

1. Overview of housing data

```
SELECT
    AVG(price) AS average_price,
    MIN(price) AS min_price,
    MAX(price) AS max_price,
    COUNT(*) AS total_houses
FROM
    housing_data;
```

2. Average price per bedroom

```
SELECT
    bedrooms,
    AVG(price) AS average_price,
    COUNT(*) AS number_of_houses
FROM
    housing_data
GROUP BY
    bedrooms
ORDER BY
    average_price DESC;
```

3. Average price per bathroom

```
SELECT
    bathrooms,
    AVG(price) AS average_price,
    COUNT(*) AS number_of_houses
FROM
    housing_data
GROUP BY
    bathrooms
ORDER BY
    average_price DESC;
```

5. Price by Main Road Availability (Yes/No)

```
SELECT
    mainroad,
    AVG(price) AS average_price,
    COUNT(*) AS number_of_houses
FROM
    housing_data
GROUP BY
    mainroad
ORDER BY
    average_price DESC;
```

6. Price by Guestroom Availability (Yes/No)

```
SELECT
    guestroom,
    AVG(price) AS average_price,
    COUNT(*) AS number_of_houses
FROM
    housing_data
GROUP BY
    guestroom
ORDER BY
    average_price DESC;
```

7. Price by Basement Availability (Yes/No)

```
SELECT
    basement,
    AVG(price) AS average_price,
    COUNT(*) AS number_of_houses
FROM
    housing_data
GROUP BY
    basement
ORDER BY
    average_price DESC;
```

8. Price by Air Conditioning Availability (Yes/No)

```
SELECT
    airconditioning,
    AVG(price) AS average_price,
    COUNT(*) AS number_of_houses
FROM
    housing_data
GROUP BY
    airconditioning
ORDER BY
    average_price DESC;
```

9. Average price per hotwater heating

```
SELECT
    hotwaterheating,
    AVG(price) AS average_price,
    COUNT(*) AS number_of_houses
FROM
    housing_data
GROUP BY
    hotwaterheating
ORDER BY
    average_price DESC;
```

10. Price by Furnishing Status

```
SELECT
    furnishingstatus,
    AVG(price) AS average_price,
    COUNT(*) AS number_of_houses
FROM
    housing_data
GROUP BY
    furnishingstatus
ORDER BY
    average_price DESC;
```

11. Average price per area

```
SELECT
    area,
    AVG(price) AS average_price,
    COUNT(*) AS number_of_houses
FROM
    housing_data
GROUP BY
    area
ORDER BY
    area DESC;
```

12. Top 5 Most Expensive Houses

```
SELECT
    *
FROM
    housing_data
ORDER BY
    price DESC
LIMIT 5;
```

13. Price by Area and Number of Bedrooms

```
SELECT
    area,
    bedrooms,
    AVG(price) AS average_price,
    COUNT(*) AS number_of_houses
FROM
    housing_data
GROUP BY
    area, bedrooms
ORDER BY
    average_price DESC;
```

14. Outliers (Houses With Prices Above/Below 2 Standard Deviations from the Mean)

```
WITH price_stats AS (  
    SELECT  
        AVG(price) AS avg_price,  
        STDDEV(price) AS stddev_price  
    FROM  
        housing_data  
)  
SELECT  
    *  
FROM  
    housing_data,  
    price_stats  
WHERE  
    price > avg_price + 2 * stddev_price  
    OR price < avg_price - 2 * stddev_price;
```

15. Price vs Area and Stories (Interaction Analysis)

```
SELECT  
    area,  
    stories,  
    AVG(price) AS average_price,  
    COUNT(*) AS number_of_houses  
FROM  
    housing_data  
GROUP BY  
    area, stories  
ORDER BY  
    average_price DESC;
```

16. Average Price for Houses with Multiple Features

```
SELECT  
    hotwaterheating,  
    basement,  
    AVG(price) AS average_price,  
    COUNT(*) AS number_of_houses  
FROM  
    housing_data  
GROUP BY  
    hotwaterheating, basement  
ORDER BY  
    average_price DESC;
```