

GOVERNMENT ARTS COLLEGE, PARAMAKUDI
UG DEPARTMENT OF MATHEMATICS

PROJECT TITLE:

Analysing housing prices In metropolitan areas of India

SUBMITTED BY:

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DEPARTMENT OF MATHEMATICS

GOVERNMENT ARTS COLLEGE, PARAMAKUDI.

1. Introduction

Since the inception of the theory and idea of development, the common feature that emerged in different point of time is the developmental gap that emerged in different parts of the world and also among various parts of a country in a particular time period. This disparity in development, like many other indicators, has also been reflected in India. Traditional development theories believed that agriculture, industrialisation, urbanisation, are significant ingredients of growth, and, ultimately important prerequisites for achieving development. Within the economy itself, the status of growth of a state can be judged through its performance in agricultural and industrial production, performance of service sector and urbanisation, and their impact through their contribution in income and employment generation at the national level. Thus, house price behaviour may also reflect some sort of developmental status of the households of a country. Keeping in view the above fact of rapid urbanisation and regional disparities, it is not unexpected that it may lead to some sort of differences in regional house prices, where housing and real estate are considered as major sources of physical and financial asset. This also leads to the differences in the dynamics of house price determination. It simply means that there might be shift of house prices in cities from average, in the country, depending upon its economic status. For instance, average house prices in the poorer provinces might be lower than the national average. Similarly, for richer states, the urban house prices, on average might be higher than the national average.



Says

What have we heard them say?
What can we imagine them saying?



Thinks
What are their wants, needs, hopes, and dreams?
What other thoughts might influence their behavior?



Persona's name

Short summary of
the persona



Does

What behavior have we observed?
What can we imagine them doing?

Feels

What are their fears, frustrations, and anxieties?
What other feelings might influence their behavior?



2

Brainstorm

Write down any ideas that come to mind that address your problem statement.

 10 minutes



TIP

You can select a sticky note and hit the pencil [switch to sketch] icon to start drawing!

Person 1

<p>What did we learn from the learning exercise?</p> <p>The Business Plan exercise is a very important part of the Business Plan. This Business Plan can be used particularly for the following purposes:</p> <ul style="list-style-type: none"> - to help you to identify your business idea; - to help you to define your business plan; - to help you to evaluate your business idea; - to help you to make a decision. <p>As a result,</p>	<p>What do I remember about the Business Plan exercise?</p> <p>The Business Plan exercise is a very important part of the Business Plan. This Business Plan can be used particularly for the following purposes:</p> <ul style="list-style-type: none"> - to help you to identify your business idea; - to help you to define your business plan; - to help you to evaluate your business idea; - to help you to make a decision. 	<p>What is the position of business plan in a small business?</p> <p>Business plan is a document that describes the business idea, its objectives, its resources, its market, its strategy, its implementation, its costs, its financial projections, its risks, and its controls. It is a tool for managing the business effectively and efficiently.</p>
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Person 2

Where do you see the company going from here?	Where do you see the company going from here?	Where do you see the company going from here?
The company has been a beneficiary of the growth in the oil price. The benefits of the oil price increase will not be sustainable. Core business needs to be diversified.	The oil price increase is likely to continue. The oil price is likely to remain at US\$100/bbl or more, growing at a CAGR of 2.5%.	There is potential for oil price to drop.

Person 3

What is the best measure of economic power?	What is the best measure of economic power?	How many degrees of freedom does a country have in its fiscal policy?
Barro's Real Gdp per capita measure of economic power. After age and latitude for measured GDP have been controlled for, Barro's measure of economic power is likely to be more accurate.	World Bank's Real Gdp per capita measure of economic power. After age and latitude for measured GDP have been controlled for, Barro's measure of economic power is likely to be more accurate.	The average degree of freedom in budgetary policy is 6.6. The range is from 1.6 in India to 9.6 in Norway. The average number of degrees of freedom in budgetary policy is 6.6. The range is from 1.6 in India to 9.6 in Norway. The average number of degrees of freedom in budgetary policy is 6.6. The range is from 1.6 in India to 9.6 in Norway.

Person 4

<p>What company will be most successful in India?</p> <p>India's software industry has grown at a steady rate over the last few years. And the market is expected to continue growing. One company that is a leader in the software industry is Microsoft. They have a strong presence in India and are well-positioned to continue growing.</p>	<p>What City Is Considered The Best In India?</p> <p>Chennai was the most attractive city for buying a home in the last quarter of 2023. The average price was \$16,224 in the last quarter of 2023.</p>	<p>What Is The Official Language Of India?</p> <p>The official language of India is English. It is spoken by approximately 12% of the population.</p>
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iii Columns

Longitude (generated)

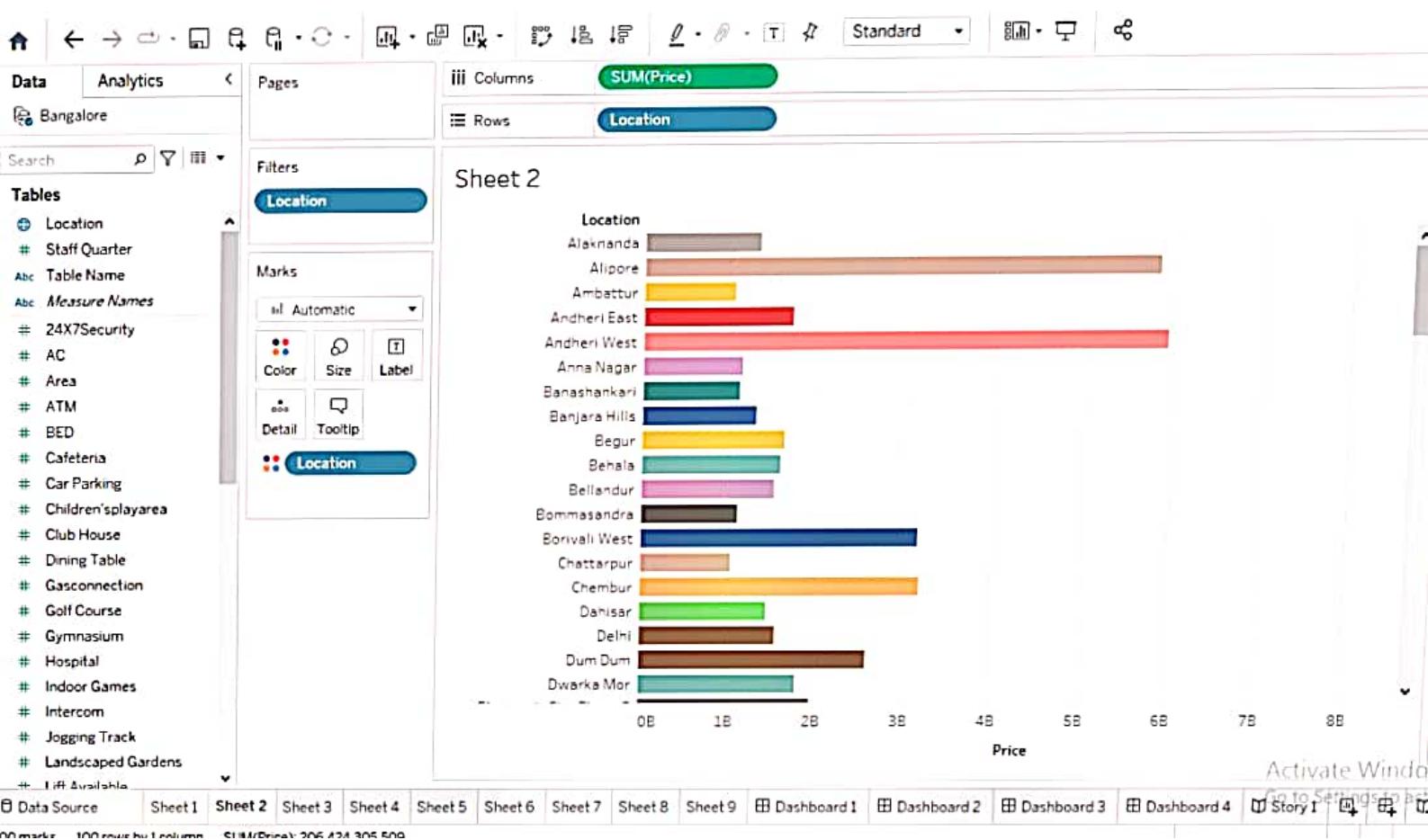
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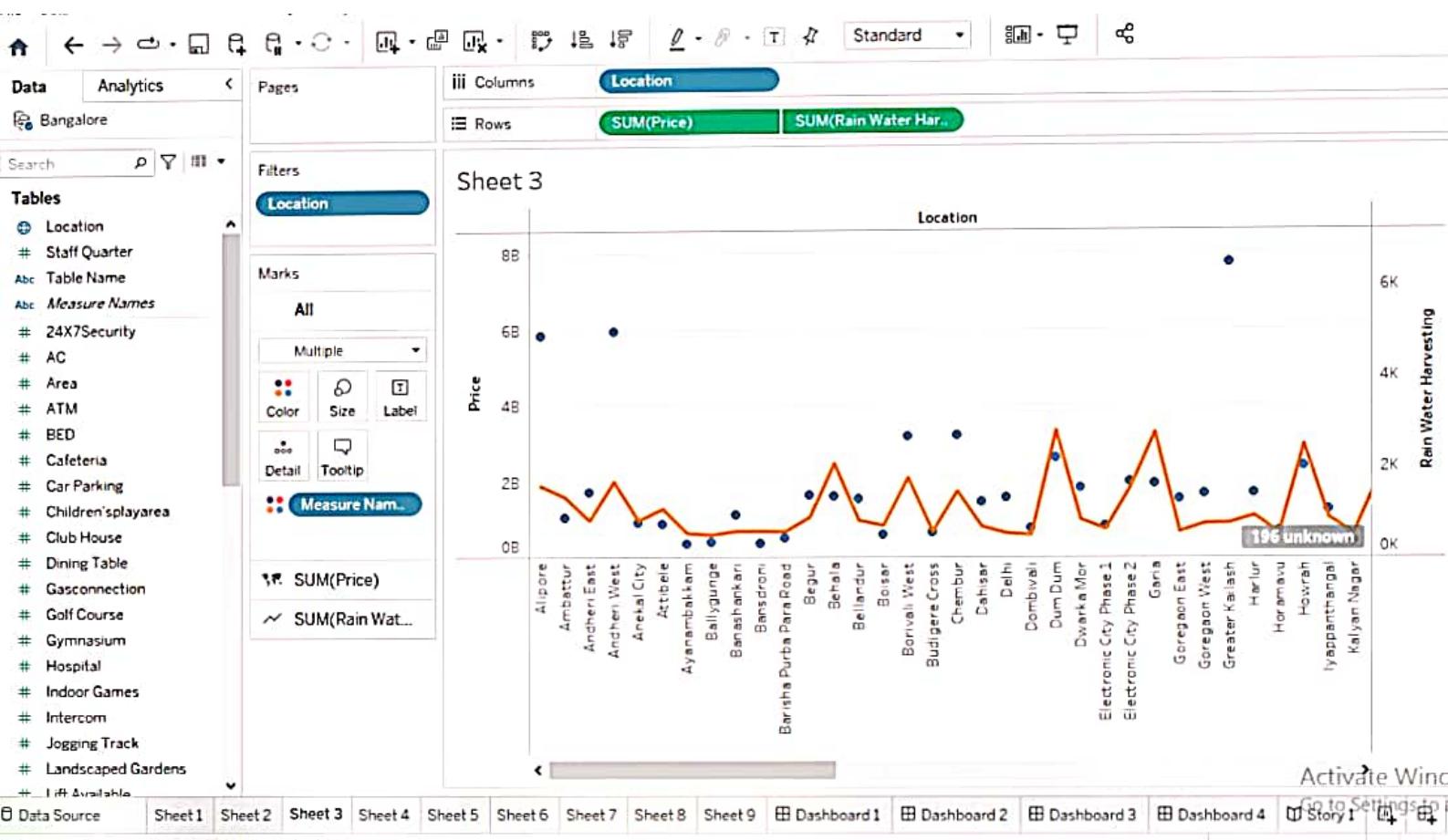
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© 2023 Mapbox © OpenStreetMap

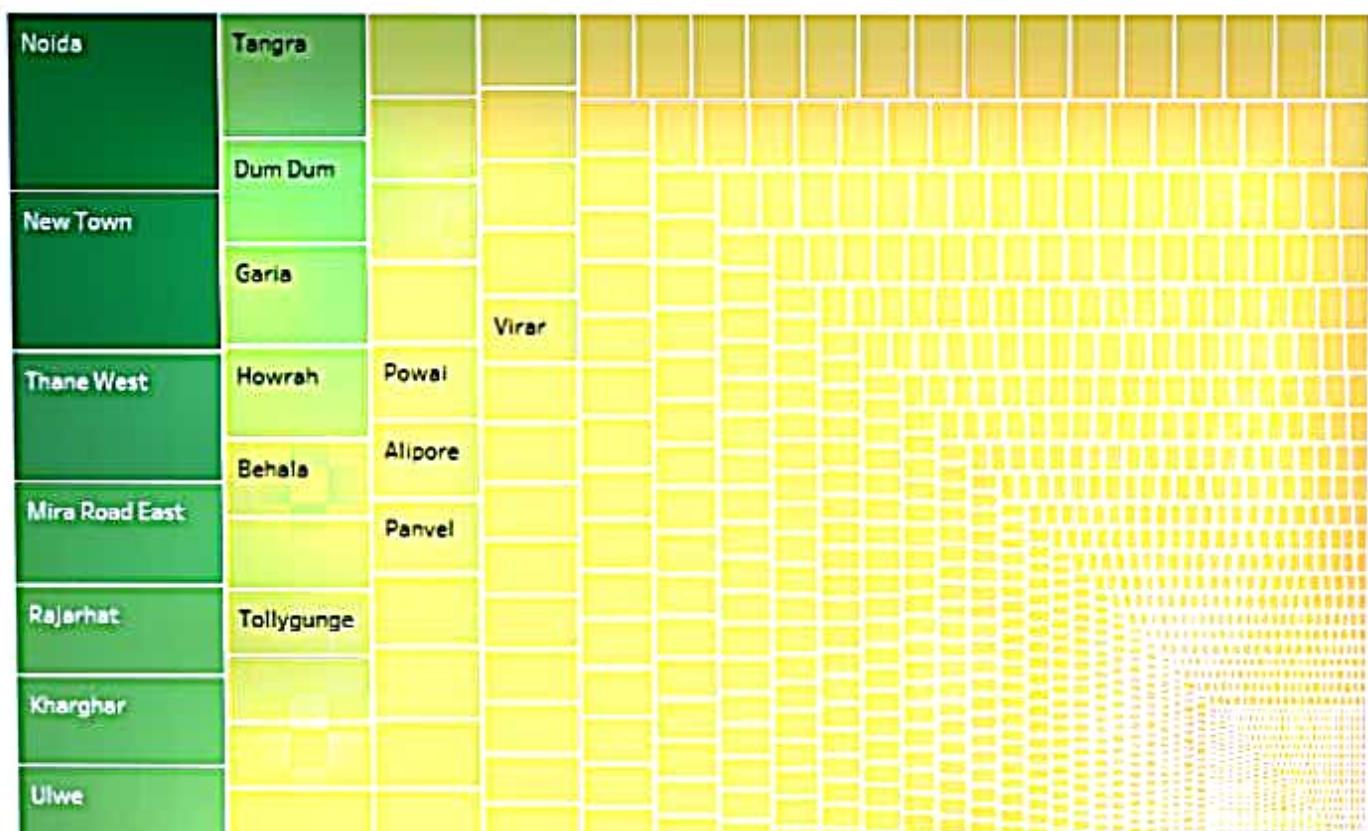
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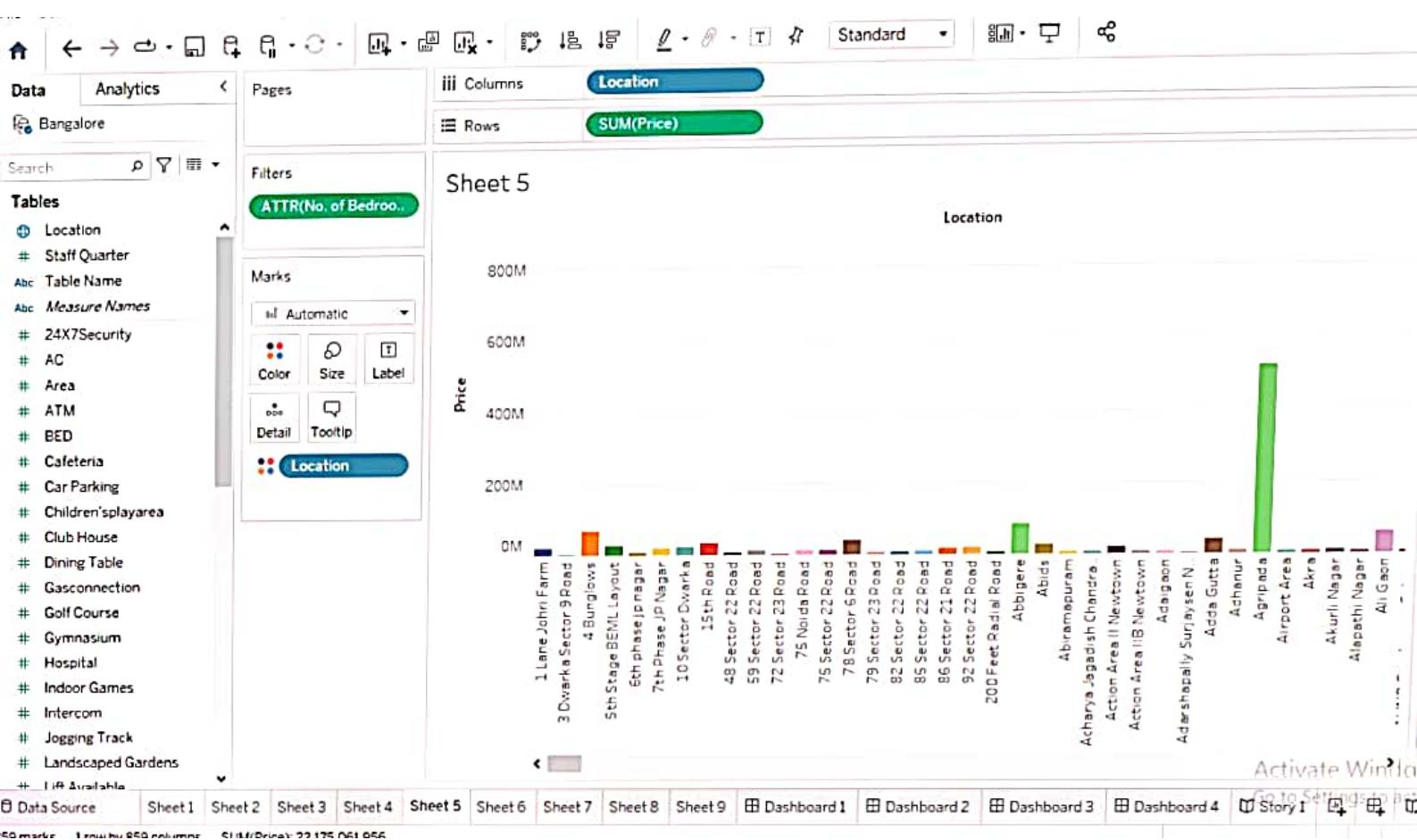


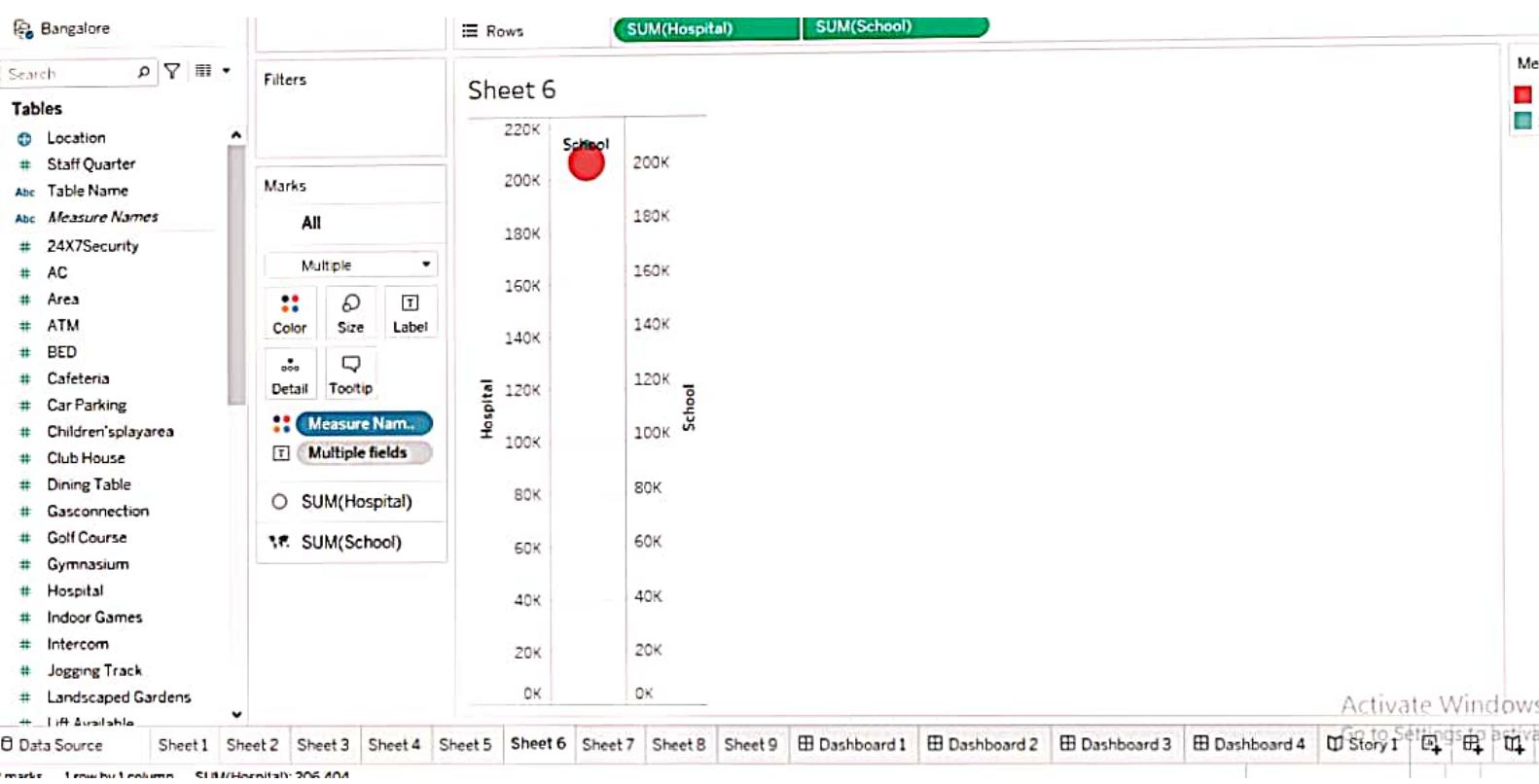


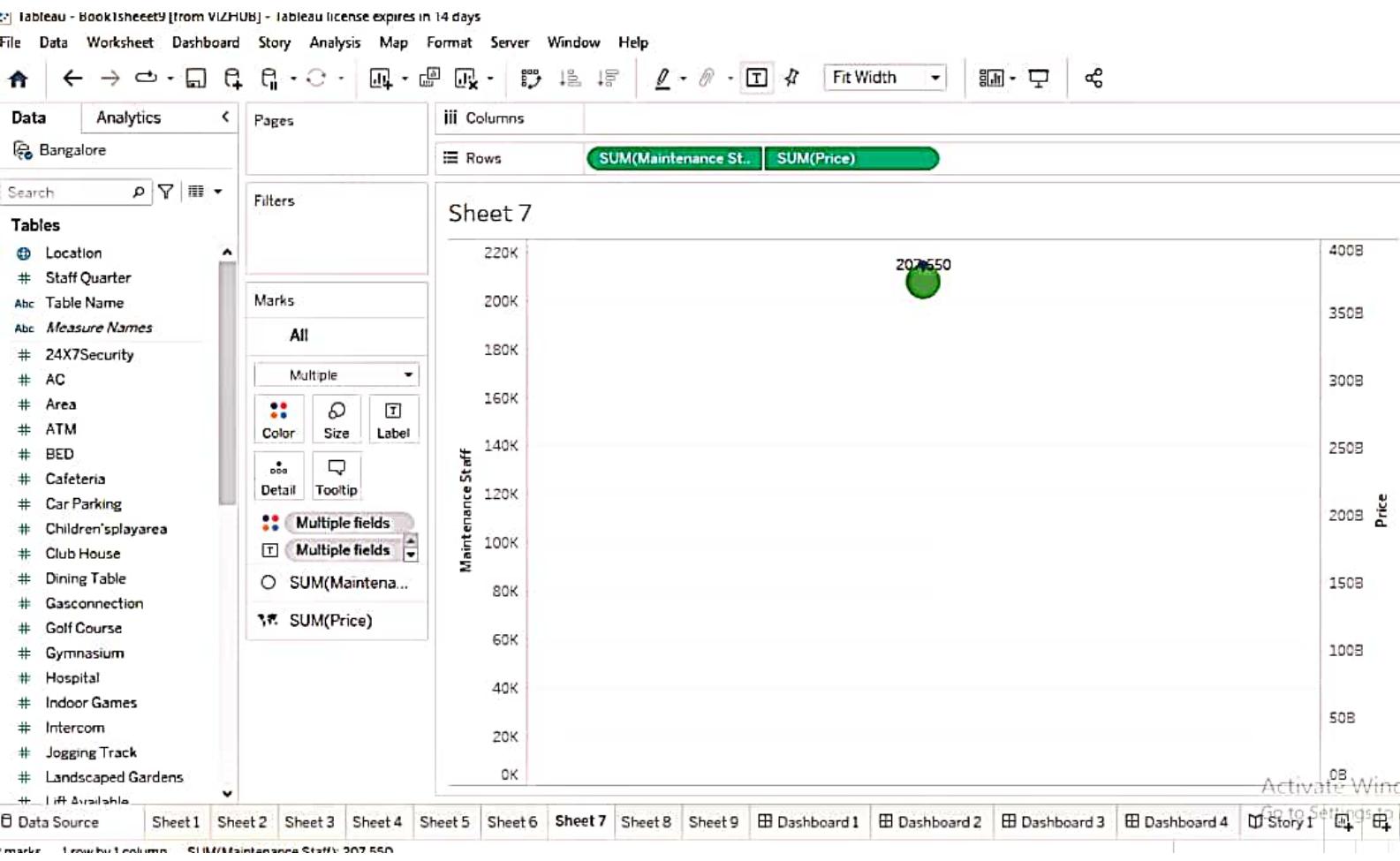
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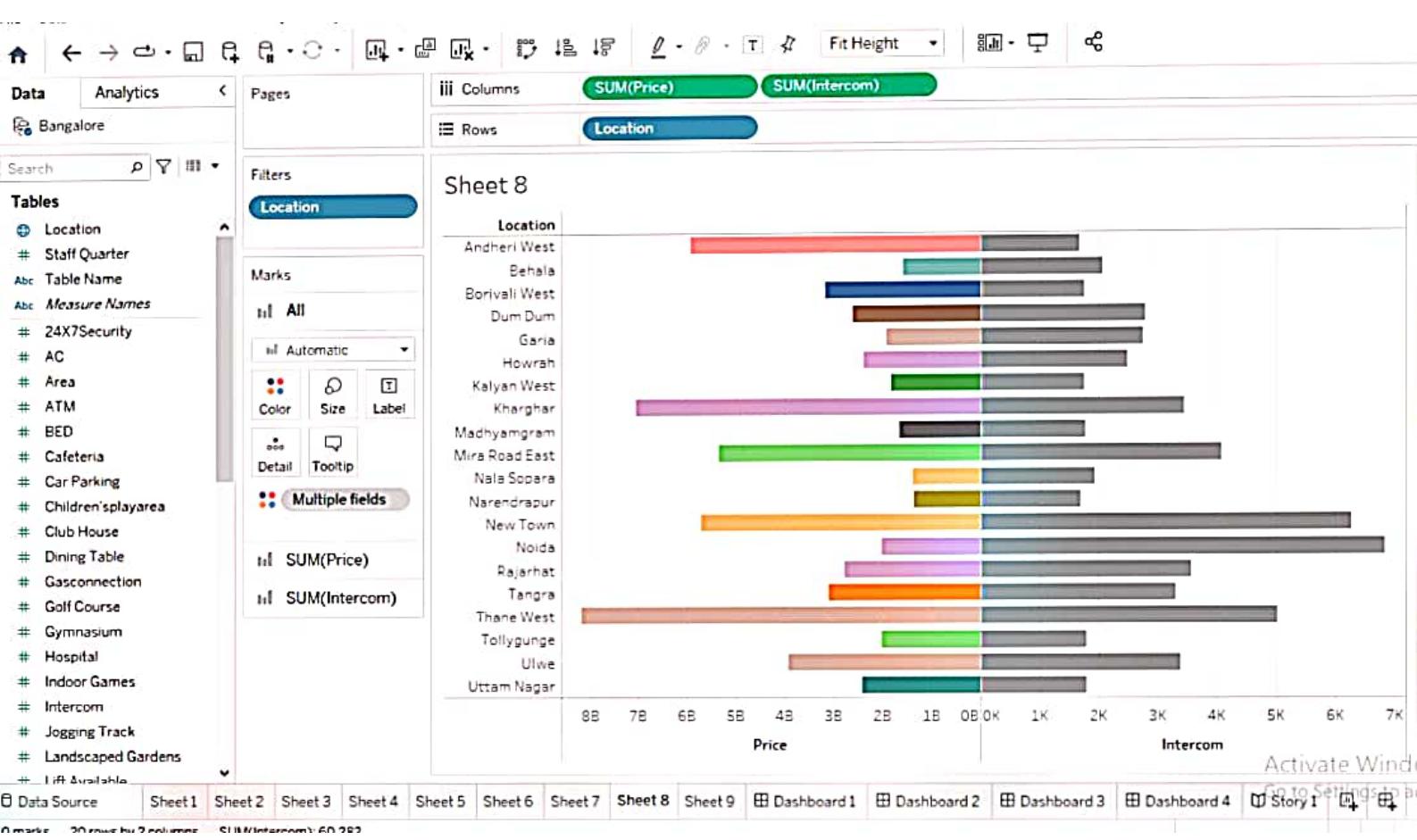
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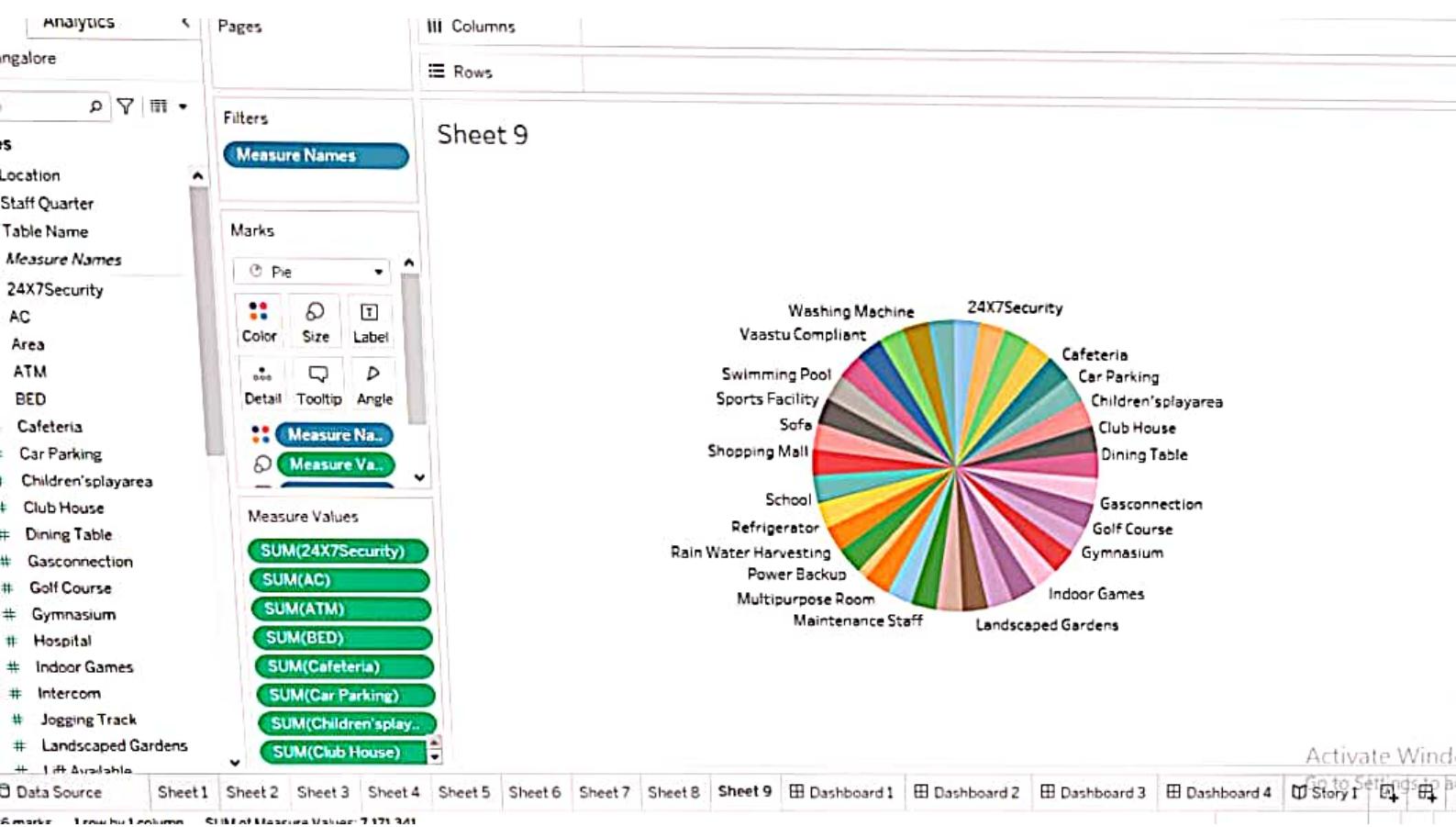


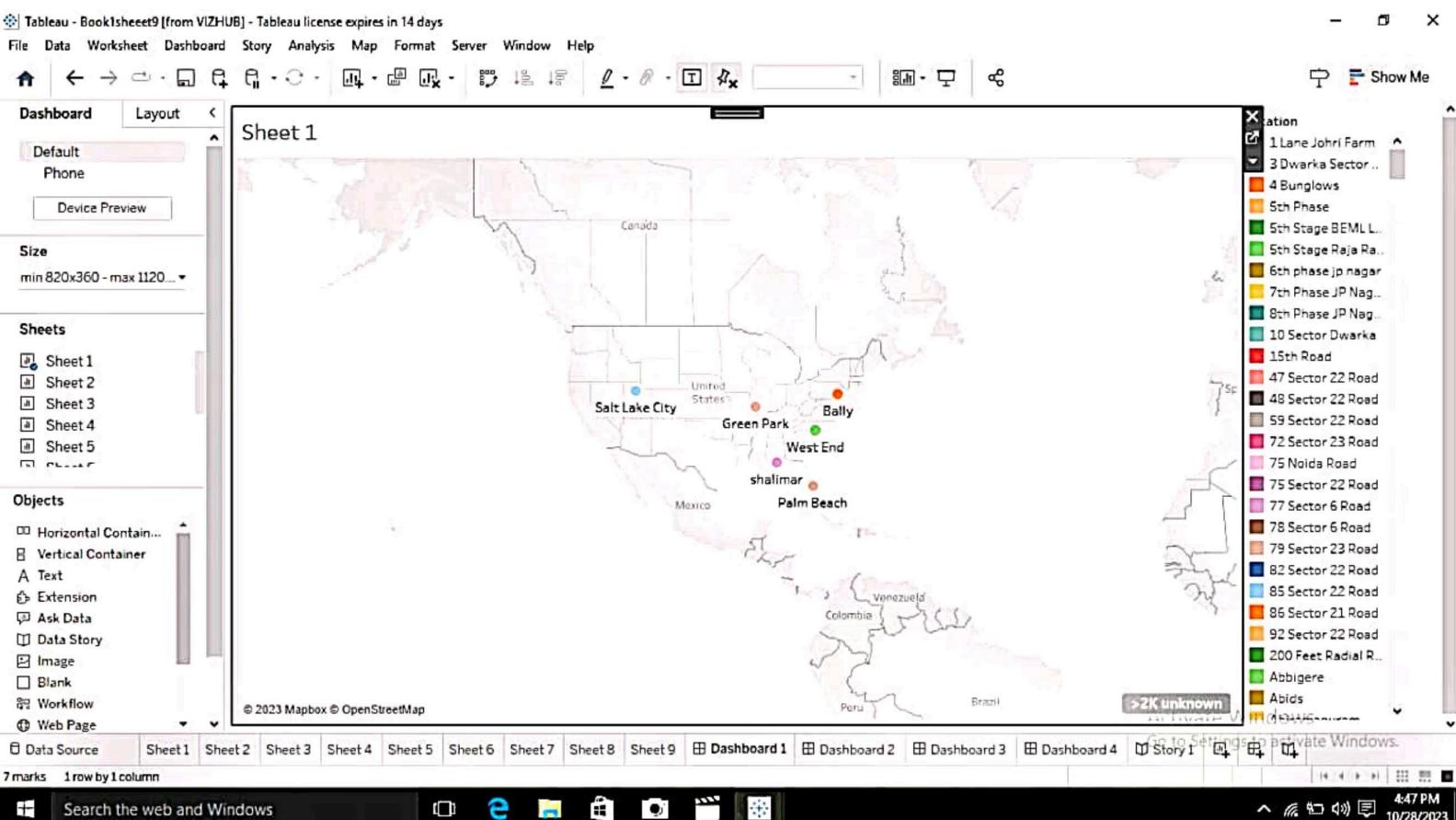


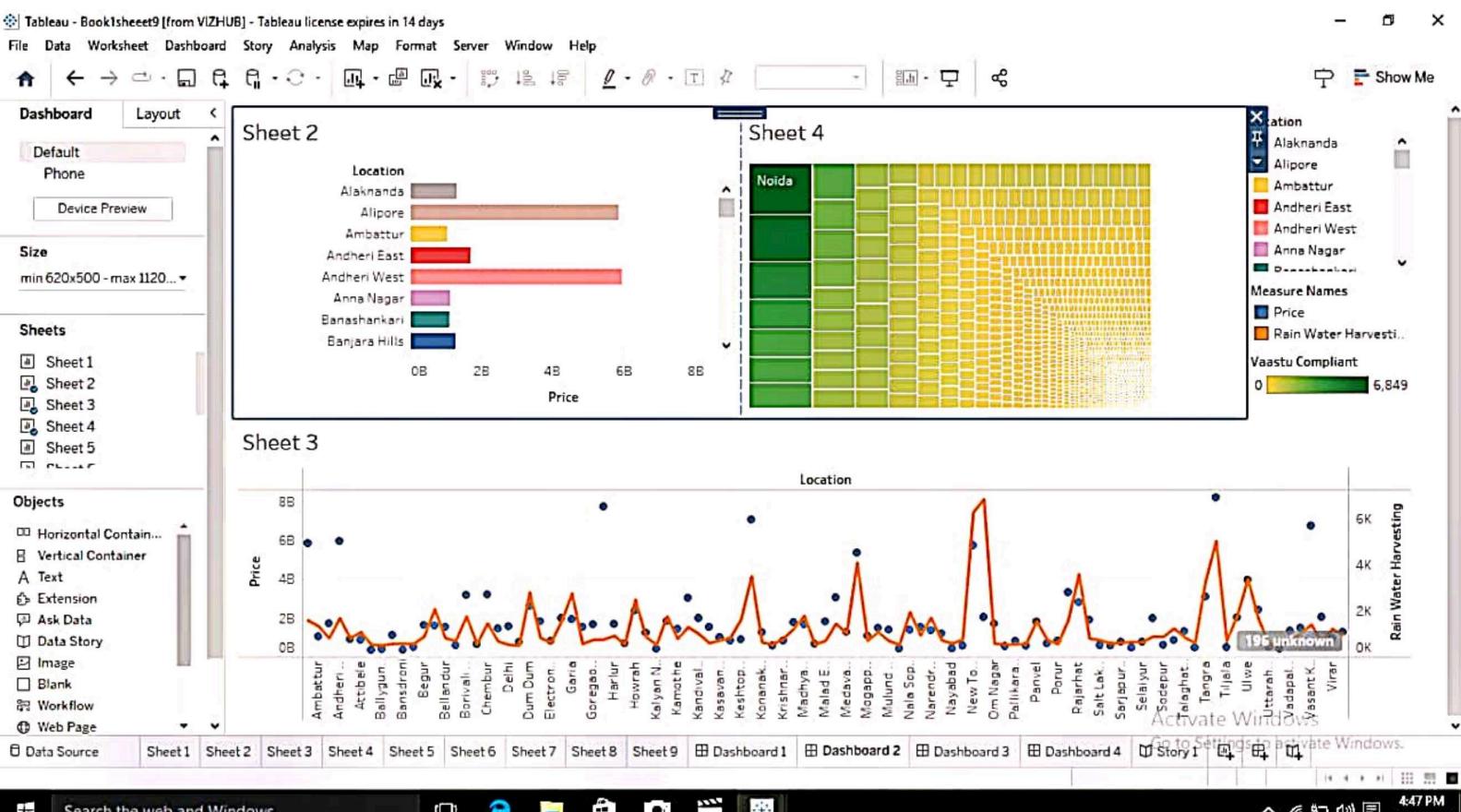


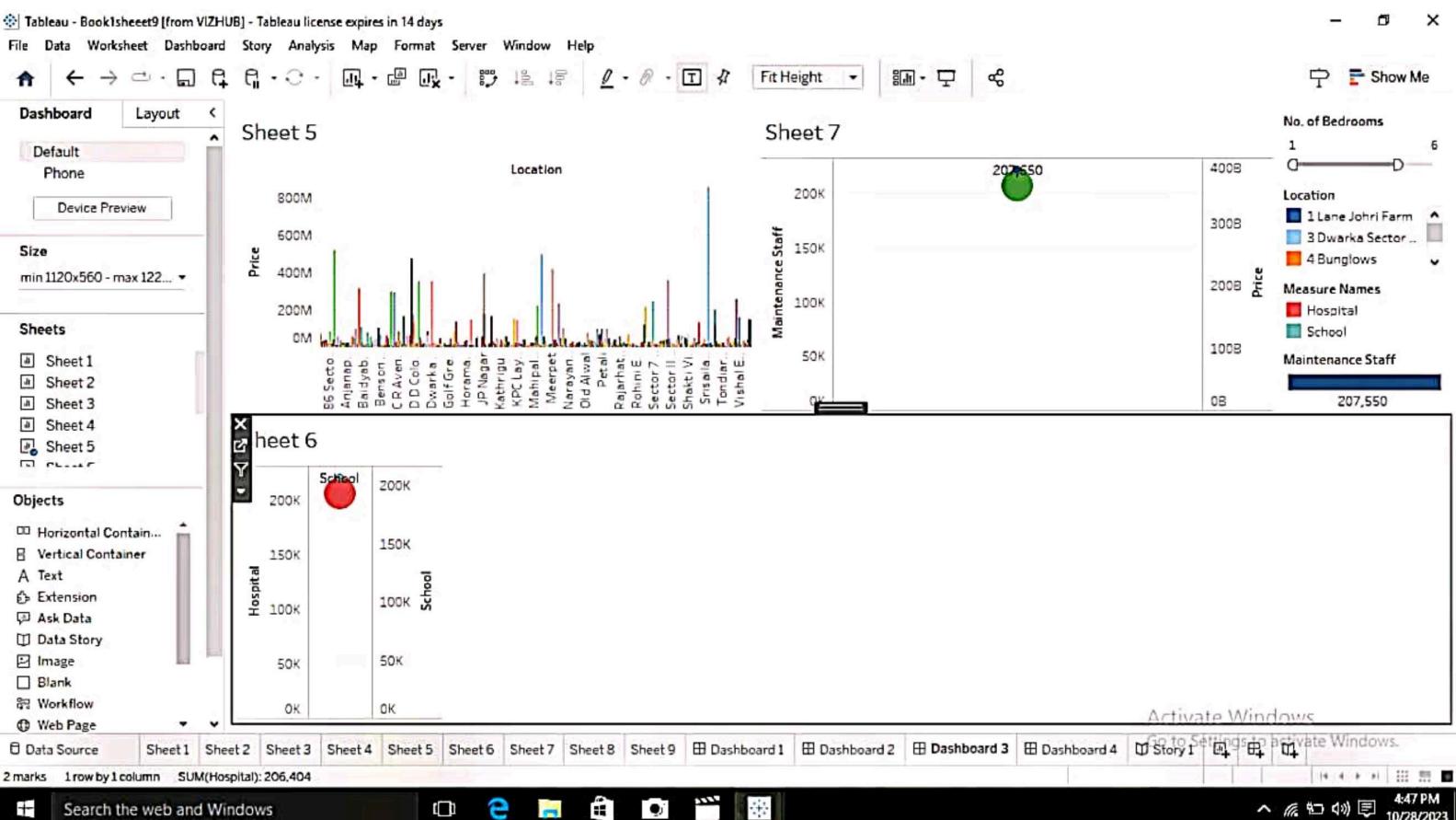


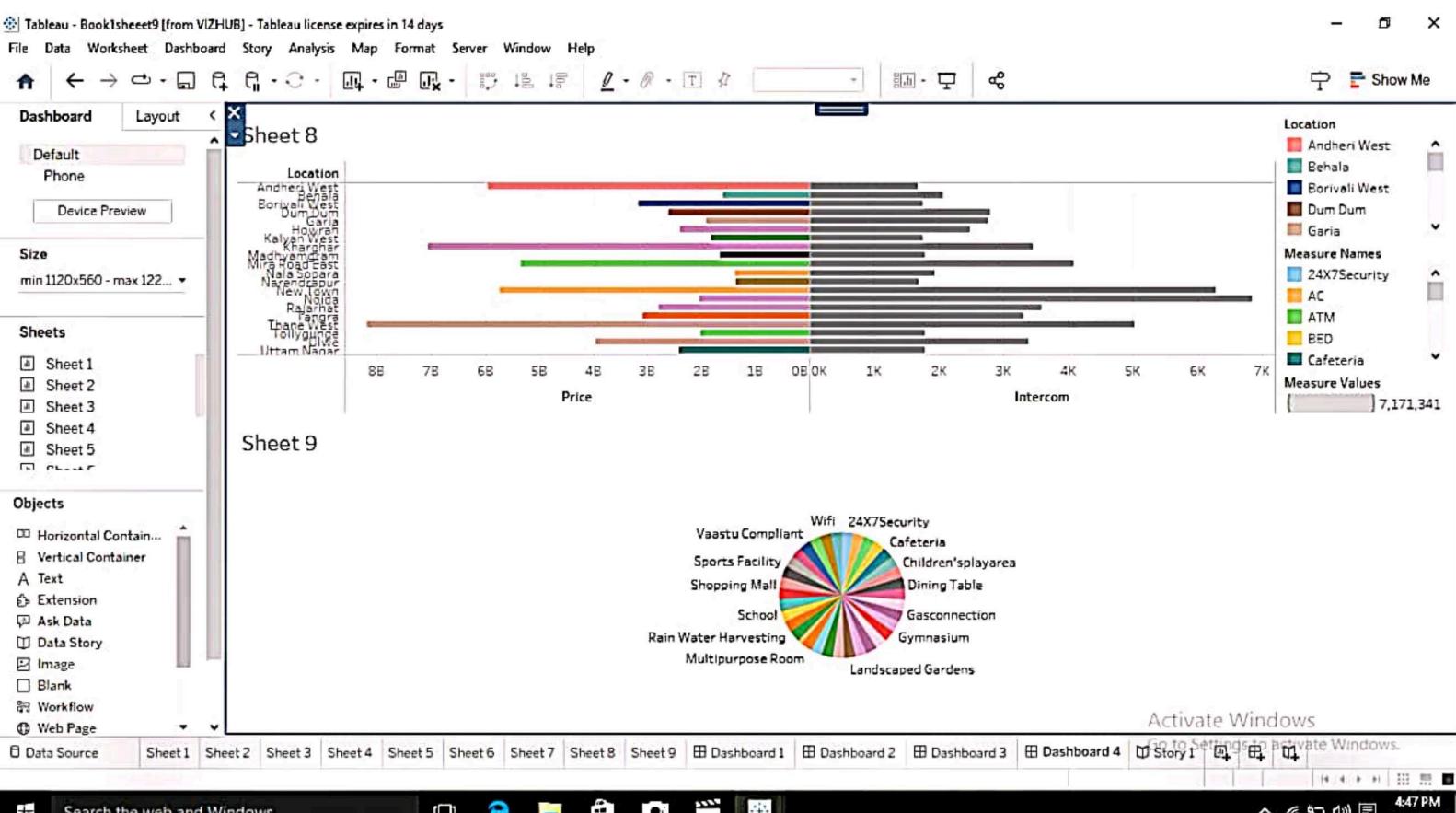






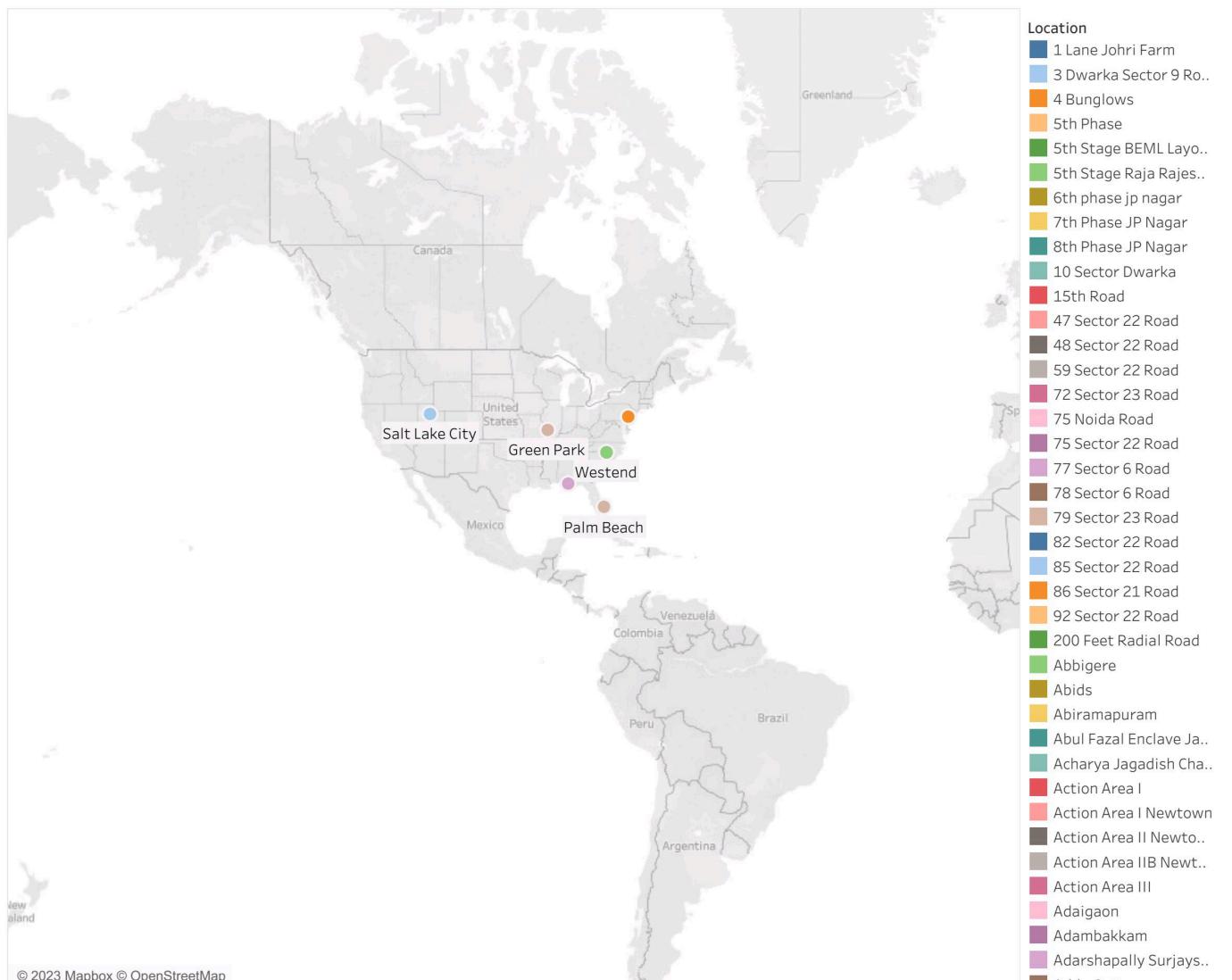




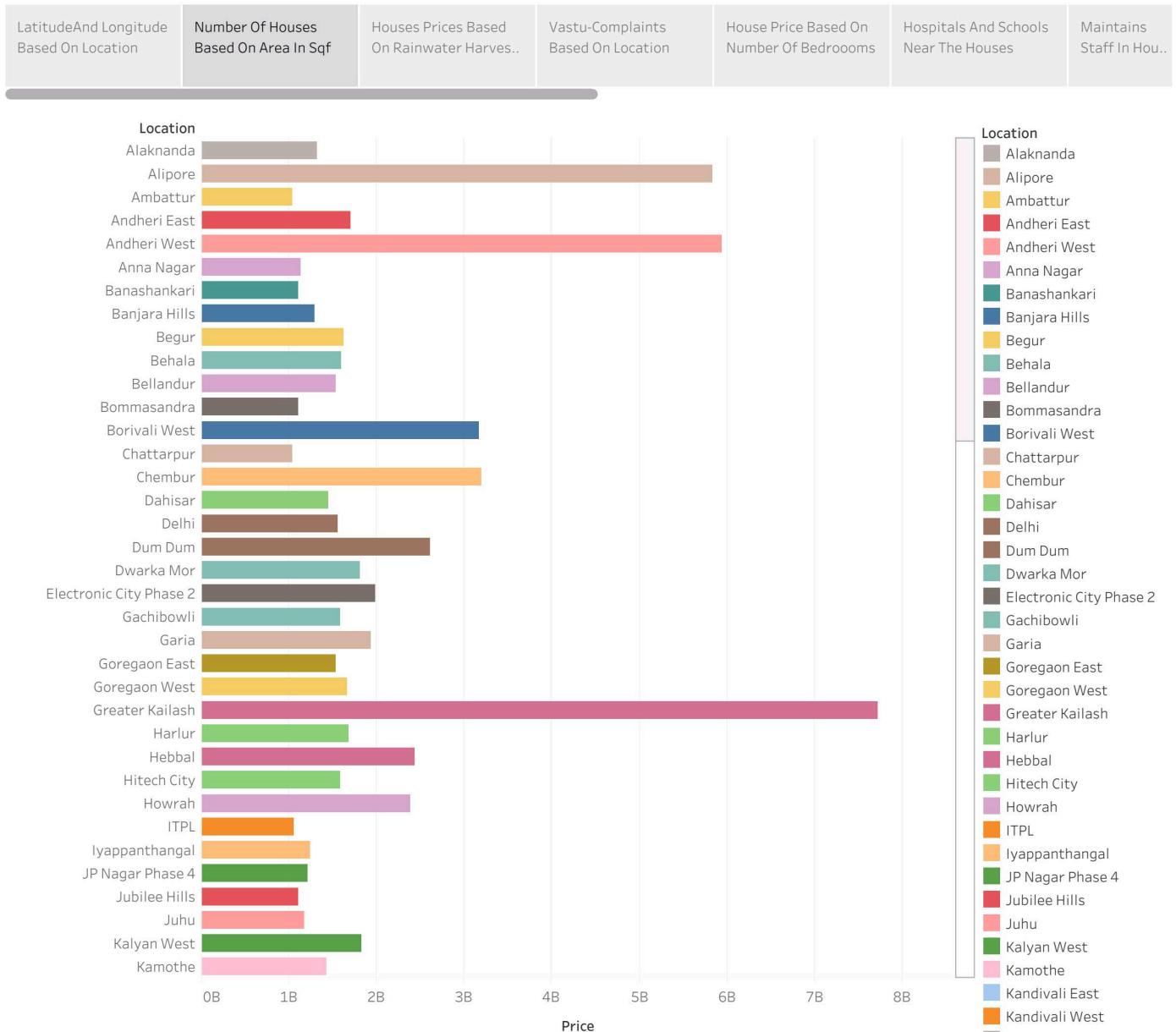


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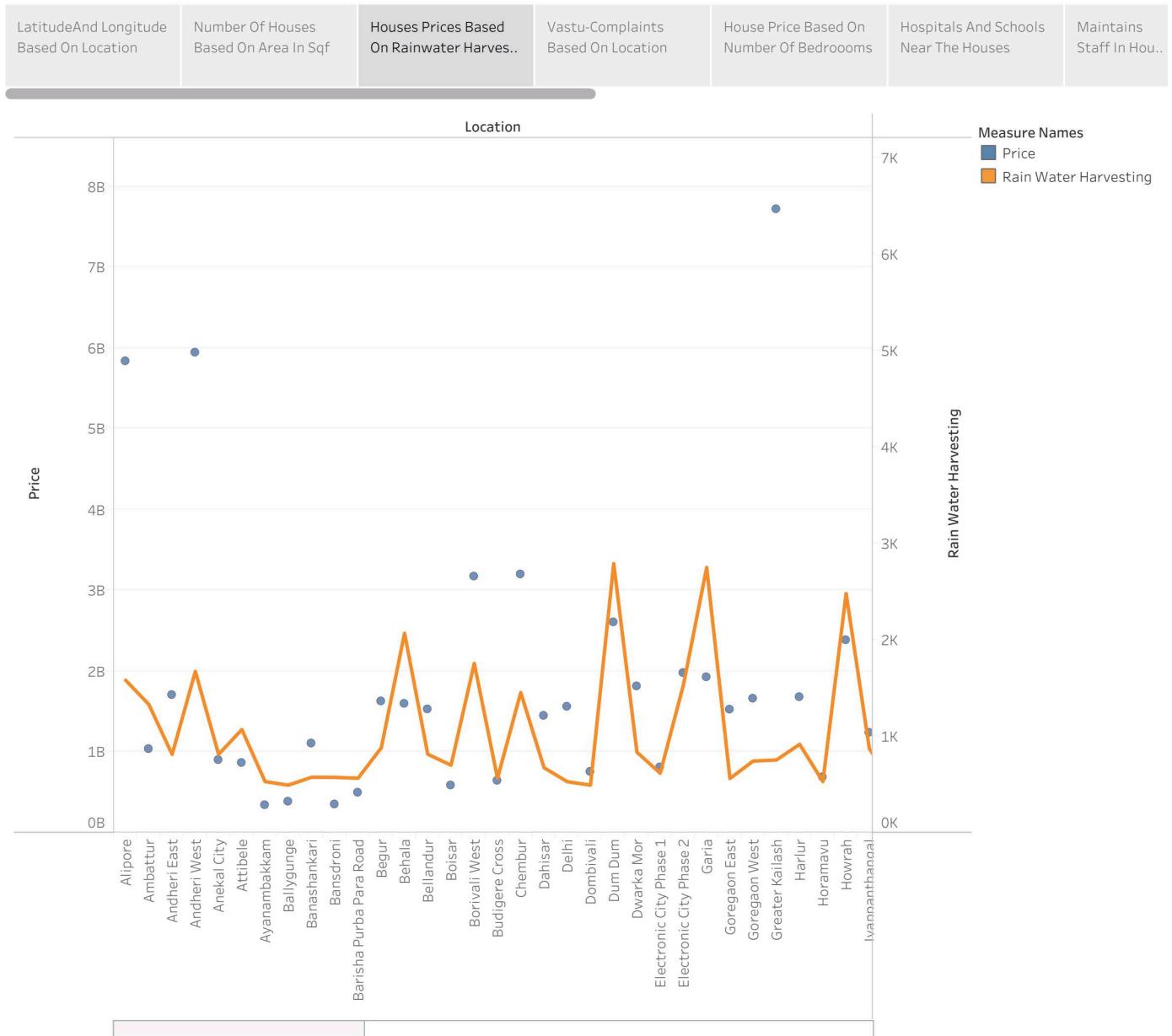
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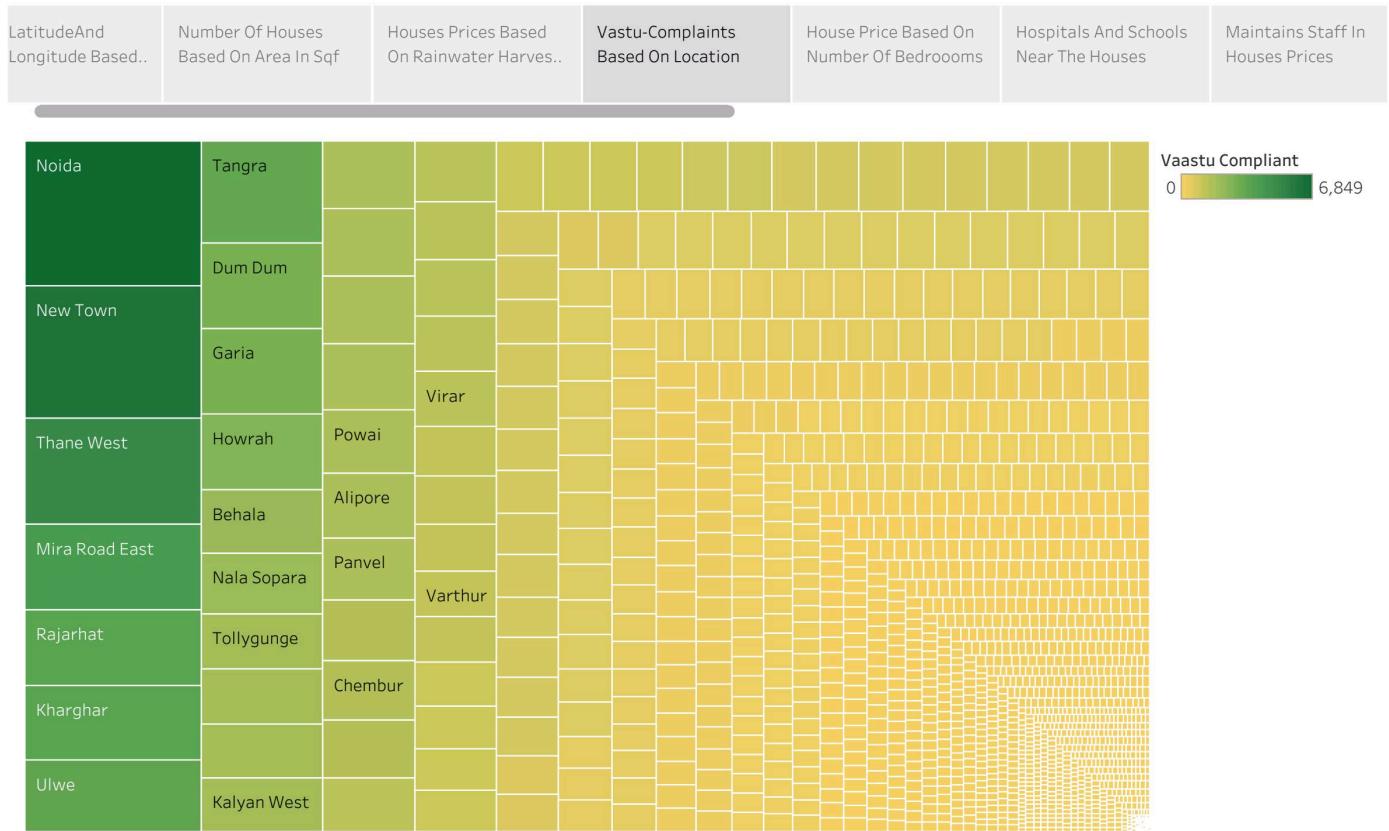
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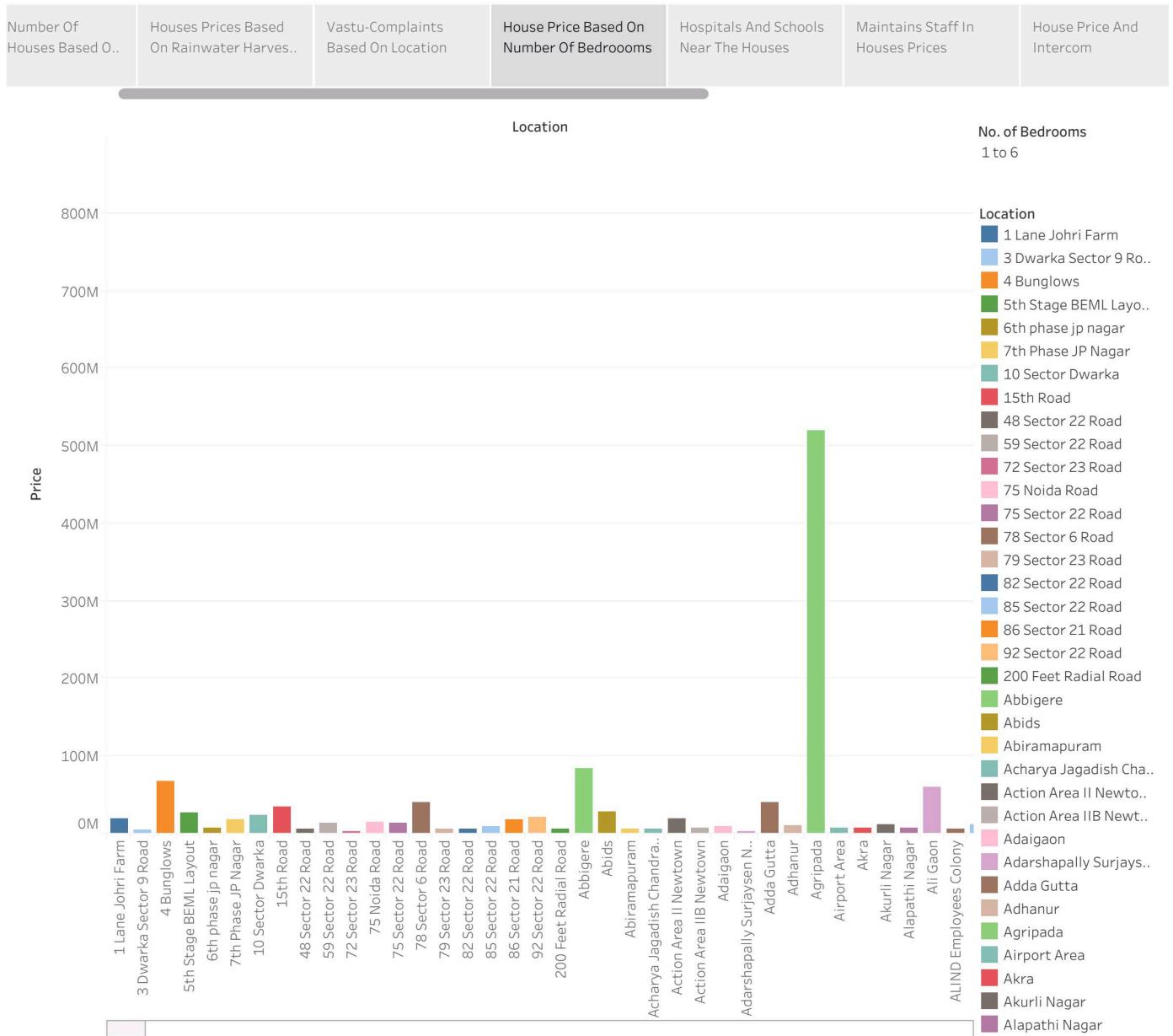
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Story 1

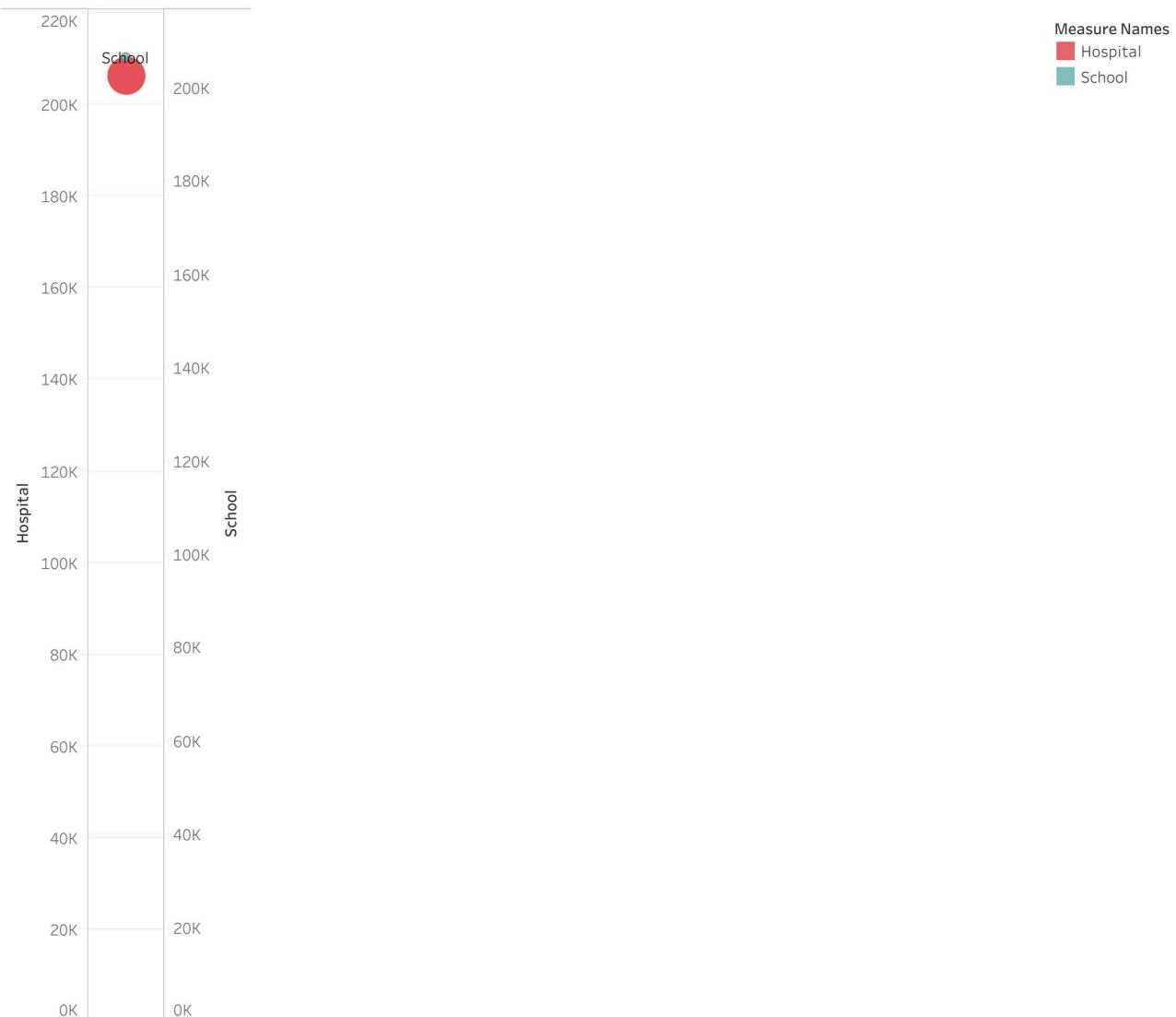


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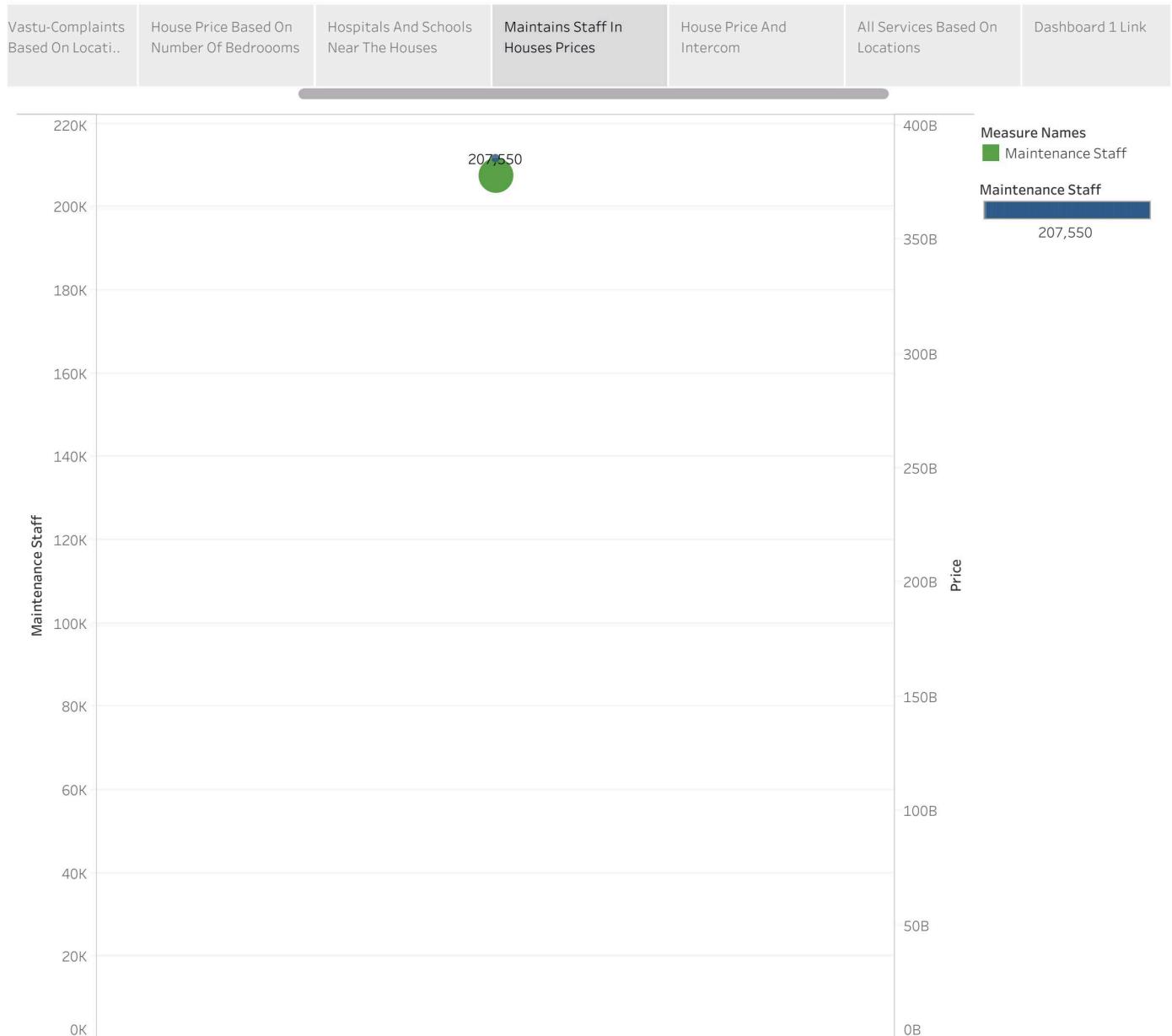


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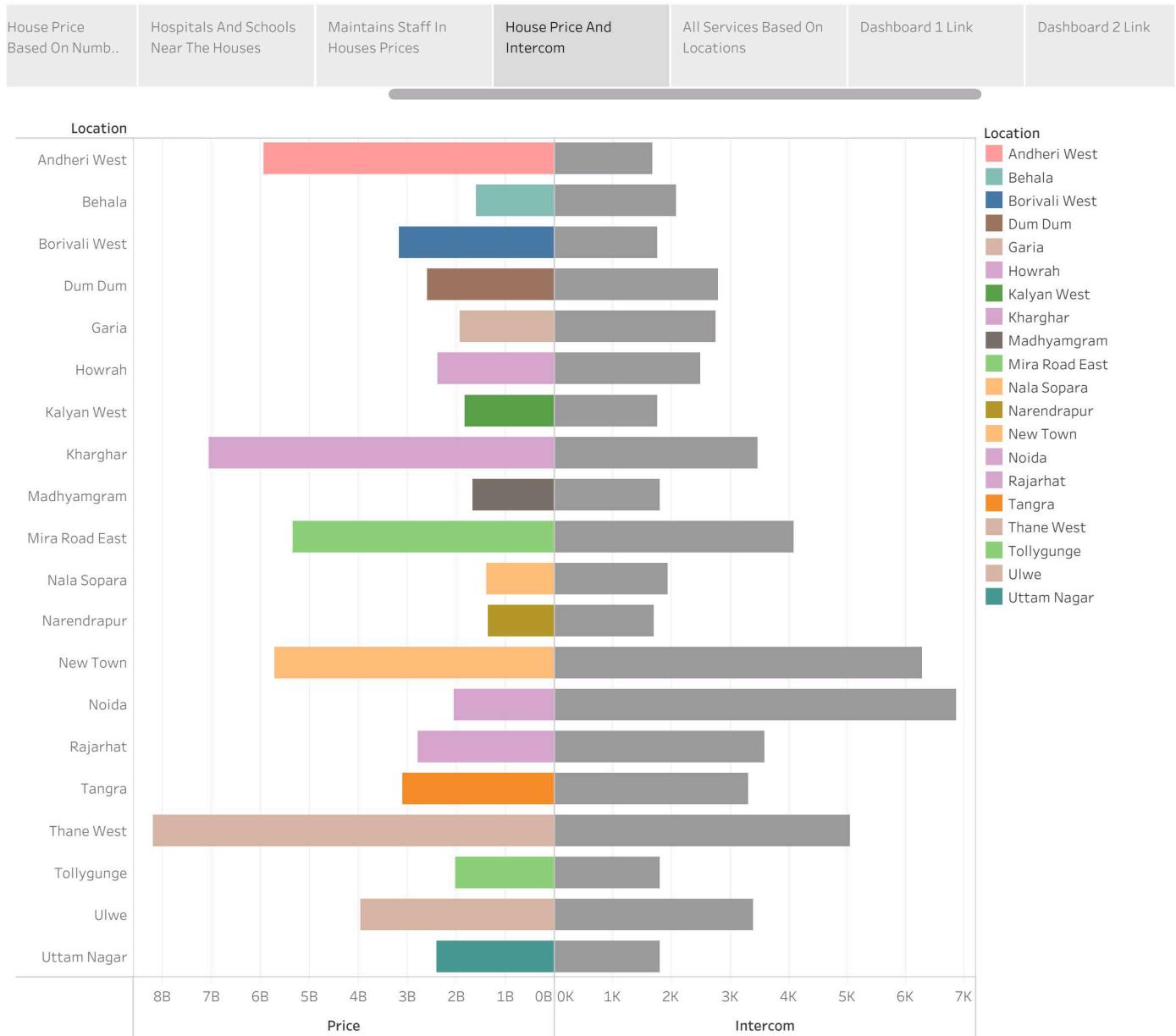
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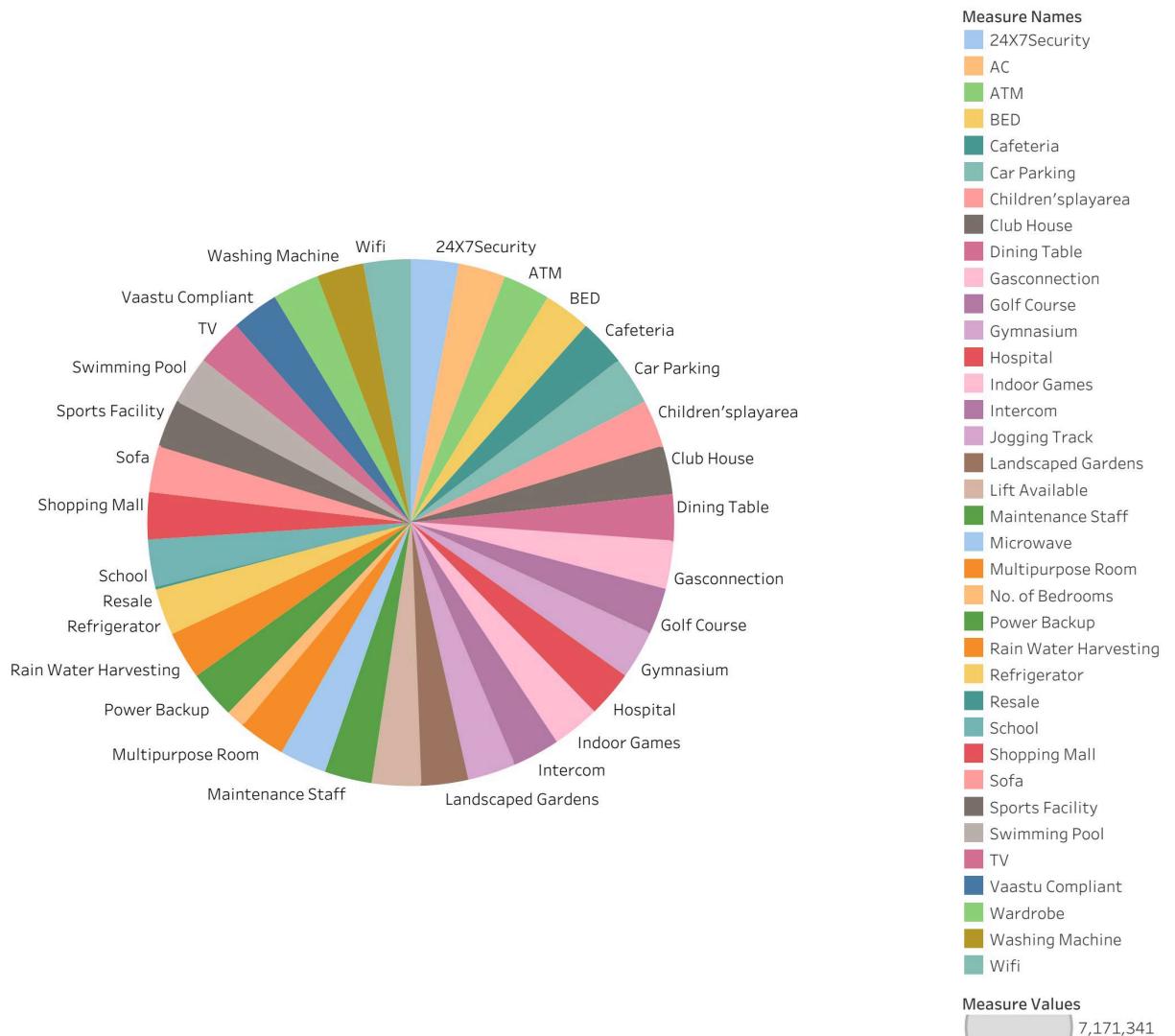


Story 1



Story 1

Hospitals And Schools Near Th..	Maintains Staff In Houses Prices	House Price And Intercom	All Services Based On Locations	Dashboard 1 Link	Dashboard 2 Link	Dashboard 3 Link
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Story 1

Maintains Staff In Houses Prices	House Price And Intercom	All Services Based On Locations	Dashboard 1 Link	Dashboard 2 Link	Dashboard 3 Link	Dashboard 4 Link
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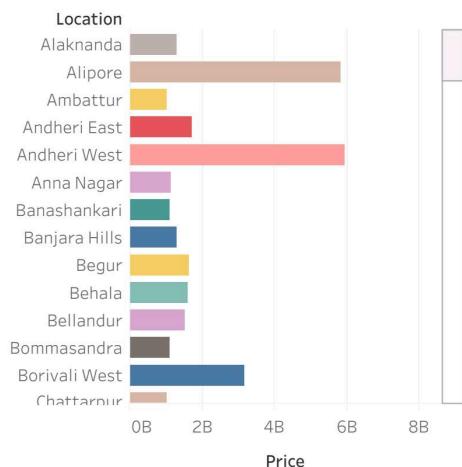
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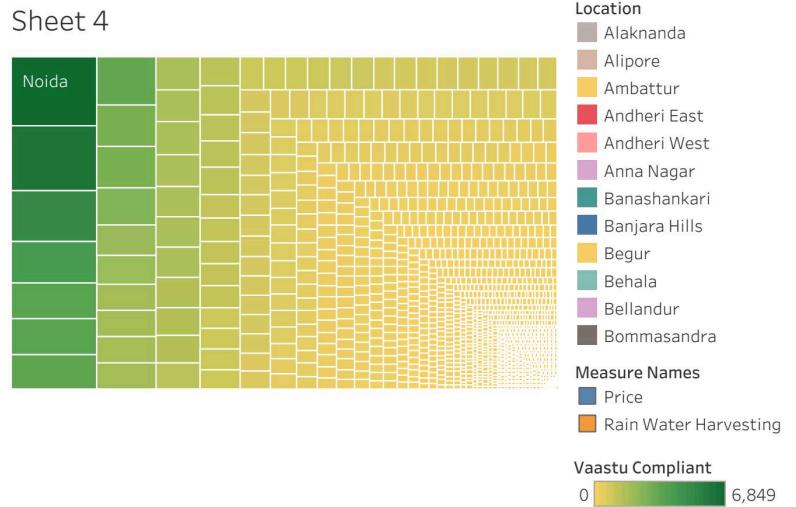
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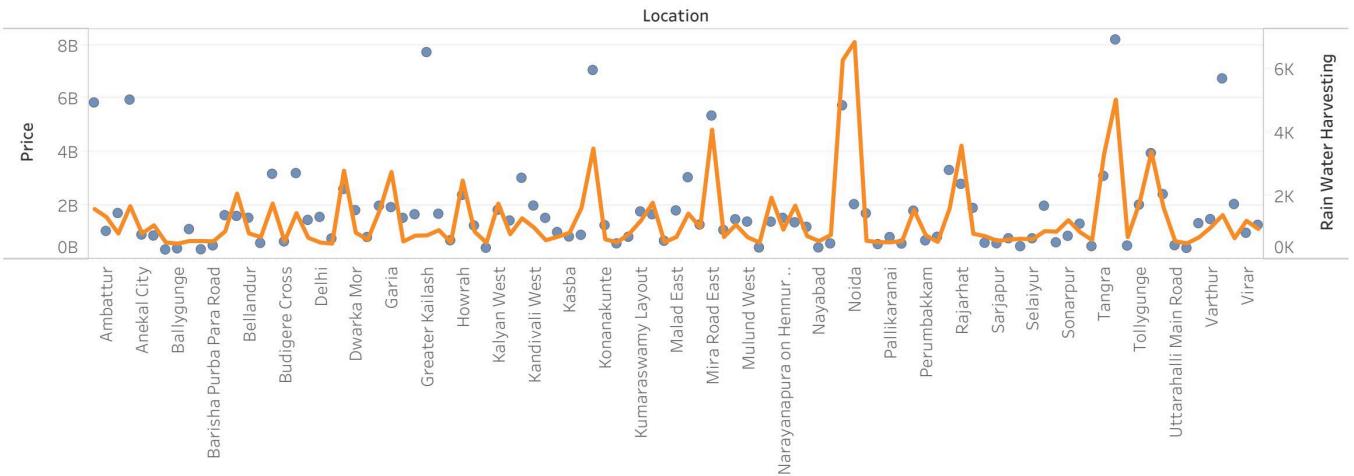
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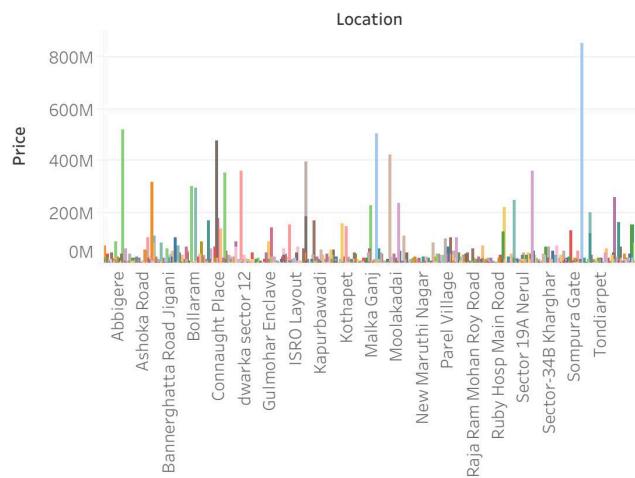
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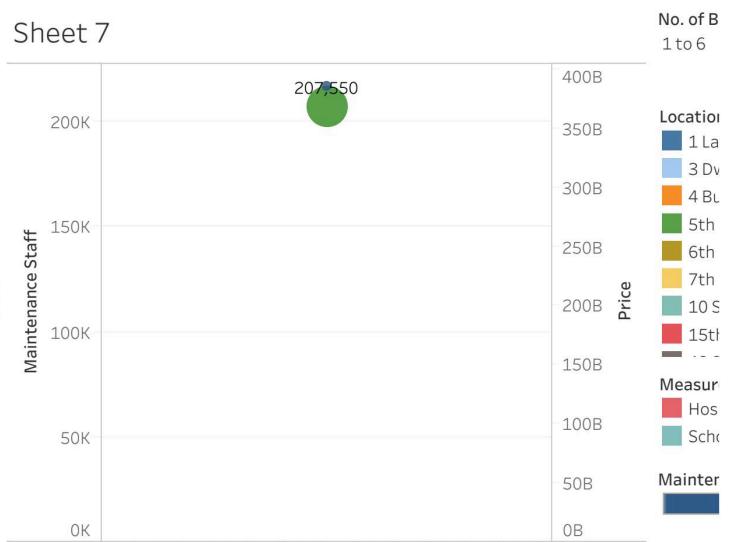
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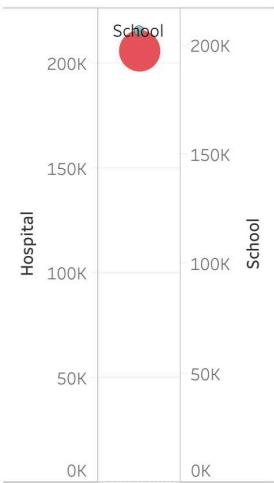
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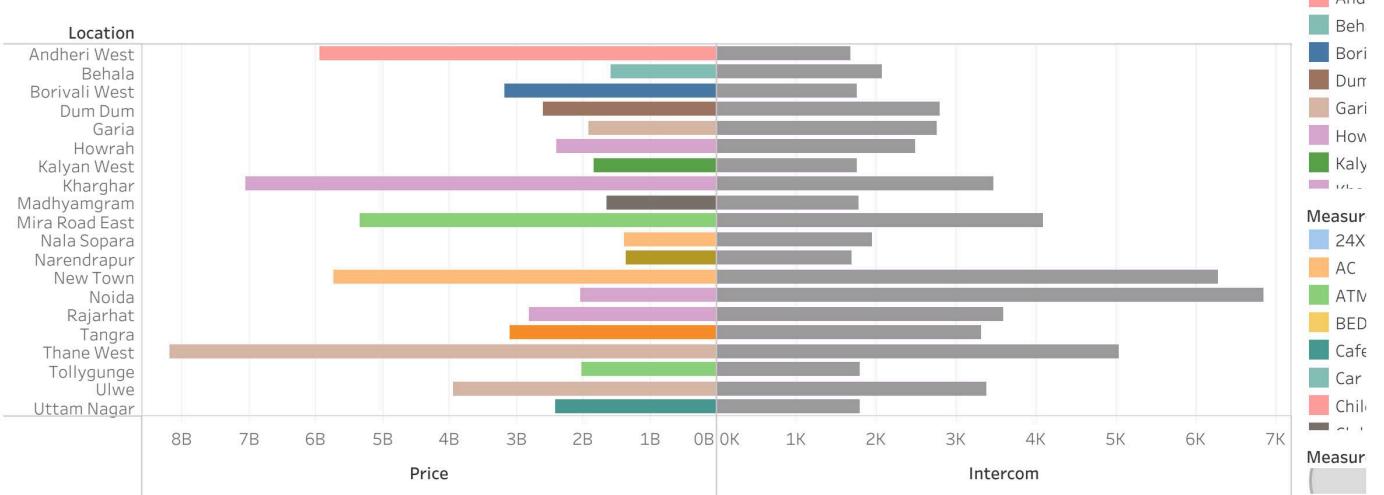
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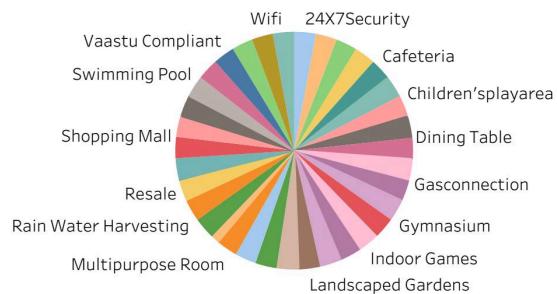
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Sheet 8



Sheet 9



5. Conclusions

This paper analyzes whether the Law of One Price (LOOP) holds in the housing market of fifteen metropolitan areas in India, namely Delhi, Mumbai, Bengaluru, Kolkata, Chennai, Jaipur, Lucknow, Hyderabad, Pune, Surat, Ahmedabad, Patna, Faridabad, Kochi and Bhopal. We test the existence of LOOP using the Im, Pesaran and Shin (2003) panel unit root test based on quarterly data on residential property prices covering the period of 2007Q1 to 2011Q4 of the Indian housing market. Based on the criterion of price convergence, house prices in the 15 metropolitan cities do not converge to the LOOP. This implies that the housing markets in the different areas operate as segmented independent local markets. Therefore, house prices in one location in India cannot impose a competitive constraint on house prices in other location, and as such a home owner can freely set the price of his house.