all unfurnished properties are affordable or typical for the category.

Key Takeaway : The furnishing status significantly impacts house prices. Furnished homes tend to be the most expensive, followed by semi-furnished, while unfurnished homes are generally the most affordable. The presence of high-value outliers in all categories suggests that other factors, such as location and property size, also play a role in pricing.

Air-condition Analysis

1) Air – condition : Yes

Number of houses with air – condition : 172

Q1 = 4.602.500

Median = 5.757.500

Q3 = 7.218.750

IQR = 2.616.250

Upper Bound : 11.143.125

Outliers : 11.410.000, 12.215.000, 12.250.000, 13.300.000

Conclusion : Houses with air conditioning tend to command higher prices, boasting a median price of 5,757,500 compared to 3,885,000 for those without. The upper threshold for outlier detection in this segment is 11,143,125, beyond which we identified four extreme values. This indicates that while the majority of air-conditioned homes fall within a predictable price range, a handful of premium properties deviate significantly, likely due to unique features, luxury amenities, or exceptional locations.

2) Air - condition : No

Number of houses without air - condition : 373

Q1 : 3.150.000

Median : 3.885.000

Q3 : 4.900.000

IQR : 1.750.000

Upper Bound : 7.525.000

Outliers : 7.700.000, 8.043.000, 8.190.000, 8.400.000, 8.400.000, 8.750.000, 9.100.000, 9.240.000, 9.240.000, 9.681.000, 10.150.000, 12.250.000

Conclusion : Houses with air conditioning command significantly higher prices, with a median of 5,757,500—48% above the median of 3,885,000 for non-air-conditioned properties. This gap underscores air conditioning's potential role in boosting market value. While most prices in this category cluster within a predictable range (outliers begin at 11,143,125), we identified only four extreme values, suggesting limited deviation from the premium norm.

Conversely, properties without air conditioning show a higher volume of outliers—12 extreme values above the 7,525,000 threshold—despite their lower median price. This implies that factors like prime location, larger square footage,

or luxury amenities can override the absence of cooling systems, driving exceptional prices in this segment.

Key Takeaway: Air conditioning correlates strongly with higher baseline values, but other premium features can propel non-air-conditioned homes into competitive price tiers, albeit less predictably.

Basement Analysis

1) Basement : Yes

Number of houses with basement : 191

Q1 : 3.998.750

Median : 4.900.000

Q3 : 6.020.000

IQR : 2.021.250

Upper Bound : 9.051.875

Outliers : 12.250.000, 12.215.000, 11.410.000, 10.850.000, 9.870.000, 9.681.000, 9.100.000, 9.100.000

Conclusion : The houses with a basement tend to have a wider price range, with a significant number of outliers above the upper bound, indicating some higher-priced properties in this category. The presence of a basement appears to contribute to a higher median price.

2) Basement : No

Number of houses without basement : 354

Q1 : 3.228.750

Median : 4.077.500

Q3 : 5.556.250

IQR : 2.327.500

Upper Bound : 9.047.500

Outliers : 13.300.000, 12.250.000, 10.150.000, 10.150.000, 9.800.000, 9.310.000, 9.240.000, 9.240.000

Conclusion : The prices for houses without a basement are generally lower, with a smaller IQR and fewer outliers. Although the prices are more concentrated within a narrower range, a few outliers suggest that there are still some high-priced homes without basements.

Key Takeaway: Both houses with and without a basement show a similar number of outliers. However, houses with a basement tend to have a slightly higher price range, with a higher median price compared to those without. The presence of outliers in both categories suggests that there are some exceptionally priced properties in each group, but overall, homes with a basement tend to have higher prices.

Guestroom Analysis

1) Guestroom : Yes

   Number of houses with guestroom : 97

   Q1 : 4.690.000

   Median : 5.495.000

   Q3 : 6.419.000

   IQR : 1.729.000

   Upper bound : 9.012.500

   Outliers : 11.410.000, 9.870.000, 9.800.000, 9.681.000, 9.100.000

   Conclusion: Houses with a guestroom tend to have a moderate price range. The upper bound price suggests that most of the properties are affordable within the expected range. However, there are several outliers with significantly higher prices, which may indicate luxury properties or those in prime locations.

2) Guestroom : No

   Number of houses with guestroom : 448

   Q1 : 3.347.750

   Median : 4.165.000

   Q3 : 5.258.750

   IQR : 1.911.000

   Upper bound : 8.125.250

   Outliers : 13.300.000, 12.250.000, 12.250.000, 12.215.000, 10.850.000, 10.150.000, 10.150.000, 9.800.000, 9.310.000, 9.240.000, 9.240.000, 9.100.000, 8.960.000, 8.855.000, 8.750.000, 8.575.000, 8.400.000, 8.400.000, 8.400.000, 8.400.000, 8.400.000, 8.295.000

   Conclusion: Houses without a guestroom tend to be more numerous, and they cover a wide price range. The presence of many outliers exceeding the upper bound suggests that some houses in this category are still relatively expensive, and these may represent higher-end properties or those in prime locations.

Key Takeaway : Houses with a guestroom tend to be priced higher than those without, but the prices for both categories vary significantly, with a number of outliers in each category indicating that a few houses are priced much higher than most others.

Hot Water Heating Analysis

1) Hot water heating : Yes

   Number of houses with hot water heating : 25

   Q1 : 3.780.000

   Median : 5.383.000

   Q3 : 6.650.000

   IQR : 2.870.000

Upper bound : 10.955.000

Outliers : No outliers for houses with hot water heating

Conclusion : These houses have a relatively high median price (€5.38M) compared to those without. The IQR is larger, indicating greater price variability. There are no outliers, suggesting that prices are more consistent within this category.

2) Hot water heating : No

   Number of houses with hot water heating : 520

   Q1 : 3.430.000

   Median : 4.329.500

   Q3 : 5.674.375

   IQR : 2.244.375

   Upper Bound : 9.040.937,5

   Outliers : 13.300.000, 12.250.000, 12.250.000, 12.215.000, 11.410.000, 10.850.000, 10.150.000, 10.150.000, 9.870.000, 9.800.000, 9.800.000, 9.310.000, 9.240.000, 9.100.000, 9.100.000

   Conclusion : The median price (€4.33M) is lower than for houses with hot water heating. This category contains many outliers, indicating that some houses are significantly more expensive than expected**.**

Key Takeaway : Houses with hot water heating tend to have higher and more stable prices, whereas houses without hot water heating show more price variability and numerous high-value outliers. This suggests that hot water heating may be a desirable feature but is not necessarily a strong differentiator for extreme house prices.

Main road Analysis

1) Main road : Yes

   Number of houses that are on main road : 468

   Q1 : 3.638.250

   Median : 4.550.000

   Q3 : 5.967.500

   IQR : 2.329.250

   Upper bound : 9.461.375

   Outliers : 13.300.000, 12.250.000, 12.250.000, 12.215.000, 11.410.000, 10.850.000, 10.150.000, 10.150.000, 9.870.000, 9.800.000, 9.800.000, 9.681.000

   Conclusion : Houses on the main road tend to have higher median prices (4,550,000) and a wider price range. Additionally, there are several high-priced outliers, indicating that some expensive properties exist in this category. This suggests that being located on a main road can be advantageous for property value, potentially due to accessibility and commercial opportunities.

2) Main road : No

Number of houses that are not on main road : 77

Q1 : 2.835.000

Median : 3.290.000

Q3 : 3.990.000

IQR : 1.155.000

Upper bound : 5.722.500

Outliers : No outliers

Conclusion : Houses not on the main road have a lower median price (3,290,000) and a more stable price distribution with no outliers. This indicates that houses in quieter areas may be more affordable and have less price fluctuation.

Key Takeaway : Being on a main road is associated with higher property prices but also a greater price variation. Houses not on the main road tend to have more stable and lower prices. The presence of high-priced outliers on main roads suggests that location plays a crucial role in pricing, possibly due to commercial potential and better accessibility.

Preferred Area Analysis

1) Preferred Area : Yes

   Number of houses that are in preferred area : 128

   Q1 : 4.548.250

   Median : 5.582.500

   Q3 : 6.650.000

   IQR : 2.101.750

   Upper bound : 9.802.625

   Outliers : 13.300.000, 12.250.000, 12.215.000, 10.850.000, 10.150.000, 9.870.000

   Conclusion : Houses in the preferred area tend to have a higher price range, with a median price of 5,582,500 and a higher number of outliers. The upper bound for house prices in this area is 9,802,625. These houses tend to be more expensive and are likely to offer premium locations.

2) Preferred Area : No

   Number of houses that are not in preferred area : 417

Q1 : 3.255.000

Median : 4.095.000

Q3 : 5.110.000

IQR : 1.855.000

Upper bound : 7.892.500

Outliers : 12.250.000, 11.410.000, 10.150.000, 9.681.000, 9.240.000, 9.100.000, 8.960.000, 8.890.000, 8.750.000, 8.680.000, 8.645.000, 8.645.000, 8.575.000, 8.400.000, 8.400.000, 8.400.000, 8.400.000, 8.190.000, 8.120.000, 8.080.940, 7.980.000, 7.962.500, 7.910.000

Conclusion : Houses outside the preferred area have a wider range of prices, with a lower median of 4,095,000. The upper bound for house prices is 7,892,500, and while there are several outliers, the prices in this category are generally lower than those in the preferred area.

Key Takeaway : Preferred Area is positively correlated with higher housing prices, as evidenced by the higher median and outliers in this category. Houses in non-preferred areas have a broader distribution with more outliers, suggesting a more varied price range with some higher-priced properties scattered throughout. The presence of outliers in both categories indicates the existence of some exceptionally expensive properties, regardless of location preference.