

## Project: 1

**Project** - In United States, there are many stores in which a survey was conducted based on students i.e.

how much they are spending on different kind of purchases like Video games, Indoor games, Toys,

Books, Gadgets etc. In the data set (Student Survey), Store setting is the column that explains the Type

of location in which the store is present. By using data set (Student Survey), try to extract the

meaningful Insights.

**Industry Type** – Retail Store

**Data set** - Student survey

**Problem Statement-** Create a Power BI Report:

The screenshot shows the Power BI Desktop interface. The Navigator pane on the left displays the loaded data source 'Student Survey.xlsx' with two tables: 'Student Survey' and 'User Mappings'. The 'User Mappings' table is expanded, showing the following data:

Column1	Column2
Survey Location	UserID
Urban	Nani
Suburb	Nani
Rural	Mani
Suburb	Nitin
Rural	Ashok

The right pane shows the Visualizations area with various chart types available for selection. The bottom status bar indicates 'Page 1 of 1' and the system clock shows '11:00 PM 12/14/2024'.

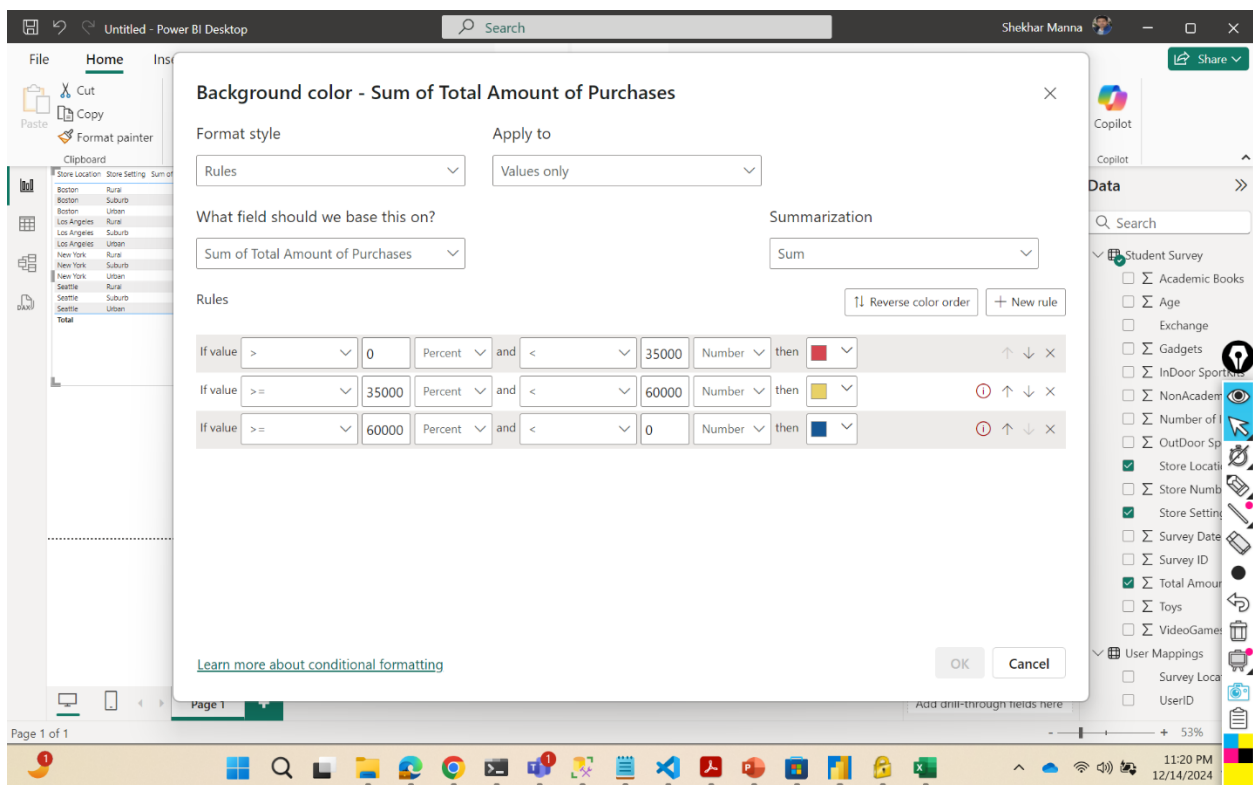
## 1. Tabular Visualization - Format the total amount of purchase (TAP) based on 'Store location' and 'Store

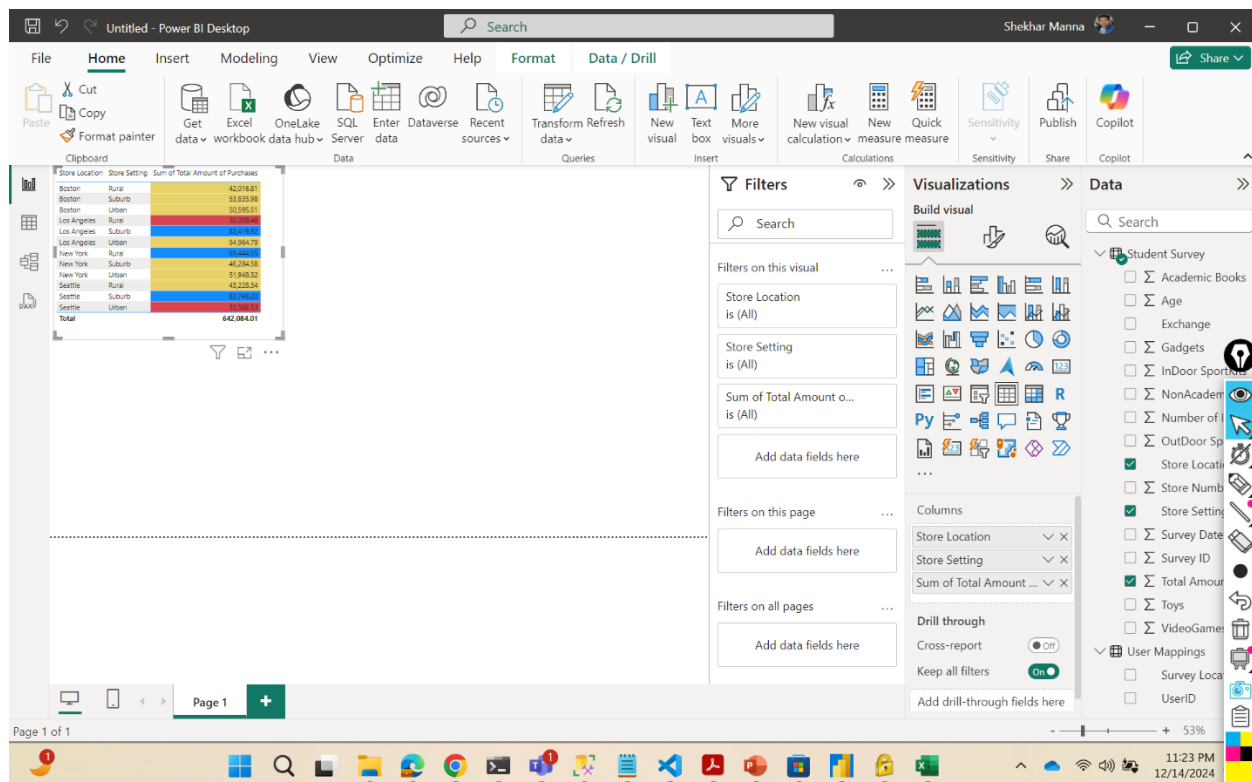
setting': -

❓ If  $0 < \text{TAP} < 35000$ , then records should be in red color

❓ If  $35000 \leq \text{TAP} < 60000$ , then records should be in yellow color

❓ If  $\text{TAP} \geq 60000$ , then records should be in Blue color





**2 Matrix Visualization** – Create Matrix Visualization to show the amount spent on Outdoor sports across

different ages and 'Store setting'. Do the color formatting for the amount spent in total outdoor sports.

Untitled - Power BI Desktop

Search

Shekhar Manna

Share

FileHomeInsertModelingViewOptimizeHelpFormatData / Drill

PasteCutCopyFormat painter

Get dataExcelOneLakeSQL ServerEnter dataDataverseRecent sources

Transform dataRefresh

New visualText boxMore visuals

New visual calculationNew visual measureQuick measure

SensitivityPublishCopilot

Clipboard

Store LocationStore SettingSum of Total Amount of Purchases

Boston	Rural	42,018.81
Boston	Suburb	52,819.08
Boston	Urban	50,995.51
Los Angeles	Rural	35,029.44
Los Angeles	Suburb	46,659.86
Los Angeles	Urban	58,066.79
New York	Rural	50,444.15
New York	Suburb	42,364.05
New York	Urban	51,946.32
Seattle	Rural	43,228.34
Seattle	Suburb	52,746.69
Seattle	Urban	55,066.59
Total		642,084.01

Store Setting7891011

Rural	3,230.75	7,485.23	2,181.59	666.29	1,834.96
Suburb	2,343.62	10,178.96	1,692.67	18,198.04	2,836.55
Total	7,806.70	10,064.06	5,505.79	7,010.82	6,374.23

Filters

Search

Filters on this visual

Age is (All)

Store Setting is (All)

Sum of OutDoor Sport... is (All)

Add data fields here

Filters on this page

Add data fields here

Filters on all pages

Add data fields here

Visualizations

Build visual

Rows

Store Setting

Columns

Age

Values

Sum of OutDoor Spor...

Drill through

Data

Search

Student Survey

Academic Books

Age

Exchange

Gadgets

InDoor Sports

NonAcademic Books

Number of

OutDoor Sports

Store Location

Store Number

Store Setting

Survey Date

Survey ID

Total Amount

Toys

VideoGames

User Mappings

Survey Location

User ID

Page 1

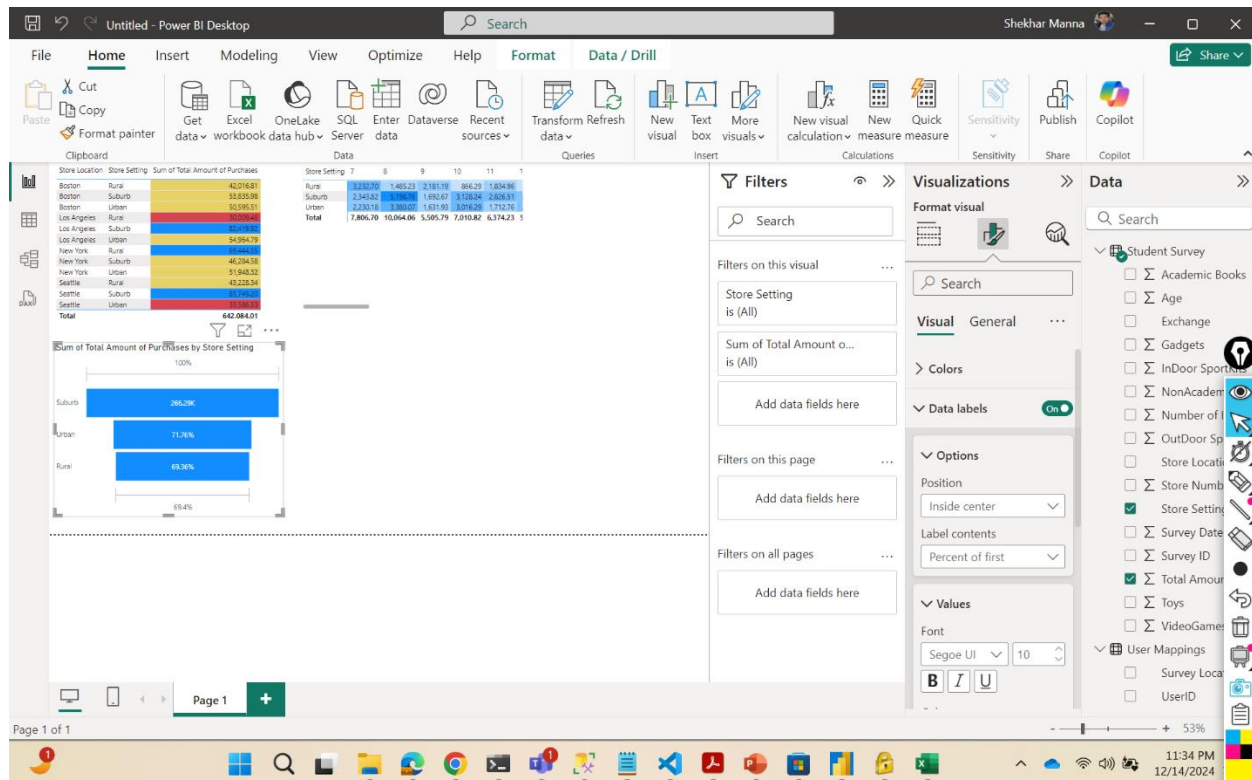
53%

1

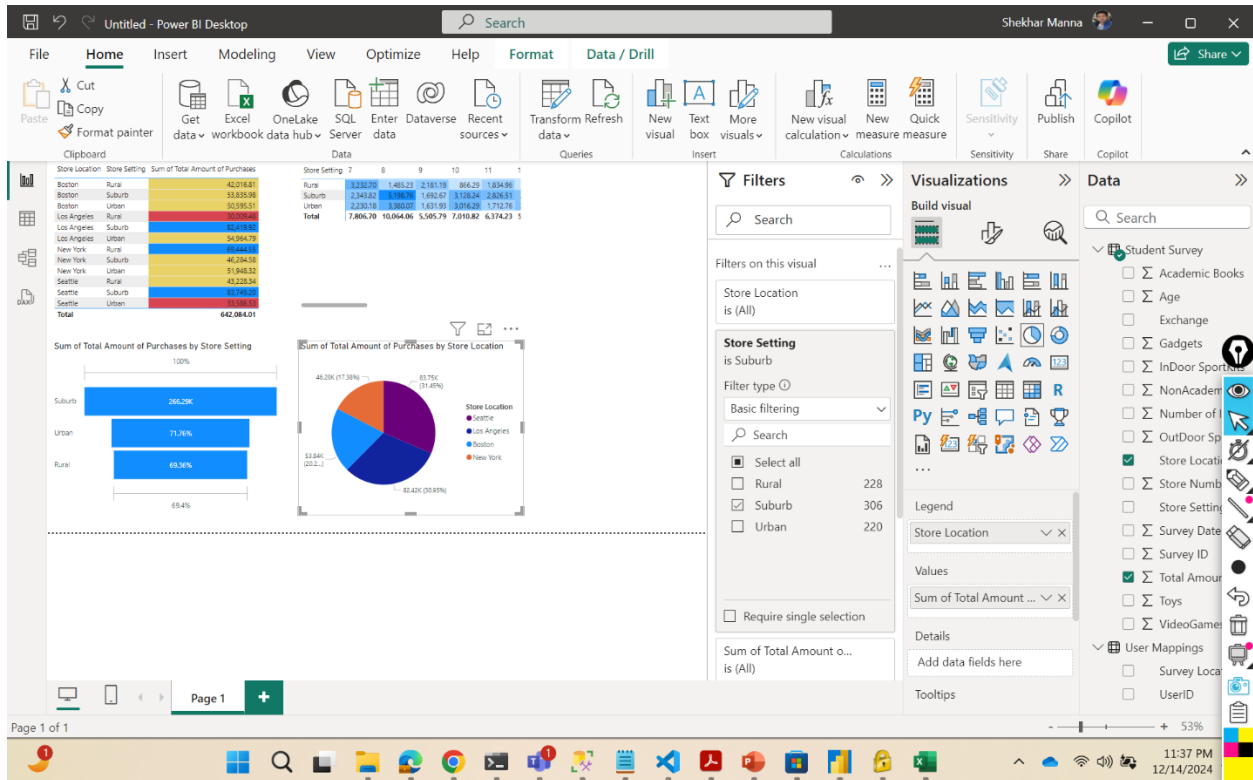
Windows Taskbar

11:31 PM 12/14/2024

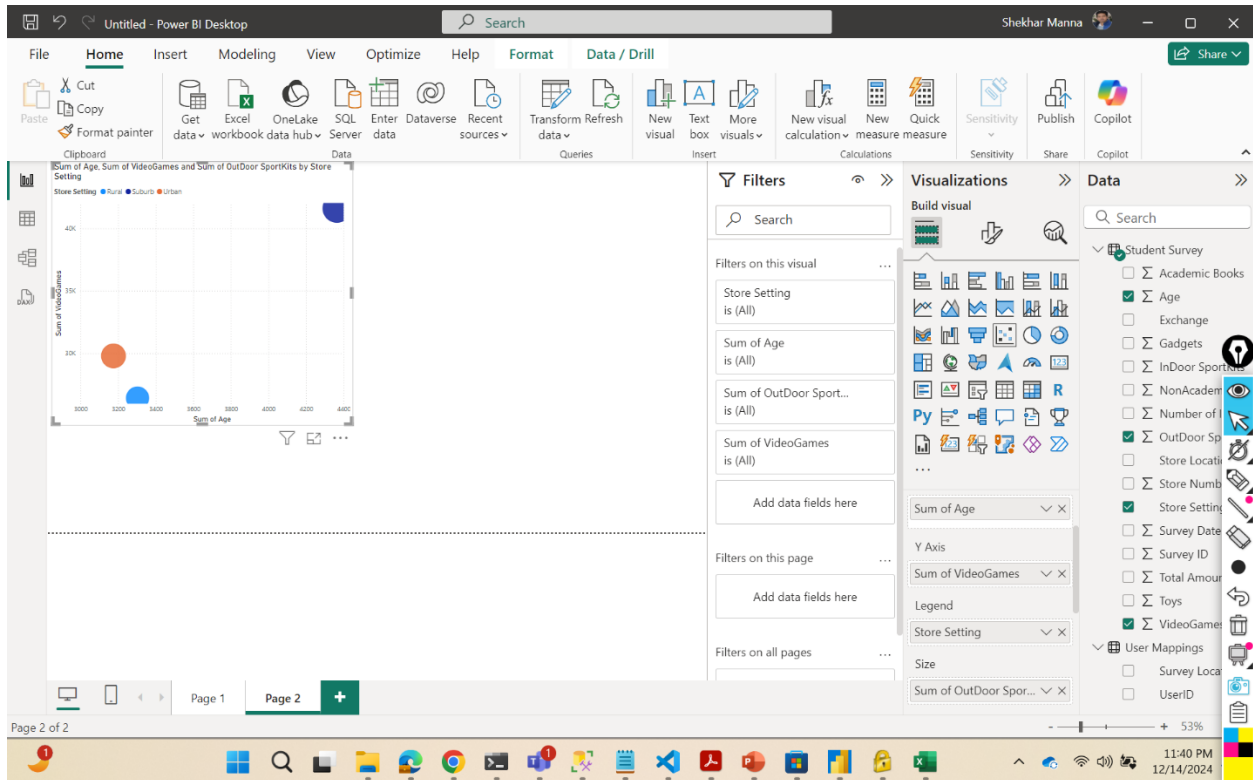
3. **Funnel chart** – Create a Funnel chart to show Total amount of purchase by ‘Store setting’. Show the data labels as Percentage of First.



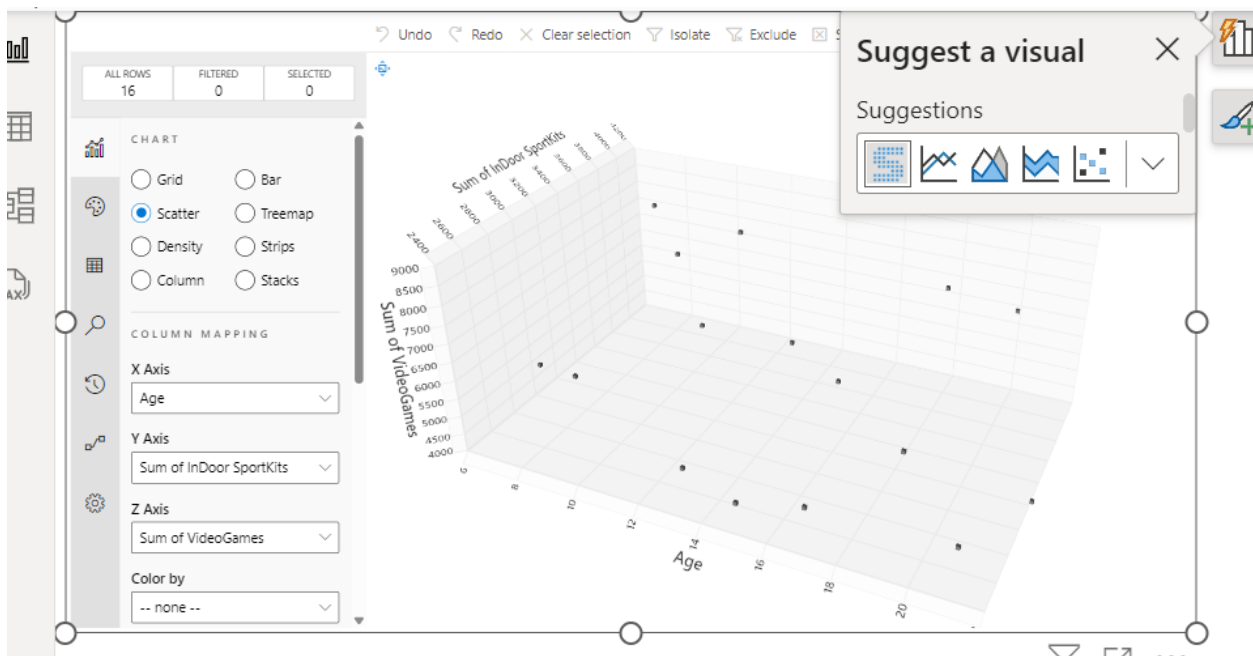
4. **Pie chart** – Show the total amount of purchase by different ‘Store location’ for Suburban ‘Store setting’ only. **Hint:** Use Filter context

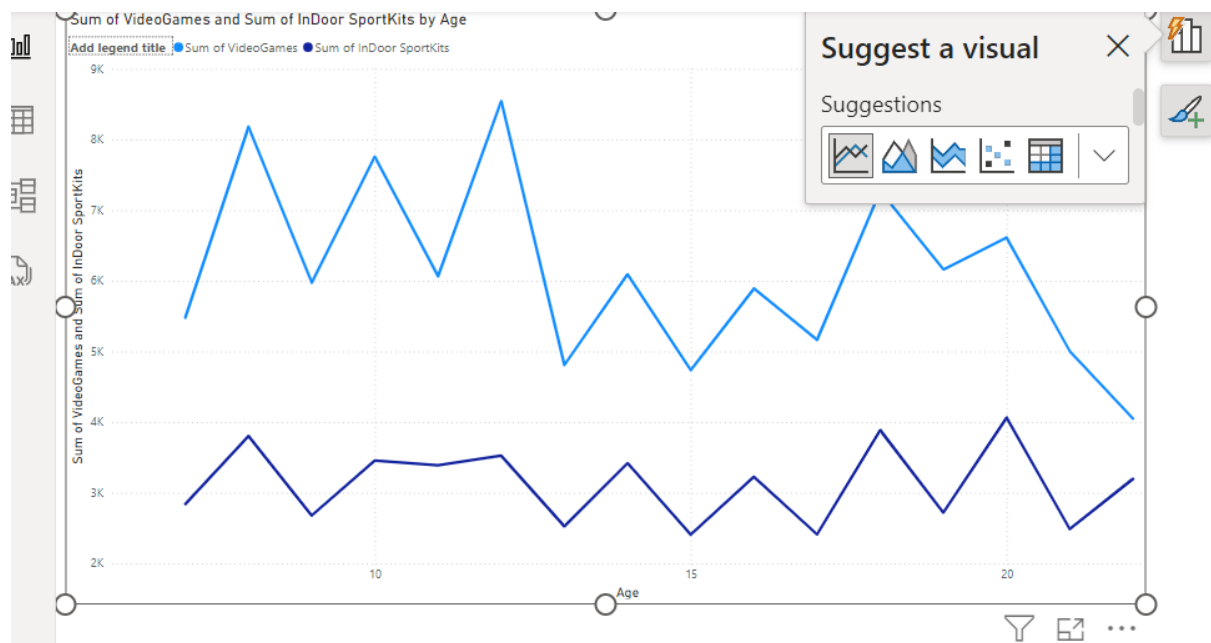
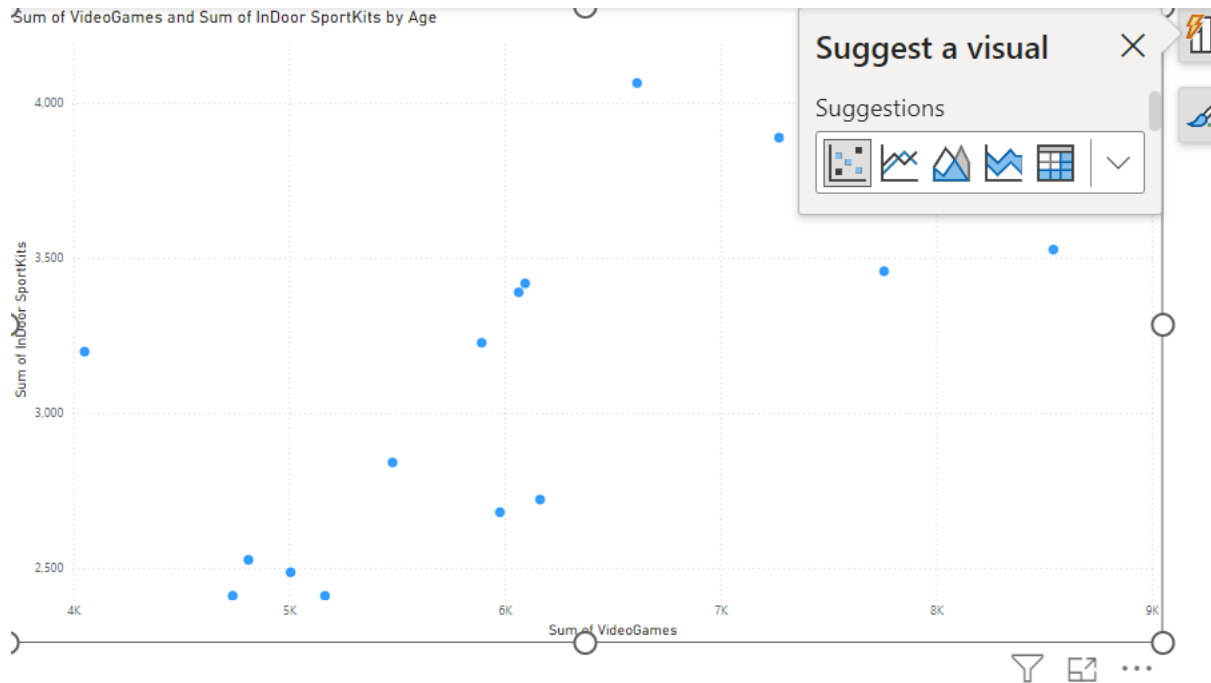


5. a) **Scatter plot** - Video games purchase and Outdoor sports spent across the different ages.

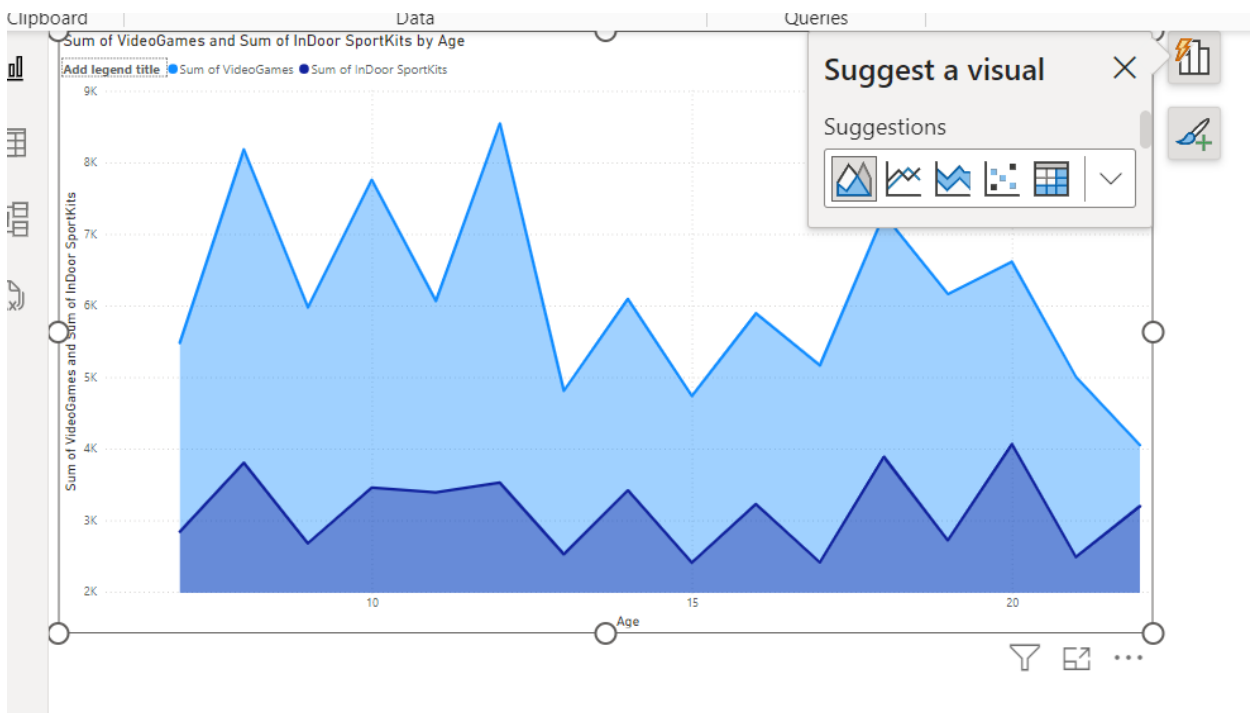
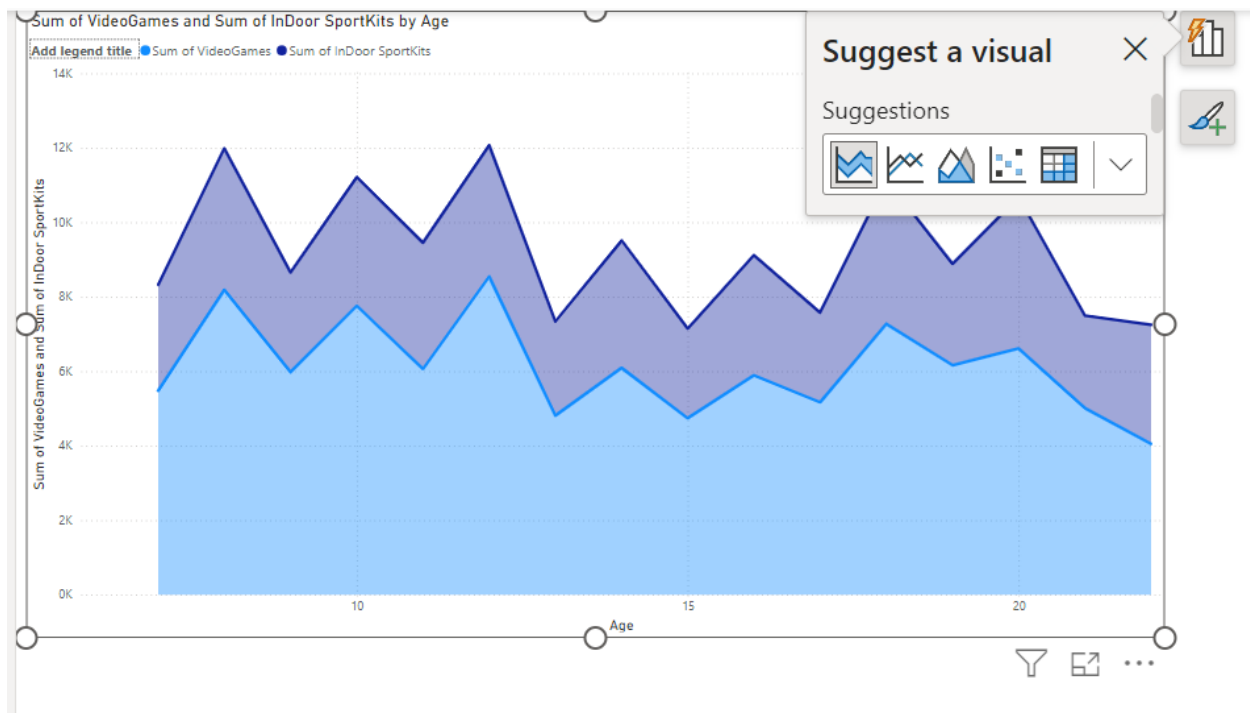


b) **Sand dance plot** - Indoor sports and Video games spent across the different age groups.









Age	Sum of VideoGames	Sum of InDoor SportKits
12	8,542.92	3,526.32
8	8,182.61	3,804.32
10	7,757.95	3,456.63
18	7,271.11	3,887.29
20	6,612.79	4,063.47
19	6,163.15	2,720.55
14	6,093.95	3,417.49
11	6,063.94	3,388.70
9	5,976.99	2,679.77
16	5,892.42	3,226.20
7	5,479.21	2,840.26
17	5,166.07	2,410.01
21	5,006.44	2,486.12
13	4,811.12	2,526.10
15	4,737.88	2,410.13
22	4,051.20	3,197.37
Total	97,809.75	50,040.73

6. Restrict data access for the given users in User mapping table. **For ex.** Mani deals with Rural area only

so she should be able to view the data which belongs to Rural only, not urban and suburban data.

**Manage security roles**

Create new security roles and use filters to define row-level data restrictions.

Successfully applied role changes.

**Roles**

- + New
- Rural

**Select tables**

- Student Survey
- User Mappings

**Filter data**

+ New Select all Delete Group Ungroup

Switch to DAX editor

Show data if All of these rules are true

Column	Condition	Value
Store Setting	Equals	Rural

+ New

Save Close

## 7. Publish the report on Power BI cloud service and Design the Master Dashboard consisting of Funnel

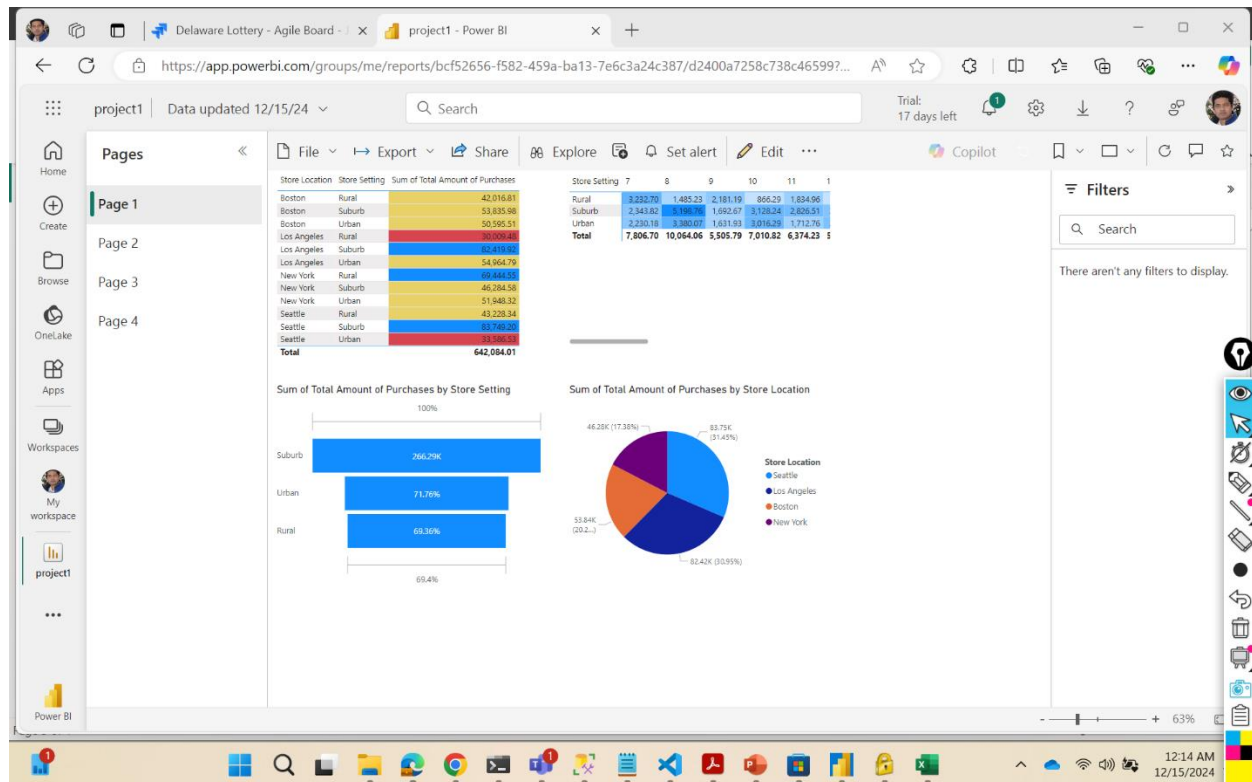



chart and scatter plots. Then create a schedule refresh for six times in every 4 hours for the Dashboard in a day.

Due to security of my organization this process is restricted but I am demonstrating how to do it .

- In the **Scheduled Refresh** section, turn on the toggle.
- Set refresh frequency to **Daily**.
- Add six refresh times, spaced every 4 hours (e.g., 12:00 AM, 4:00 AM, 8:00 AM, 12:00 PM, 4:00 PM, 8:00 PM).
- Click **Apply** to save changes.




### You don't have any data gateways.

We didn't find any suitable data gateways to connect to the data sources that this dataset uses. Either install an on-premises data gateway and add the data sources that this dataset uses to it, or install a data gateway in personal mode to connect this dataset to its data sources. [Learn more](#)

#### Cloud connections

No cloud connections


 You have no personal gateways installed [Learn more](#) [Install now](#)

Apply

Discard

▸ Data source credentials

▾ Parameters

 Parameters haven't been defined for this semantic model yet. If you want to set parameters, use the Query Editor.

## 8. Use Q&A feature of Power BI –

a) To show average age of students

Q&A setup

Getting started

Synonyms

Relationships

Teach Q&A

Review questions

Suggest questions

### Teach Q&A

Teach Q&A to understand questions and terms people might use.

Enter a question about your data using everyday language

What is the average age of students?

Clear

Define the terms Q&A didn't understand ⓘ

Student

Student refers to

Preview your result

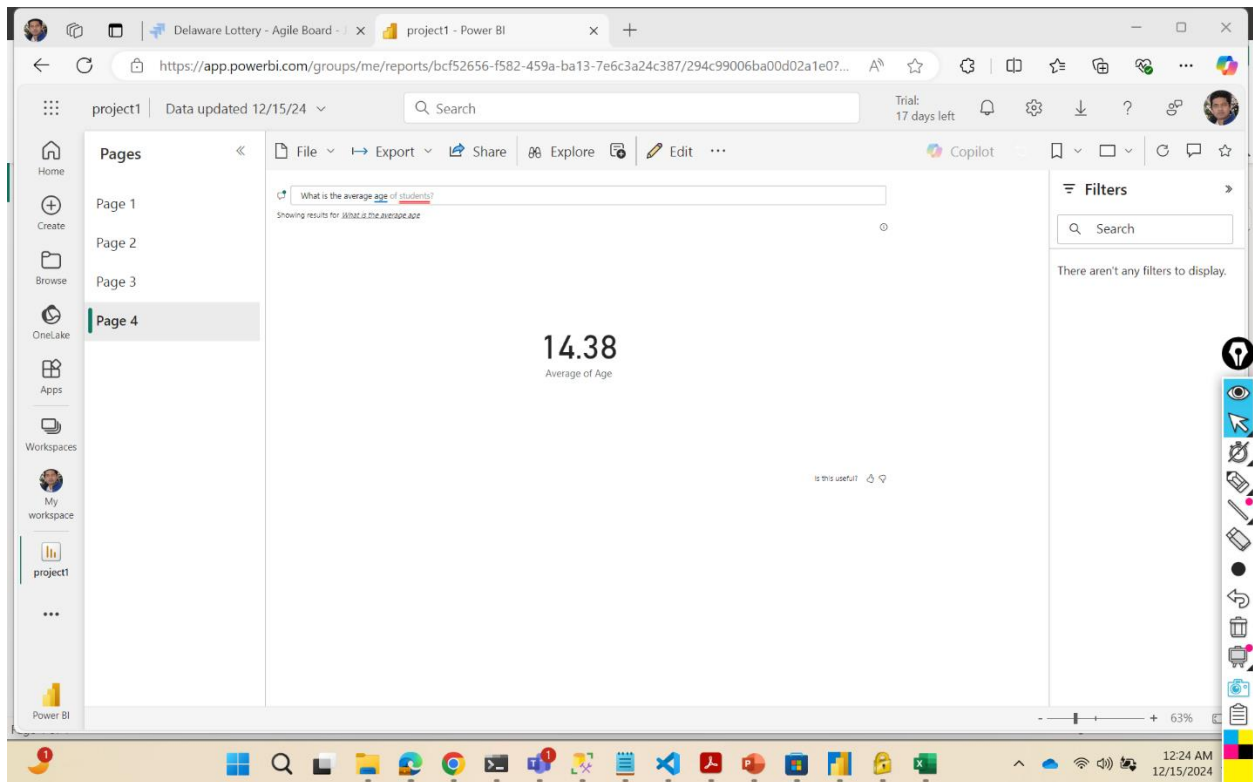
Show average age

14.38

Average of Age

Save

ⓘ This feature is in preview. [Learn more](#)



b) Donut chart for total amount of purchases by 'Store location'

