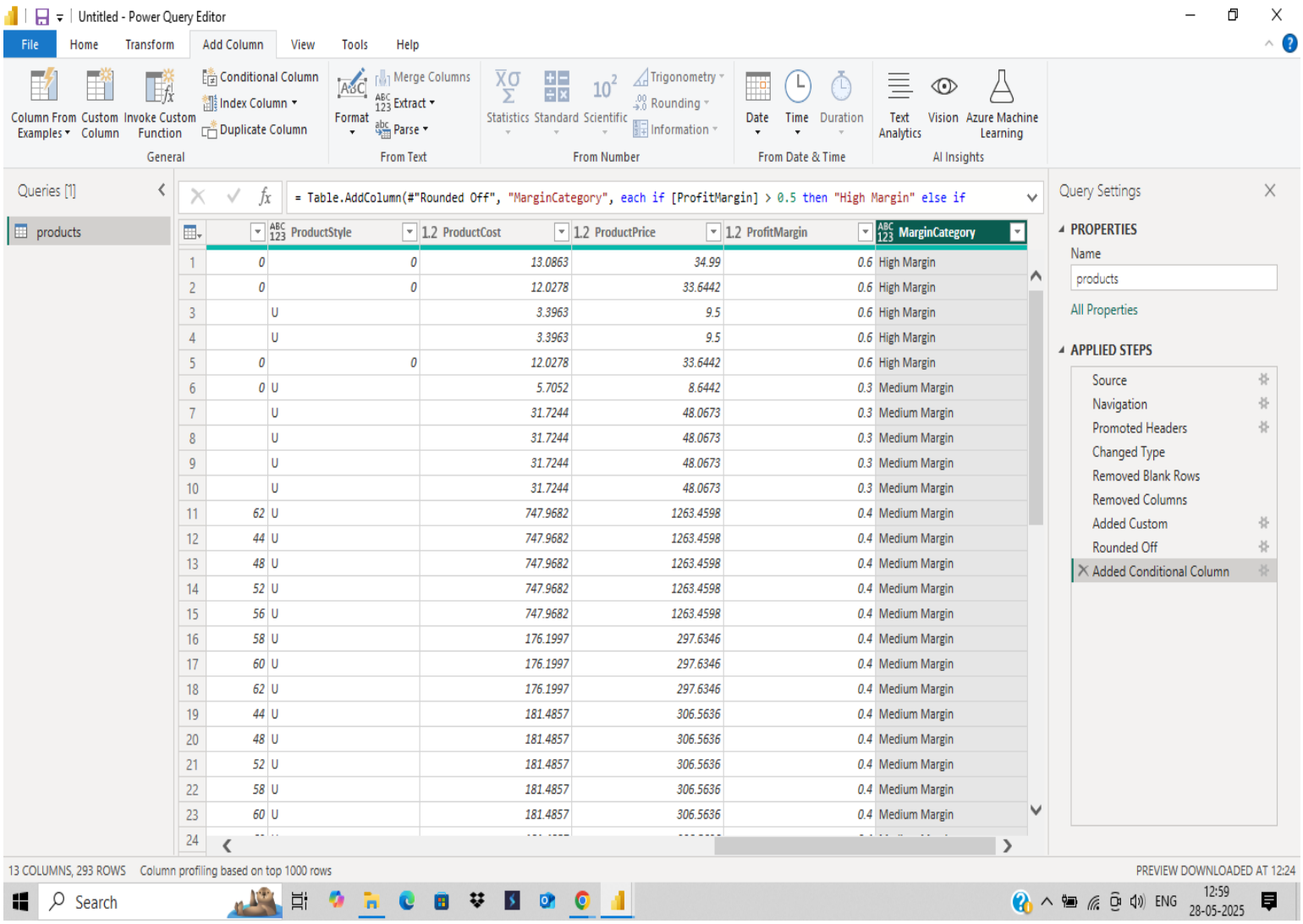
Task 1- Create a custom column that calculates the profit margin for each product. Use the formula: ProfitMargin = (ProductPrice - ProductCost) / ProductPrice. Name this column "ProfitMargin". Add a conditional column to classify products as "High Margin", "Medium Margin", or "Low Margin" based on their profit margin. Define the thresholds: High Margin (> 0.5), Medium Margin (0.2 - 0.5), Low Margin (< 0.2)



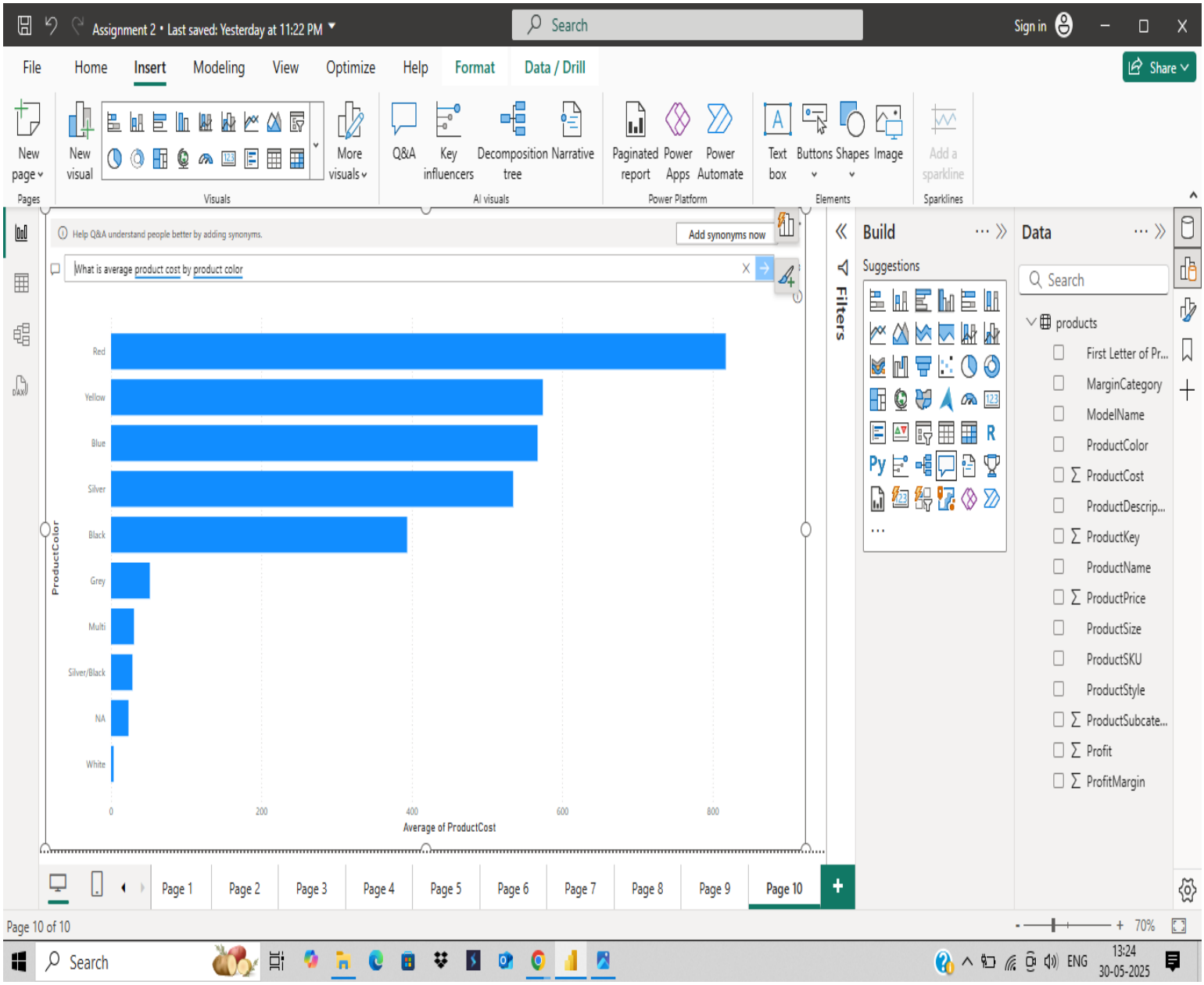
To perform this task:

- Click Transform data > Power Query
- Select Add Column > Custom Column
- Name- ProfitMargin
- Then Formula- (ProductPrice - ProductCost)/ ProductPrice

To Perform Conditional Column:

- Select Add Column > Conditional Column
- Name- MarginCategory
- Condition- If ProfitMargin > 0.5 ->High margin
- If ProfitMargin > 0.2 -> Medium Margin
- Else Low Margin

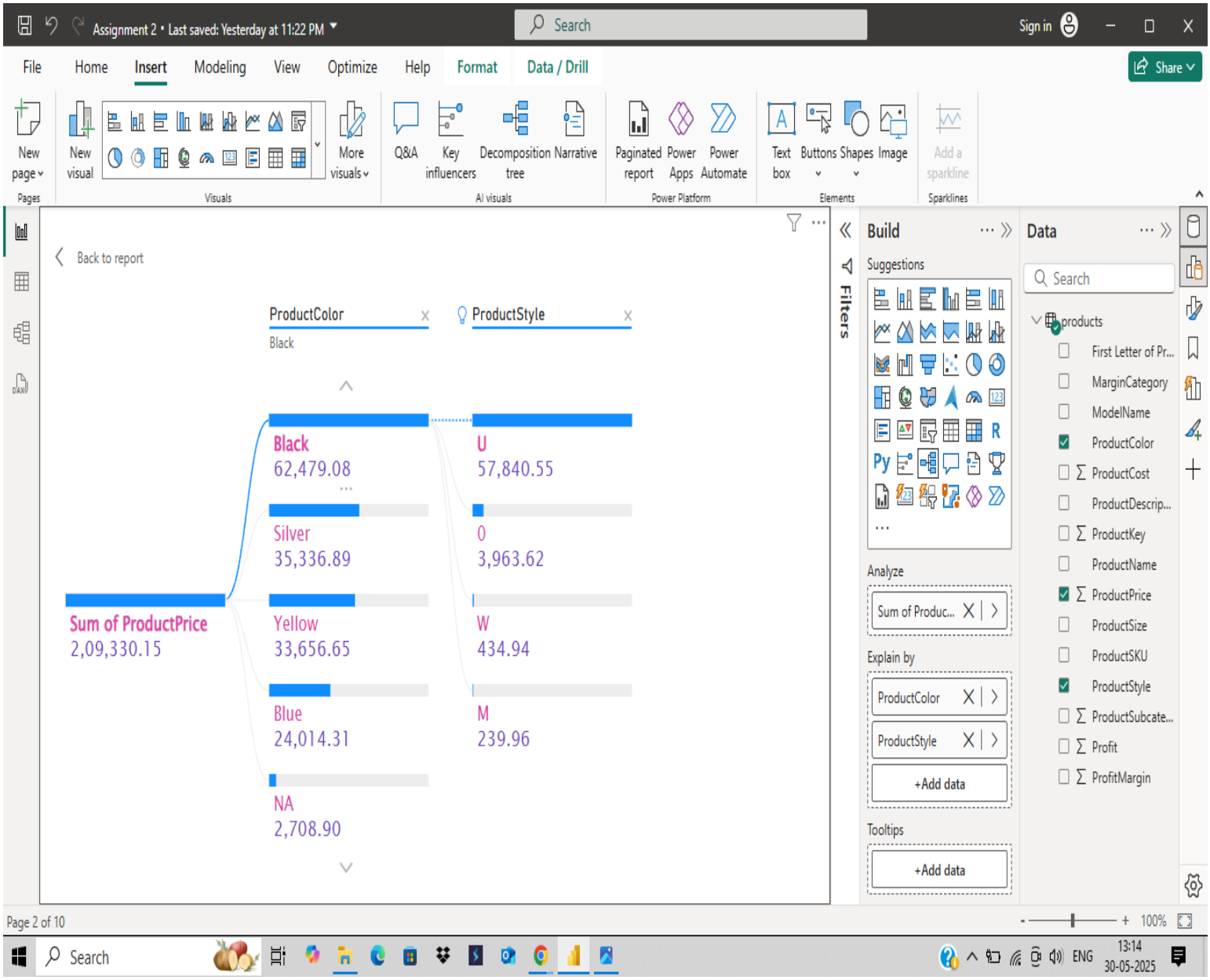
Task 2: Use the Q&A feature to find out "What is the average product cost by product color?" and display the results as a bar chart.



To Perform this task:

- In Report View > Build pane > Q/A visual
- Then in Q/A box write:
  - What is average product cost by product color
- Enter and it will show the query in bar chart

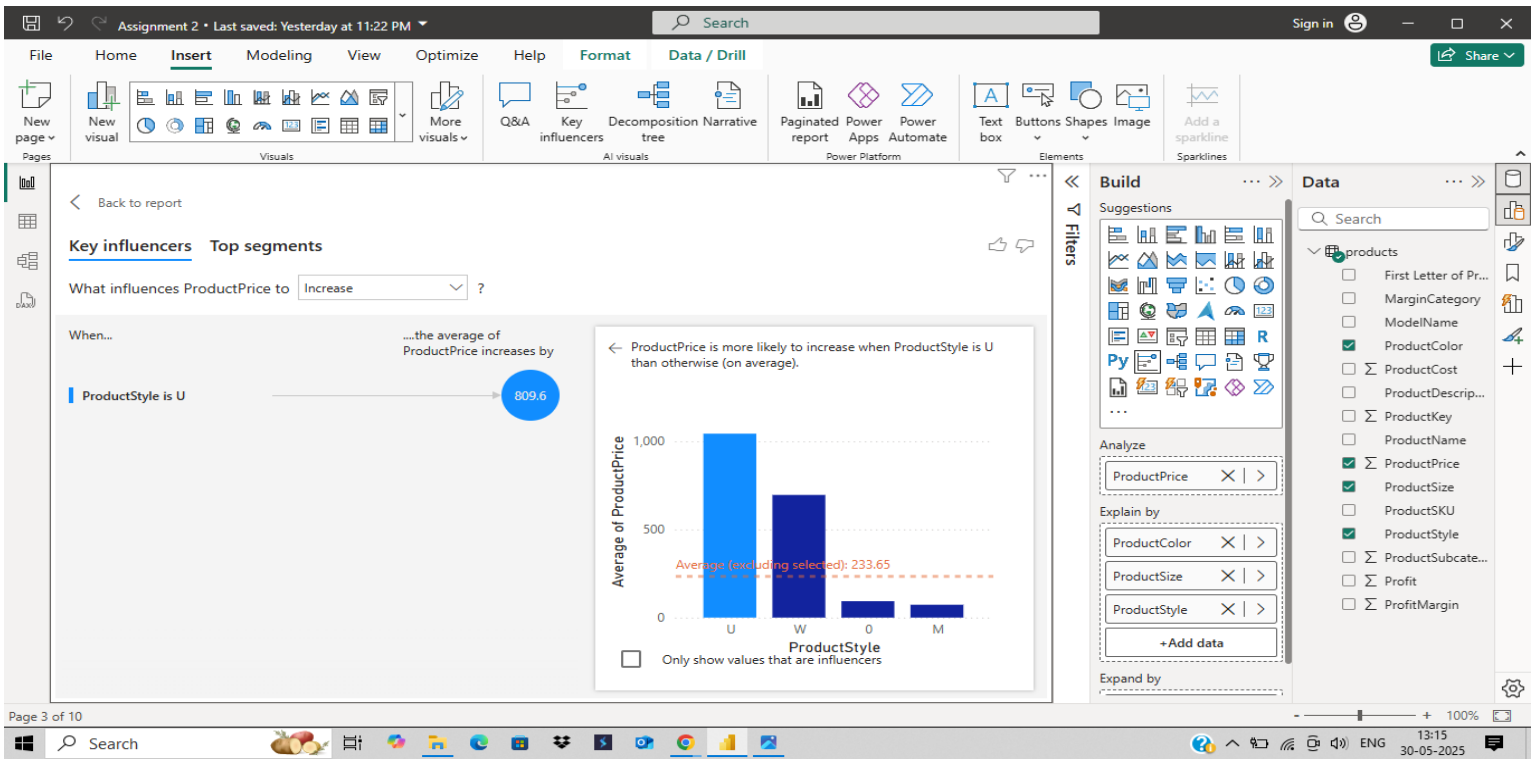
Task 3: Create a decomposition tree to analyze ProductPrice by ProductColor and further by ProductStyle. Identify key drivers for high prices.

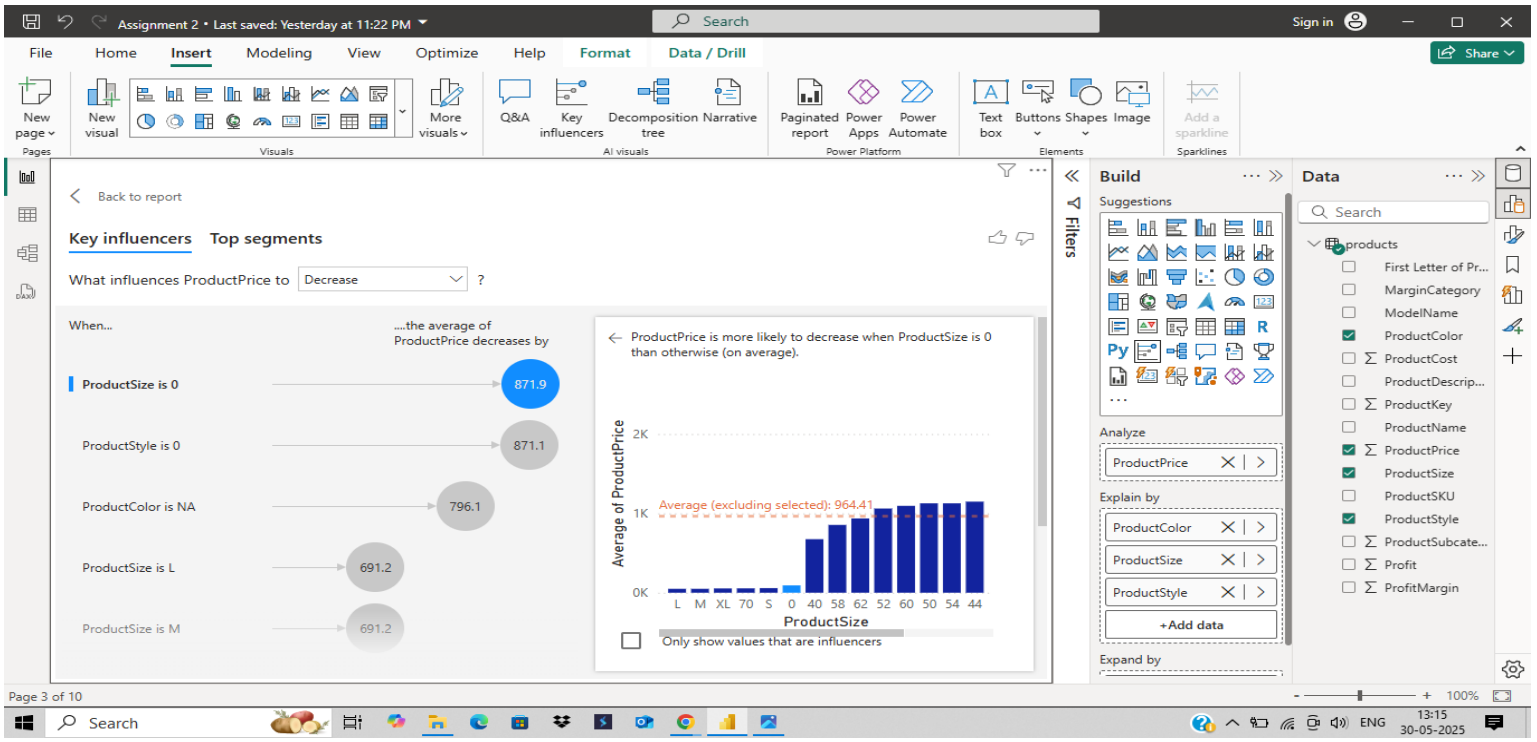


To perform this task:

- In the report view > Build pane > Decomposition visual
- In analyze add ProductPrice
- In explain by add ProductColor followed by ProductStyle
- Then select from ProductPrice higher prices and then from ProductColor
- It will show the above output

Task 4: Use the Key Influencer visual to determine which factors (e.g., ProductColor, ProductSize, ProductStyle) influence high product prices. Provide a summary of your findings.

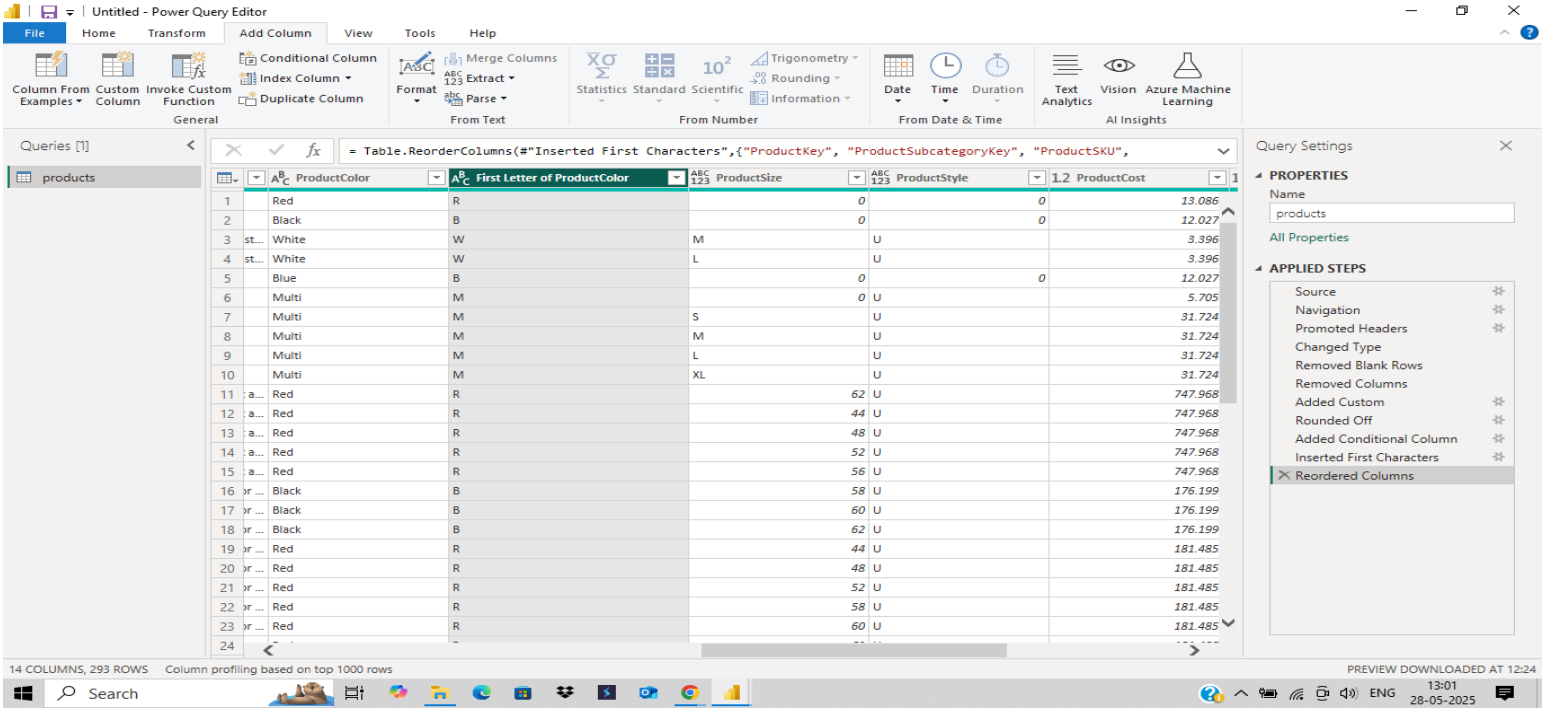




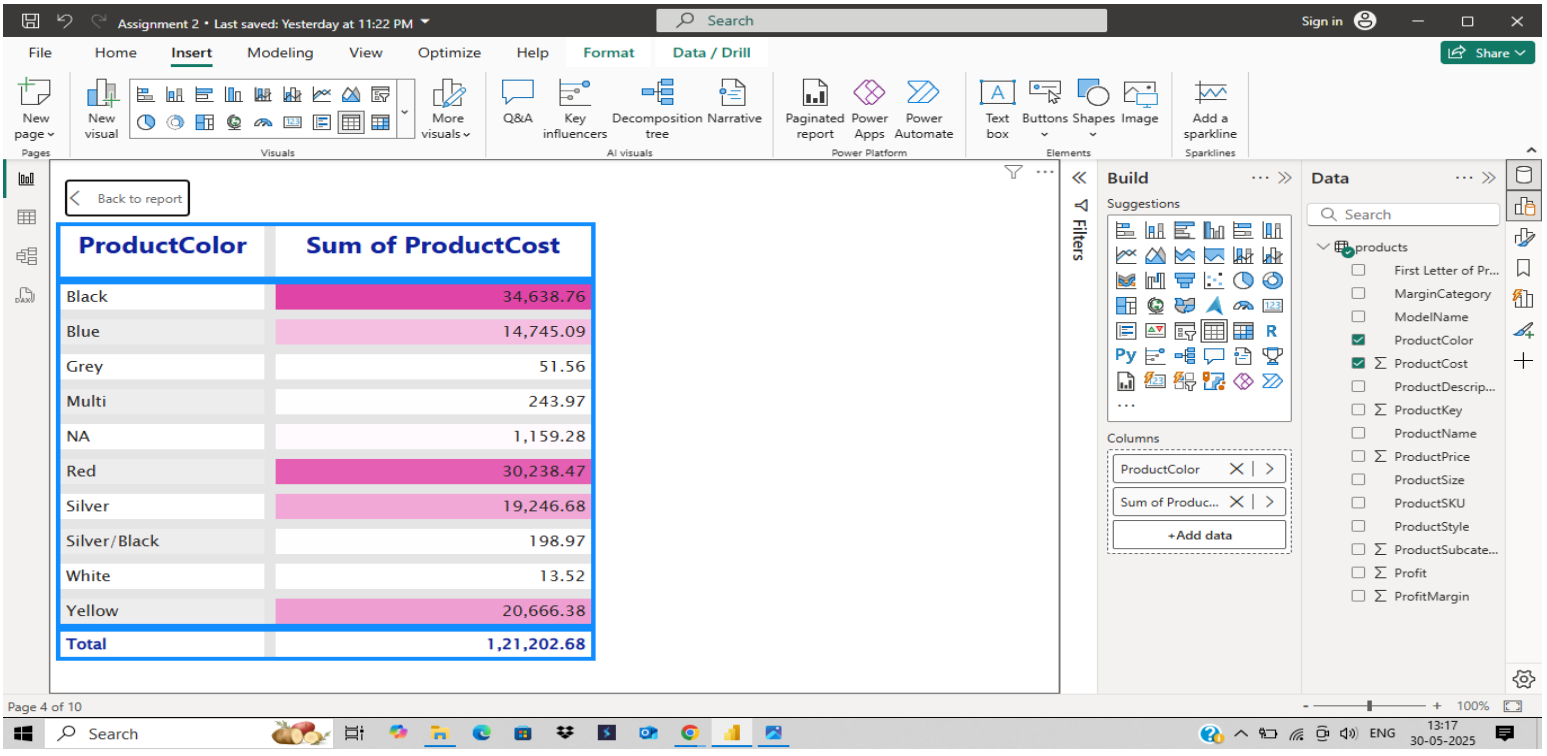
To Perform this task:

- In Report view > Build pane > Key Influencers visual
- Add ProductPrice in Analyze
- Add ProductColor,ProductSize,ProductStyle in Explain By
- Then in what influences ProductPrice to first put **increase** then **decrease**.

Task 5: Create a new column using the "Column from Example" feature to extract the first letter from the product color column (eg: red should be R, etc). Create a table visual to display the total product cost by product color. Highlight the costs column using conditional formatting (highest costs in dark pink, medium costs in light pink and lowest costs in white)



	ProductColor	First Letter of ProductColor	ProductSize	ProductStyle	ProductCost
1	Red	R	0	0	13.086
2	Black	B	0	0	12.027
3	White	W	M	U	3.396
4	White	W	L	U	3.396
5	Blue	B	0	0	12.027
6	Multi	M	0	U	5.705
7	Multi	M	S	U	31.724
8	Multi	M	M	U	31.724
9	Multi	M	L	U	31.724
10	Multi	M	XL	U	31.724
11	Red	R	62	U	747.968
12	Red	R	44	U	747.968
13	Red	R	48	U	747.968
14	Red	R	52	U	747.968
15	Red	R	56	U	747.968
16	Black	B	58	U	176.199
17	Black	B	60	U	176.199
18	Black	B	62	U	176.199
19	Red	R	44	U	181.485
20	Red	R	48	U	181.485
21	Red	R	52	U	181.485
22	Red	R	58	U	181.485
23	Red	R	60	U	181.485
24					



To Perform this task:

First to extract first letter from ProductColor column:

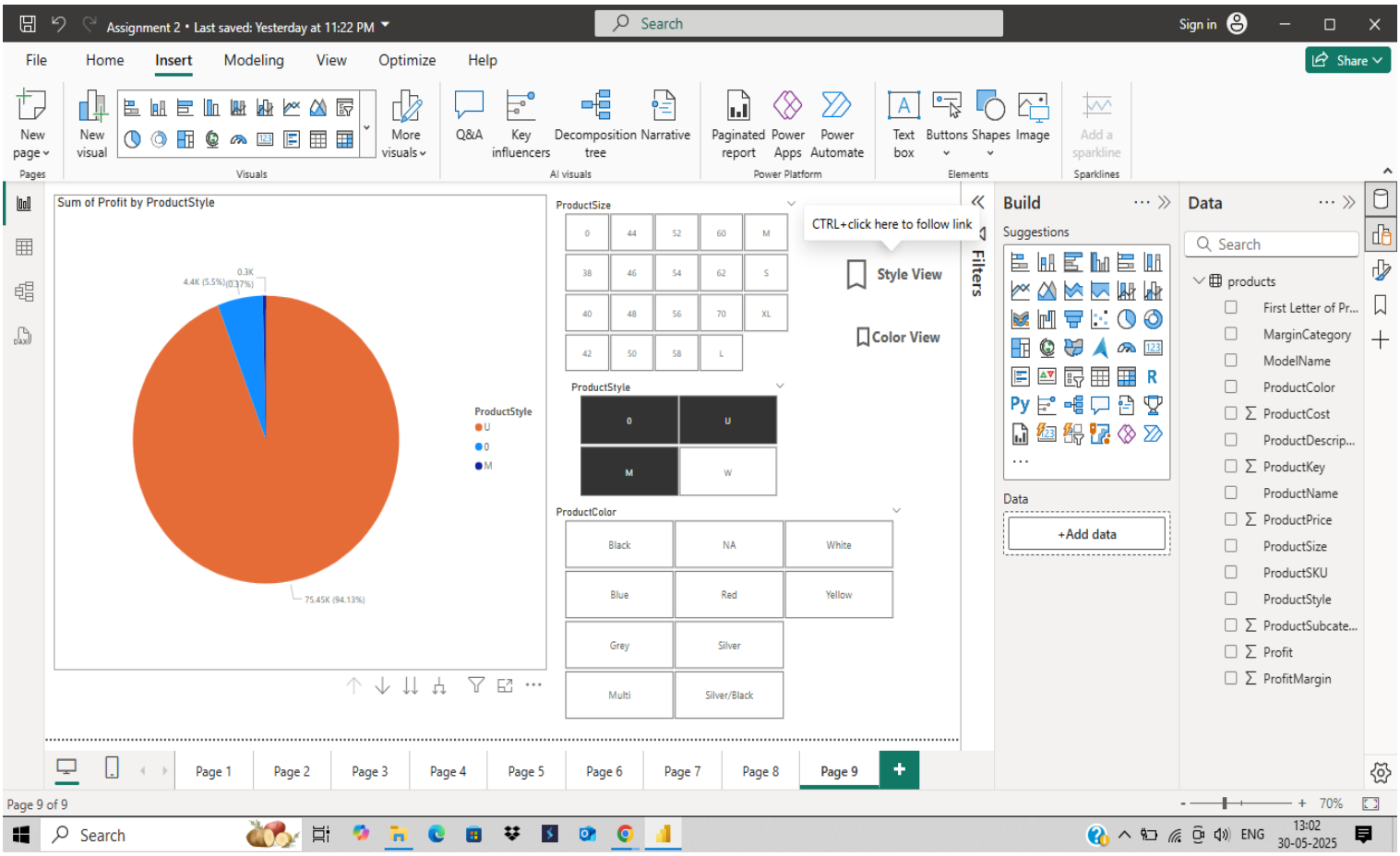
- Go to Power Query editor
- Select the ProductColor column

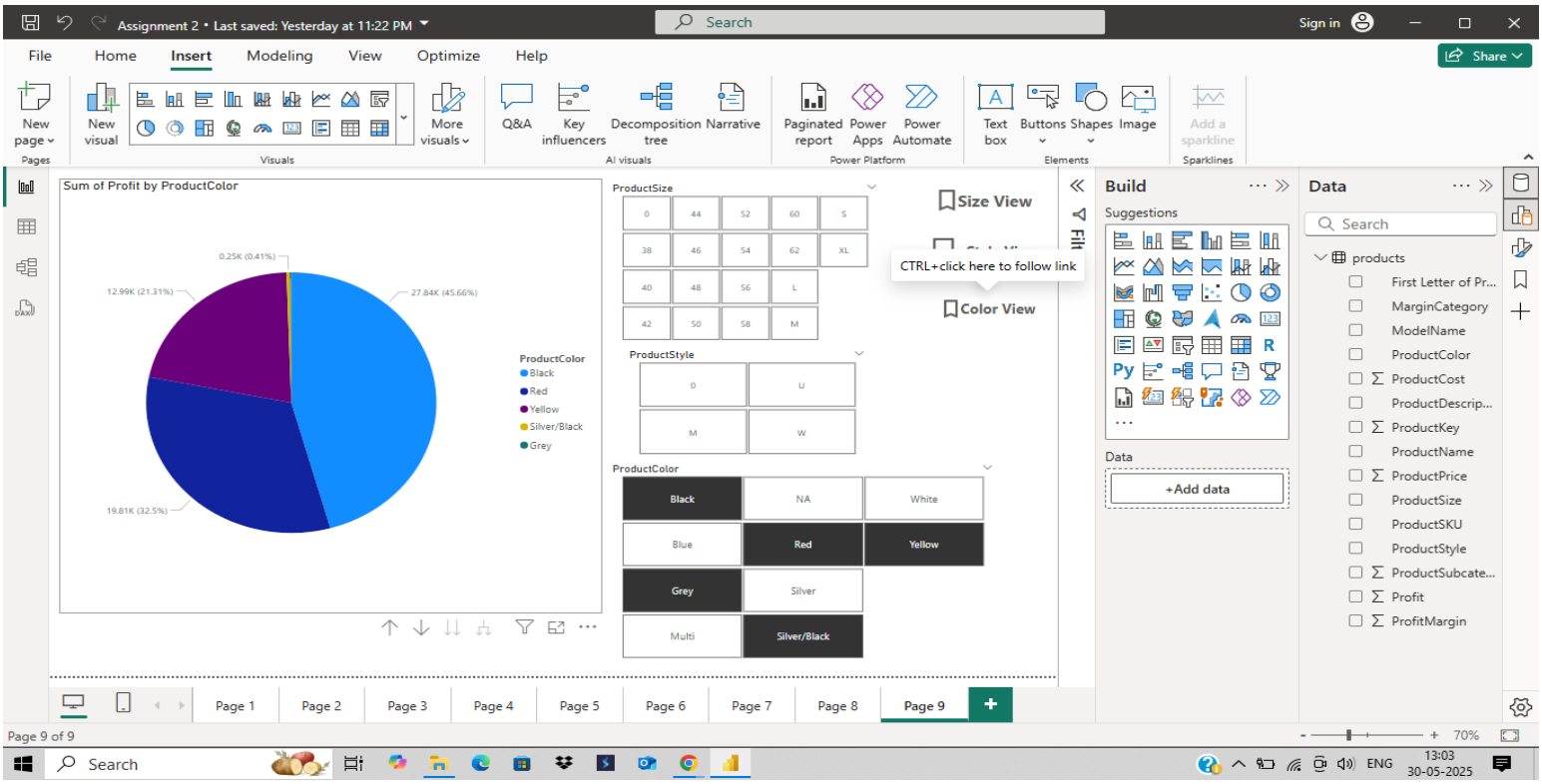
- Then Add Column > Column From Example > From Selection
- Type first letter of color > press Ctrl+Enter > do it for one more color > Press Ctrl+Enter
- Click ok

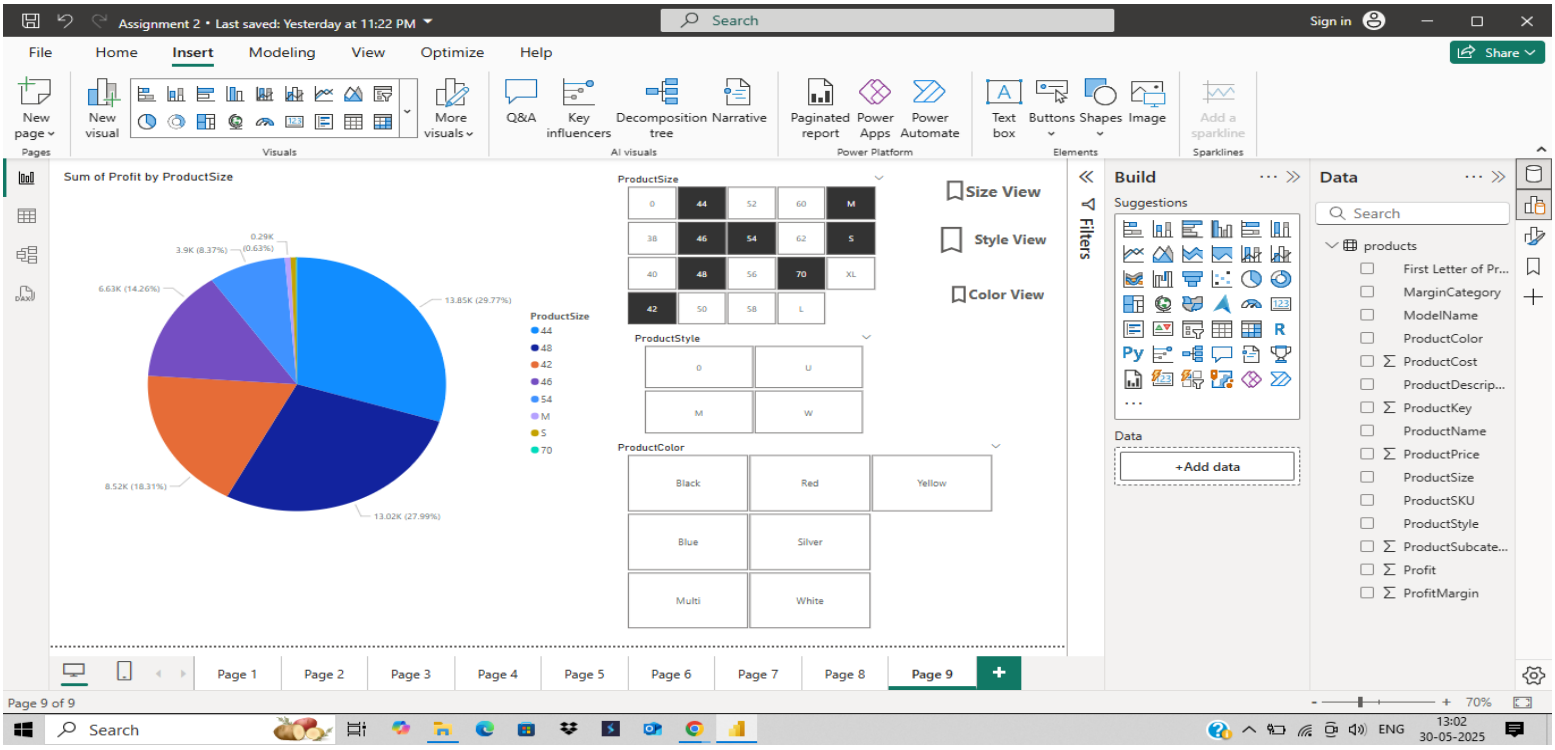
Create Table visual with conditional formatting:

- Load the data > In report view > Visualization pane > Table visual
- Add ProductColor, ProductCost
- Then Go to Format pane > Cell Elements > Select ProductCost column > Background Color
- Select color scale- Low as white, Middle as light pink, High as Dark pink.

Task 6: Set up bookmarks to save different views of your report. Create bookmarks for views by ProductStyle, ProductColor, and ProductSize based on your own set conditions or filters



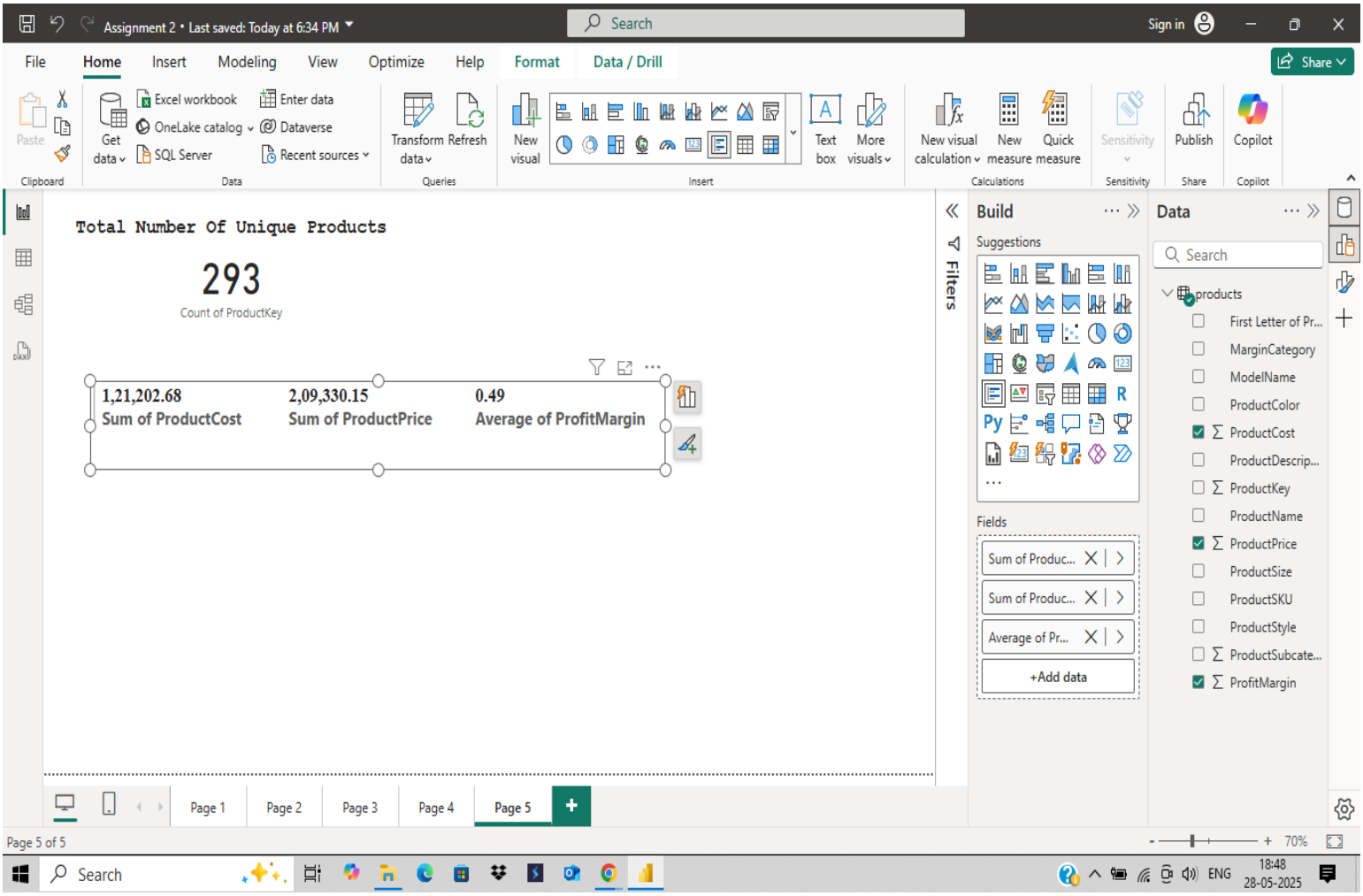




To perform this task:

- Create a pie chart visual in report view
- Then Insert slicers of ProductSize, ProductColor, ProductStyle
- Create Visual using these slicers
- Then Click on View > Bookmark Pane
- Then Add to save each filtered task as a bookmark
- Rename them as Size view, Style view, Color view
- Then Insert > Buttons > Bookmark
- Assign each bookmark to these buttons.

Task 7: Create a single row card to display the total number of unique products in the dataset. Create a multi-row card to display the total product cost, total product price, and average profit margin



To perform this task:

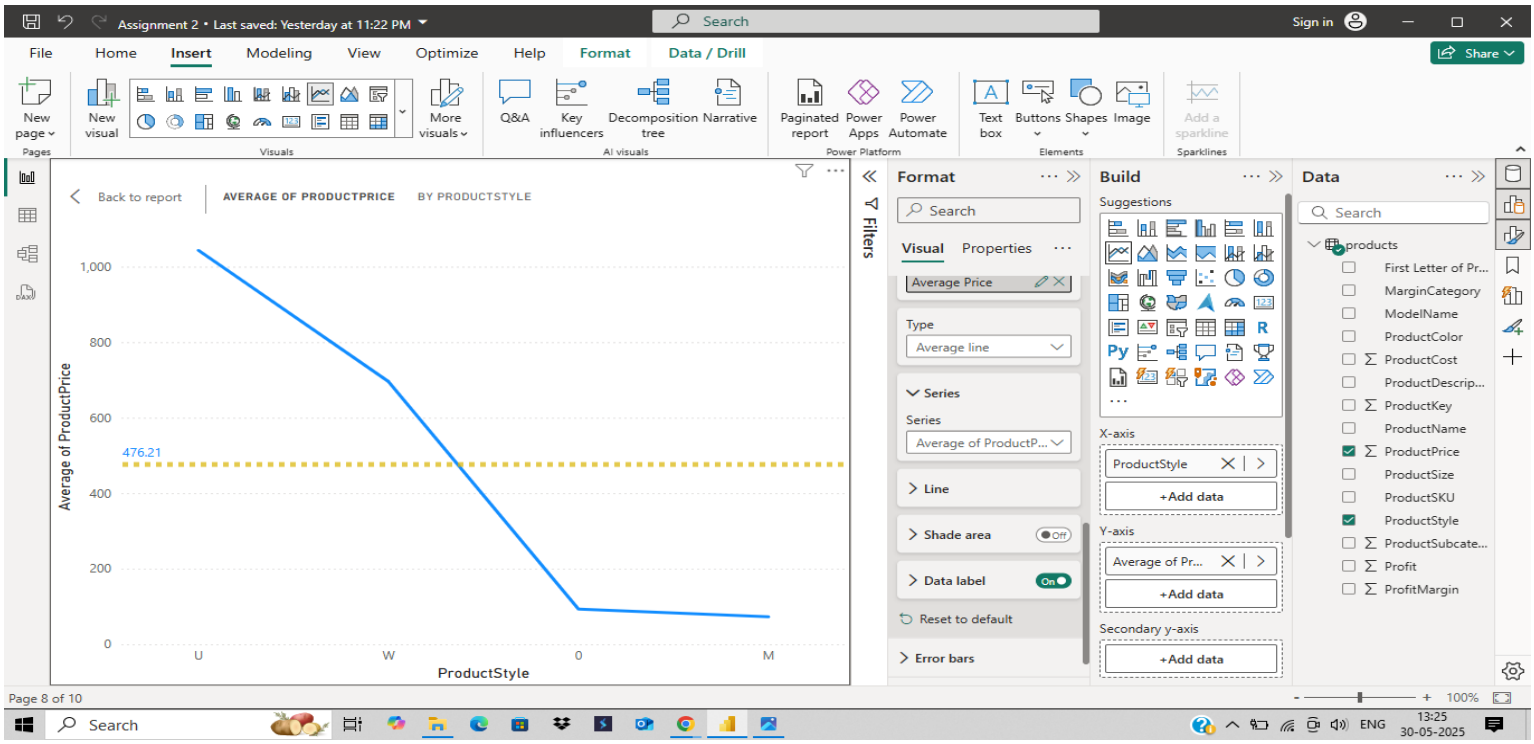
Unique Products in Single row card:

- In report view > Visualization pane > Single row card
- Add ProductKey
- Then click ProductKey in visualization pane and set aggregation to Count(Distinct).

Multi Row card:

- In Report view > Visualization pane > Multi row card
- Add ProductCost as SUM
- Add ProductPrice as SUM
- Add ProfitMargin and set its aggregation as Average.

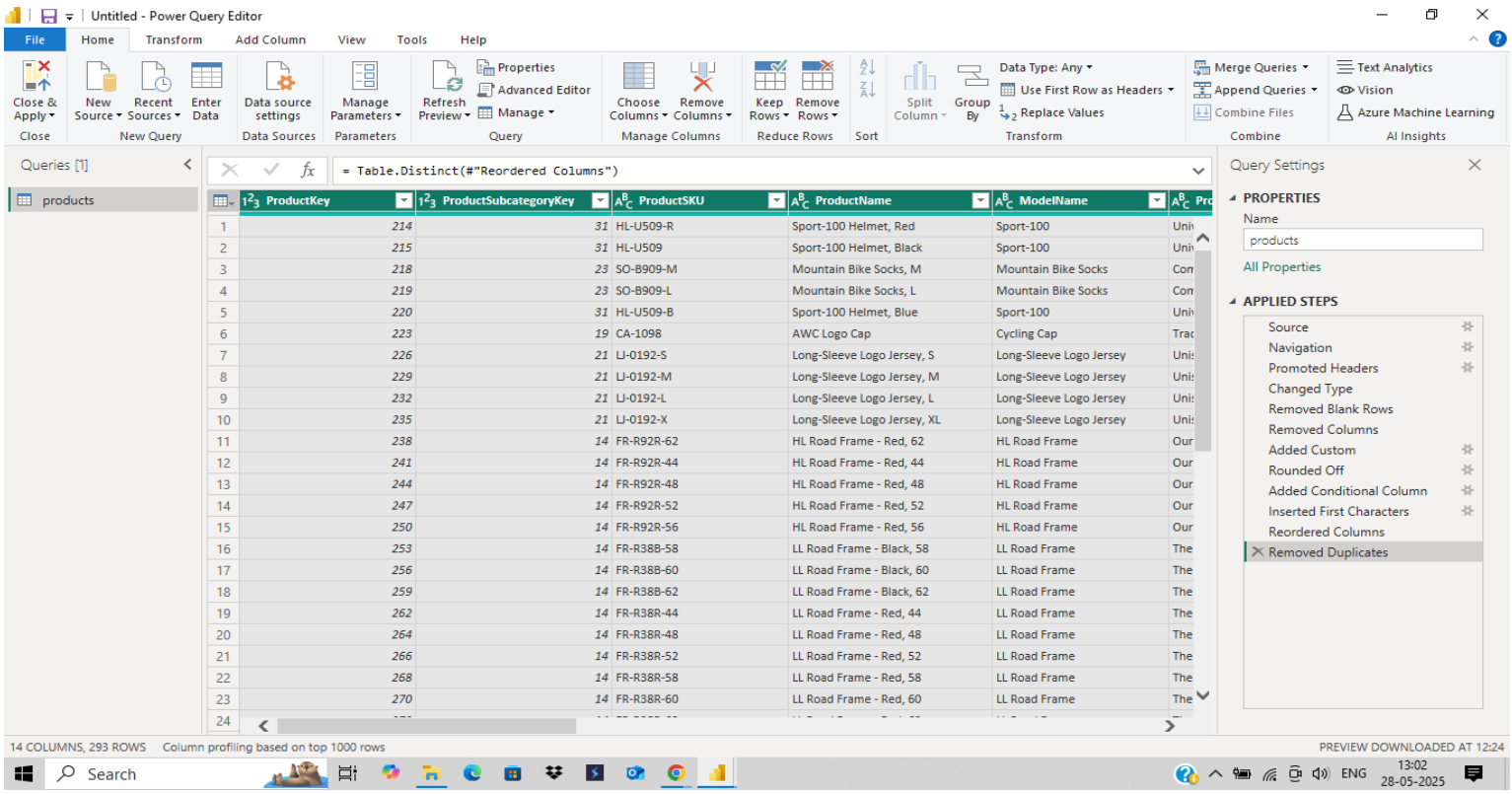
Task 8: Add a reference line in a line chart to show the average product price over different product styles



To perform this task:

- In Report view > Visualization pane > Line Chart
- Add ProductStyle in x-axis
- Add ProductPrice in y-axis and set aggregation as average
- Then go to Format pane > Reference Line > Add Average Line

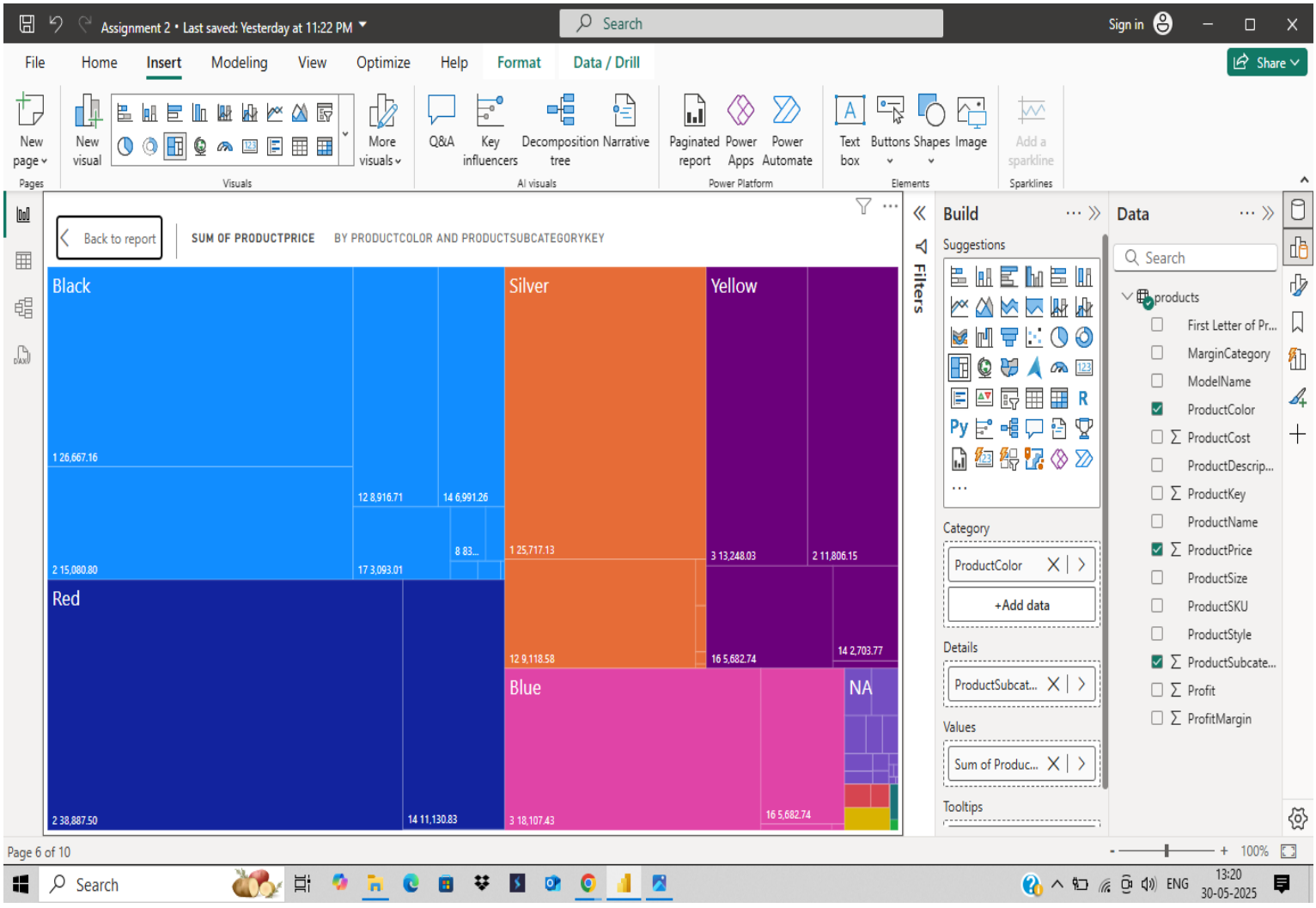
Task 9: Identify and remove any duplicate product records in the dataset.

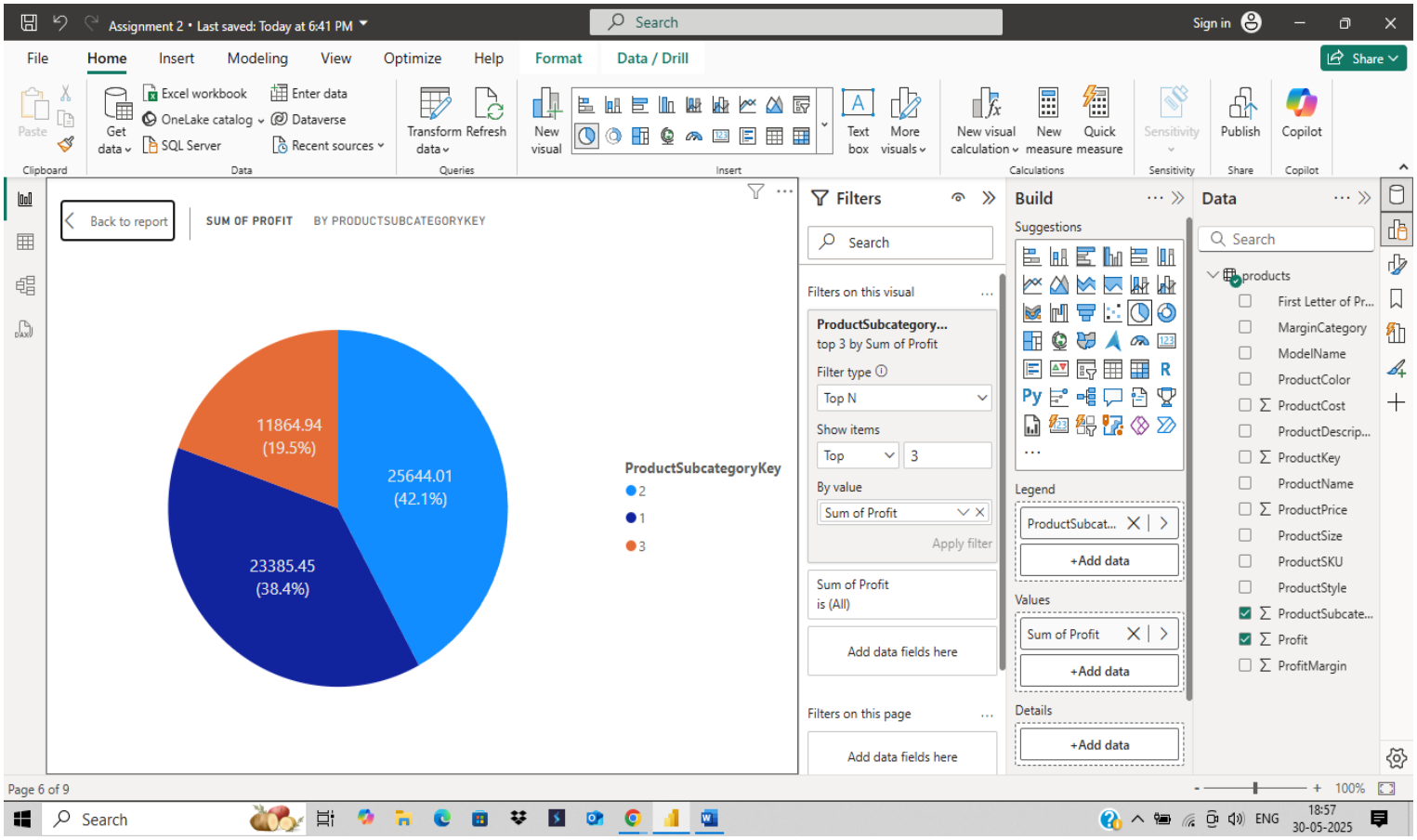


To perform this task:

- Go to transform data in Power BI
- Select all the columns in the query
- Then Home > Remove Rows > Remove Duplicates
- Click close and apply to load the data for creating visuals

Task 10: Create a Treemap to show product price for each color and subcategory. Also show the top 3 subcategories based on profit (price-cost).





To perform this task:

For Treemap by ProductColor and ProductSubCategory:

- In Report View > Visualization pane > Treemap visual
- Add Category-> ProductColor
- Add Details -> ProductSubCategory
- In Values -> ProductPrice as SUM

For Top 3 ProductSubCategories by Profit:

- First Go to Power Query editor
- Add Column > Custom Column
- Name-> Profit, Formula -> (ProductPrice – ProductCost)
- Then Close and apply
- In Report view > Visualization pane > Pie Chart
- Add ProductSubCategory, Profit
- Then In Filter pane > ProductSubCategory> Add Filter > Top N
- Top 3 By Sum Of Profit