CALCULATED COLUMNS:

1. Crime Level =IF([Crim]>10, “High” ,IF([Crim]>3,”Moderate”,”Low”))
2. Rooms\_Category=IF([Rm]>=7,”Spacious”,IF([Rm]>=5,”Moderate”,”Compact”))
3. Tax\_Level=IF([Tax]>500,”High Tax”,”Low Tax”)
4. Near\_CharlesRiver=IF([Chas]=1,”Yes”,”No”)
5. Valuable\_Homes=IF([Medv]>=30,”Yes”,”No”)
6. Age\_Group=IF([Age]>80,”old”,IF([Age]>50,”Middle”,”Young”))
7. Region=IF{[Dis]<3,”Urban”,IF([Dis]<6,”Suburban”,”Rural”))
8. Distance\_Category=IF([Dis]<3,”Near”,IF([Dis]<6,”Mid”,”Far”))
9. Zone\_Category=IF([Zn]=0,”No Zone”,IF([Zn]<20,”Low Zone”,”High Zone”))
10. Pollution\_Level=IF([Nox]>0.7,”High”,IF([Nox]>0.5,”Moderate”,”Low”))
11. Price\_Category=IF([Medv]>=30,”Premium”,IF([Medv]>=20,”Mid-Range”,”Affordable”))
12. Student\_facility\_Rating=IF([Ptratio]<15,”Excellent”,IF([Ptratio]<20,”Good”,”Poor”))
13. LocationID=Boston\_Housingdata[Rad]\*100+Boston\_Housingdata[Tax]
14. FeatureID=ROUND(Boston\_Housingdata[Rm]\*10,0)

CALCULATED MEASURES:

1.Avg\_Crime\_Rate =AVERAGE(Boston\_Housingdata[Crim])

2.Avg\_Home\_Value=AVERAGE(Boston\_Housingdata[Medv])

3.Avg\_Rooms=AVERAGE(Boston\_Housingdata[Rm])

4.Avg\_Tax=AVERAGE(Boston\_Housingdata[Tax])

5.Max\_Home\_Value=MAX(Boston\_Housingdata[Medv])

6.Min\_Home\_Value=MIN(Boston\_Housingdata[Medv])

7.Total\_Properties=COUNTROWS(‘Boston\_Housingdata’)

8.Total\_Medv=SUM(Boston\_Housingdata[Medv])

DIMENSION TABLES CREATED:

1.Feature\_Dim=DISTINCT(SELECTCOLUMNS(Boston\_Housingdata,”FeatureID”,Boston\_Housindata[FeatureID],”Rm”,Boston\_Housingdata[Rm]))

2.Location\_Dim=DISTINCT(SELECTCOLUMNS(Boston\_Housingdata,”LocationID”,Boston\_Housingdata[LocationID],”Rad”,Boston\_Housingdata[Rad],”Tax”,Boston\_Housingdata[Tax]))

3.Price\_Dim=DISTINCT(SELECTCOLUMNS(Boston\_Housingdata,”Price\_Category”,Boston\_Housingdata[Price\_Category]))

VISUALS AND IT’S USES:

1.Button slicer- pollution level( high, low, moderate)

Stacked column chart- yaxis- student facility rating , x axis Count of Zone Category ( which zoning level offers better schooling facilities)

2.Pie chart- legend(pollution level)

Values(Total Properties)-how many properties fall under high , low, moderate categories

3.Donut-price category- premium,mid-range, affordable(Legend).

total properties(Values)- it shows overall housing affordability distribution

4.Gauge- average home value( value)

Have set min value as 10, max value as 50 , target value as 25, callout value as 21- it shows how the current average home price compares to maximum or expected value

5. Table- LocationId,FeatureId,Total Homes(Columns) counting the number of homes based on locationid and featureid.

6. Card- Number of blacks(fields)

7. Treemap-

category- region

Details- price\_category

Values- total\_medv

Which region have median value homes and how they’re distributed across price level.

7. New card- total homes(Data)

8. New card- avg tax, avg\_ crime\_rate(Data).

9. Funnel chart-

Region(category)

total homes (values)

This chart shows which regions contributes to total home values

10.Clustered column chart-x axis- featureid and y axis-Average home value

Dashboard Creation

* In Dashboard page1- I have given a heading with an emblem of boston housing authority and background image of boston.
* In this page page navigation to next page is used.
* In Boston housing dashboard page 2- created visuals with 9 charts with page navigation button and previous page button.
* Here tooltips of all the visuals are made active.
* In Drill through page 3-
* Clustered column chart- Region(x-axis),Medv(y-axis)
* Pie chart- pollution level(legend)

Total Properties(Values)-how many properties fall under high , low, moderate categories

In the above pie chart and clustered column chart provided with drill through .By right clicking any of the data in any visuals, it will move directly to the tables created from these datas(which is in details page 4)

* Below these visuals, there is another visual as matrix, where drill up and drill down is done.

Matrix-Region,Crime\_Level,Medv(Rows)

Page navigation and previous page have been done.

* Details page 4- Descriptions of drill through are given.Previous page arrow also given.
* Bookmarks where created for Drillthrough and Details Page.