

Nigeria Houses Project (SQL + Tableau)

Introduction

This project is inspired by my interest in house prices in Nigeria because I want to find the insight in this house listings.

Dataset

Source: <https://data.world/abdulkbk/nigeria-houses-price>

Tools

1. SQL Online IDE (To analyze the dataset by using SQL)
2. Tableau Public (To visualize the dataset by making a dashboard)

Analysis

Task 1: Find Max, min, mean of house prices, and the number of houses in this dataset

```

1 SELECT
2     MAX(price) AS max_price,
3     MIN(price) AS min_price,
4     AVG(price) AS avg_price,
5     COUNT(price) AS count_price
6 FROM nigeria_houses_data;

```

max_price	min_price	avg_price	count_price
1800000000000	90000	301380208.47241634	24326

Maximum price = 1,800,000,000,000 NGN

Minimum price = 90,000 NGN

Average price = 301,380,208.47241634 NGN

Number of houses in this dataset = 24,326 houses

Task 2: Find the data of the most and the least expensive house in this dataset

```

1 SELECT *
2 FROM nigeria_houses_data
3 WHERE price == 1800000000000 OR price == 90000
4 ORDER BY price DESC;

```

bedrooms	bathrooms	toilets	parking_space	title	town	state	price
7	7	8	8	Detached Duplex	Ikoyi	Lagos	1800000000000
2	3	3	4	Terraced Duplexes	Ibeju Lekki	Lagos	90000

Task 3: Find max, min, and average amount of bedrooms, bathrooms, toilets, and parking space for the houses in this dataset

max:

```

1 SELECT
2     MAX(bedrooms) AS max_bedrooms,
3     MAX(bathrooms) AS max_bathrooms,
4     MAX(toilets) AS max_toilets,
5     MAX(parking_space) AS max_parking_space
6 FROM nigeria_houses_data;

```

max_bedrooms	max_bathrooms	max_toilets	max_parking_space
9	9	9	9

min:

```

1 SELECT
2     MIN(bedrooms) AS min_bedrooms,
3     MIN(bathrooms) AS min_bathrooms,
4     MIN(toilets) AS min_toilets,
5     MIN(parking_space) AS min_parking_space
6 FROM nigeria_houses_data;

```

min_bedrooms	min_bathrooms	min_toilets	min_parking_space
1	1	1	1

average:

```

1 SELECT
2     AVG(bedrooms) AS avg_bedrooms,
3     AVG(bathrooms) AS avg_bathrooms,
4     AVG(toilets) AS avg_toilets,
5     AVG(parking_space) AS avg_parking_space
6 FROM nigeria_houses_data;

```

avg_bedrooms	avg_bathrooms	avg_toilets	avg_parking_space
4.338814437227658	4.600797500616625	5.176354517799885	4.041724903395544

	bedrooms	bathrooms	toilets	parking_space
min	9	9	9	9
max	1	1	1	1

	bedrooms	bathrooms	toilets	parking_space
average (4 decimals, no rounding)	4.3388	4.6079	5.1763	4.0417

Task 4: Find the top 5 states with the highest and lowest average house price

Top 5:

```

1 SELECT AVG(price), state
2 FROM nigeria_houses_data
3 GROUP BY state
4 ORDER BY AVG(price) DESC
5 LIMIT 5;
```

AVG(price)	state
345772143.6923286	Lagos
227924610.523269	Abuja
130328409.7117117	Rivers
105000000	Borno
103023809.52380952	Delta

Bottom 5:

```
1 SELECT AVG(price), state
2 FROM nigeria_houses_data
3 GROUP BY state
4 ORDER BY AVG(price)
5 LIMIT 5;
```

AVG(price)	state
10500000	Katsina
13750000	Plateau
22666666.666666668	Kwara
23281684.458398744	Ogun
25000000	Cross River

Top 5 states: Lagos, Abuja, Rivers, Borno, Delta

Bottom 5 states: Katsina, Plateau, Kwara, Ogun, Cross River

Task 5: Find the top 5 houses in Lagos State with the highest and lowest house price

Top 5:

```

1 SELECT
2     title AS house,
3     price,
4     town
5 FROM (SELECT *
6 FROM nigeria_houses_data
7 WHERE state == 'Lagos'
8 ORDER BY price DESC
9 LIMIT 5);

```

house	price	town
Detached Duplex	18000000000000	Ikoyi
Semi Detached Duplex	450000000000	Ikoyi
Detached Duplex	350000000000	Lekki
Detached Duplex	1600000000000	Lekki
Semi Detached Duplex	125000000000	Lekki

Bottom 5:

house	price	town
Terraced Duplexes	90000	Ibeju Lekki
Detached Duplex	350000	Isheri North
Detached Duplex	350000	Isheri North
Detached Duplex	350000	Isheri North
Detached Duplex	400000	Lekki

Task 6: Find max, min, and average price of each type of houses in Lagos state

```

1 SELECT
2     title AS house,
3     MAX(price) AS max_price,
4     MIN(price) AS min_price,
5     AVG(price) AS avg_price
6 FROM nigeria_houses_data
7 WHERE state == 'Lagos'
8 GROUP BY title
9 ORDER BY AVG(price) DESC;

```

house	max_price	min_price	avg_price
Detached Duplex	1800000000000	350000	427997003.47585154
Semi Detached Duplex	4500000000000	660000	397327922.1447619
Block of Flats	15000000000	710000	215021419.04285714
Terraced Duplexes	2700000000	90000	92660961.42857143
Terraced Bungalow	550000000	6500000	56821931.12244898
Detached Bungalow	15000000000	2500000	52777565.59790874
Semi Detached Bungalow	350000000	3000000	44061158.95061728

house type	max_price (NGN)	min_price (NGN)	avg_price (NGN)
Detached Duplex	1,800,000,000,000	350,000	427,997,003.47585154
Semi Detached Duplex	450,000,000,000	660,000	397,327,922.1447619
Block of Flats	15,000,000,000	710,000	215,021,419.04285714
Terraced Duplexes	2,700,000,000	90,000	92,660,961.42857143
Terraced Bungalow	550,000,000	65,000,00	56,821,931.12244898
Detached Bungalow	15,000,000,000	2,500,000	52,777,565.59790874
Semi Detached Bungalow	350,000,000	3,000,000	44,061,158.95061728

Data Visualization

Link:

https://public.tableau.com/views/NigeriaHousesDashboard/NigeriaHousesDashboard?:language=en-US&:display_count=n&:origin=viz_share_link

In my data visualization, the dashboard contains:

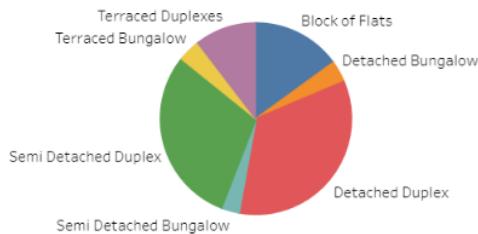
- Average and median price for each type of house (both in pie and bar chart for comparison)
- Average house prices in each state
- Average number of components (bedrooms, bathrooms, toilets, and parking spaces) for each house in a state

In this interactive dashboard, you can select a house type or a state in any chart in the dashboard to filter the charts in the dashboard as you desire.

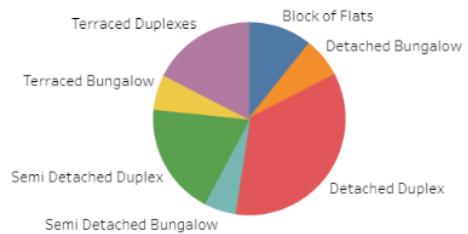
Nigeria Houses Dashboard

Source: <https://data.world/abdulkpk/nigeria-houses-price>

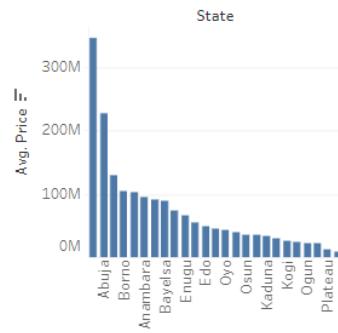
Average house price for each house type



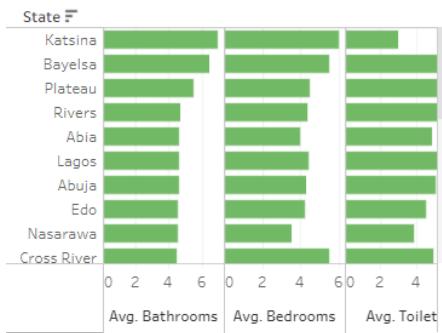
Median house price for each house type



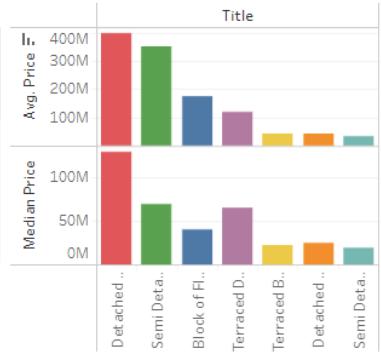
Average house prices in each state



Average number of components for each house in a state



Average and median price for each type of house

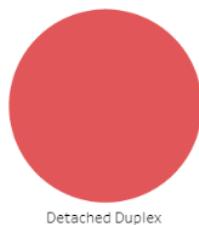


For example: Filter 'Detached Duplex'

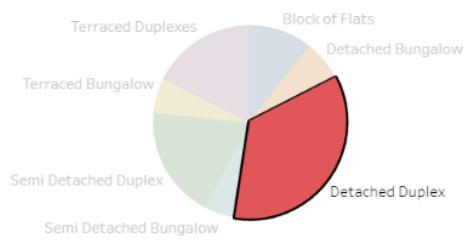
Nigeria Houses Dashboard

Source: <https://data.world/abdulkblk/nigeria-houses-price>

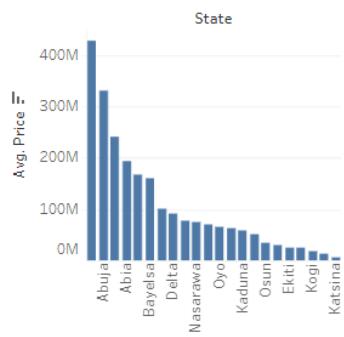
Average house price for each house type



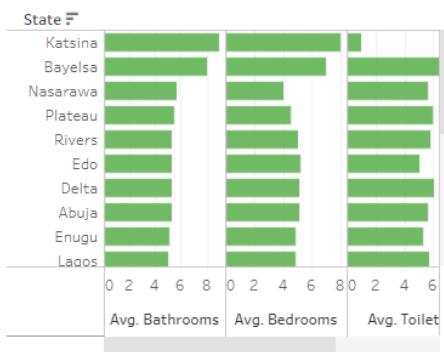
Median house price for each house type



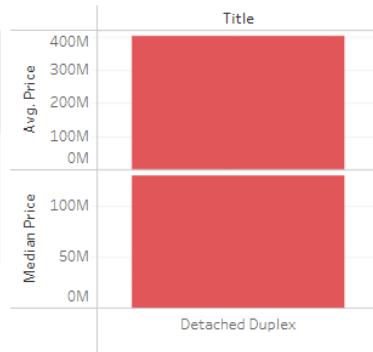
Average house prices in each state



Average number of components for each house in a state



Average and median price for each type of house

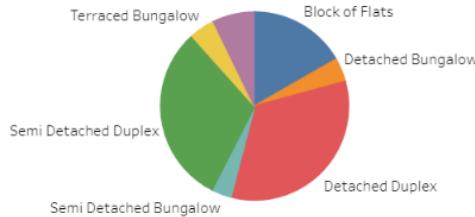


Or, filter 'Lagos'

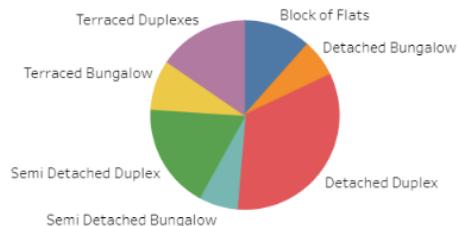
Nigeria Houses Dashboard

Source: <https://data.world/abdulkbk/nigeria-houses-price>

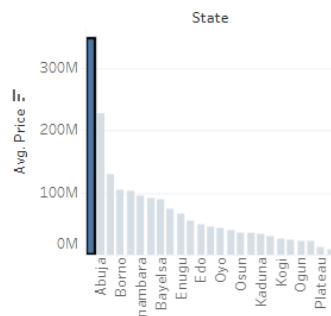
Average house price for each house type



Median house price for each house type



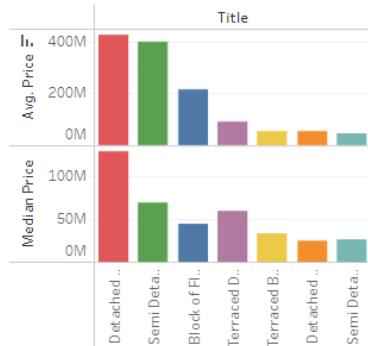
Average house prices in each state



Average number of components for each house in a state

State	Avg. Components		
	Avg. Bathrooms	Avg. Bedrooms	Avg. Toilets
Lagos	0	2	4

Average and median price for each type of house



Conclusion

In the analysis, we found that:

1. The most and the least expensive house are both in Lagos state, which has the most average house price in this dataset.
2. Toilets have the highest number of component in average for each house, followed by bathrooms, bedrooms, and parking spaces.
3. For each type of houses in Lagos state, Detached Duplex is the most expensive in average, followed by Semi Detached Duplex, Block of Flats, Terraced Duplexes, Terraced Bungalow, Detached Bungalow, and Semi Detached Bungalow.

In conclusion, this means:

1. Lagos state has the highest house price discrepancy compared to other states in Nigeria.
2. People in Nigeria need toilet the most compared to other house components in the dataset.
3. Detached Duplex is the most popular house type in Lagos.

Beware that there may be other factors that are affecting the house price other than town, state, and house components shown in this dataset. Therefore, other factors must be explored in order to interpret the trends of house price.
