

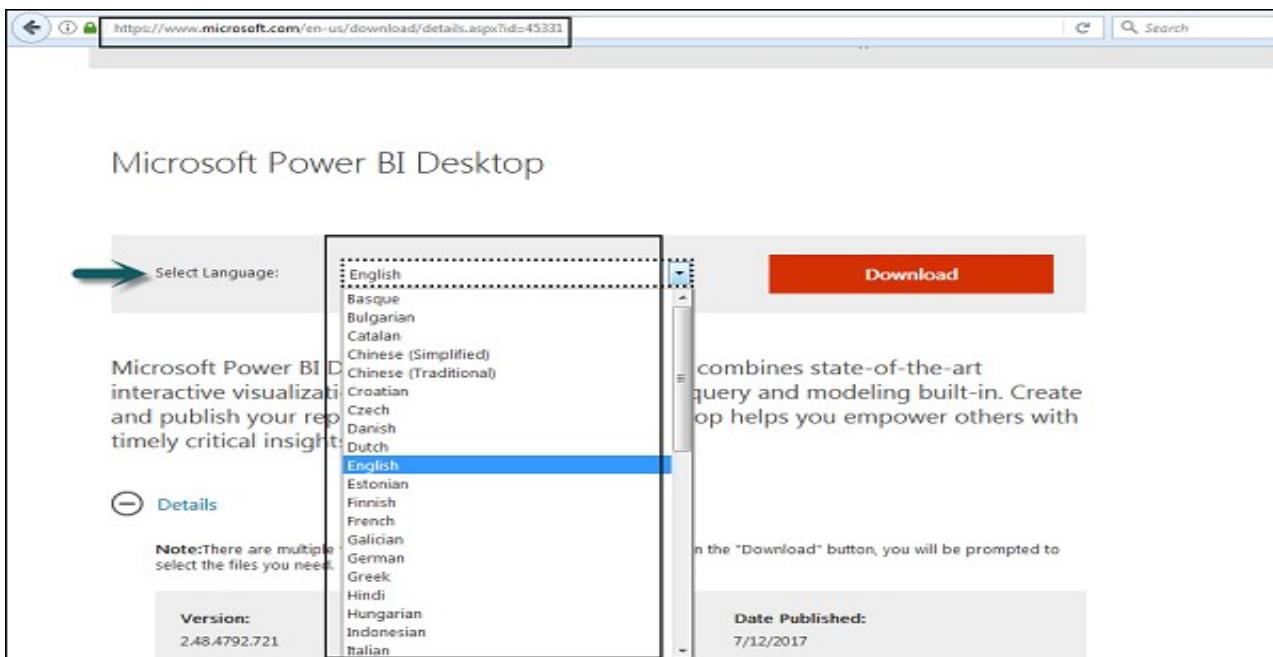
Experiment Number: 01

Aim:

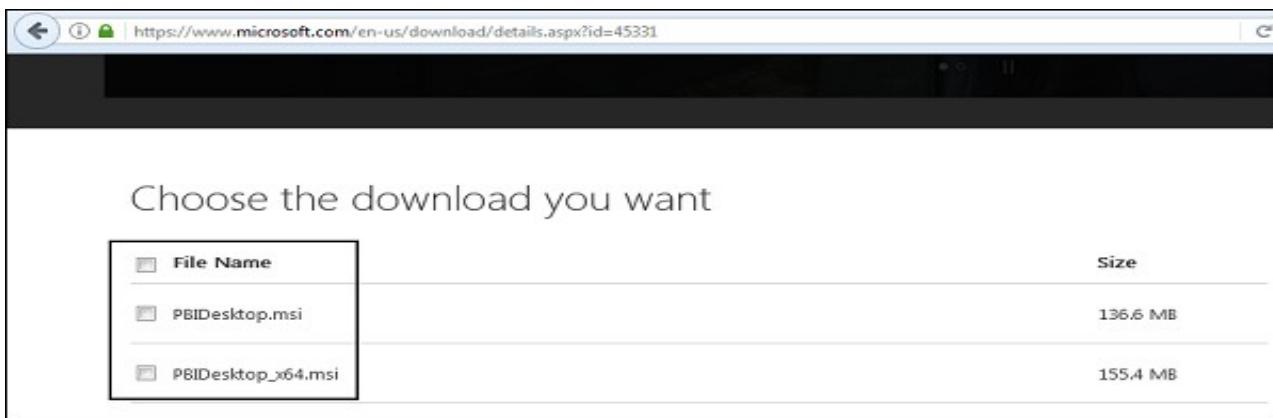
Installation and overview in power BI Desktop.

Procedure:

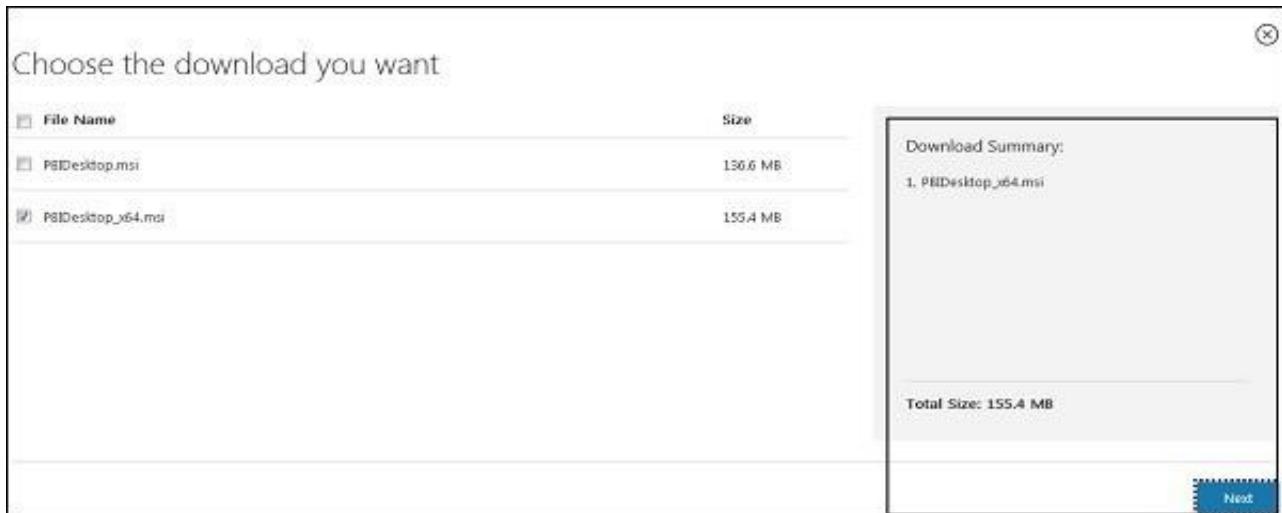
- Users can select a language in which they want to install Power BI and following files are available for download.



- This is the link to directly download Power BI files –
- <https://www.microsoft.com/en-us/download/details.aspx?id=45331>



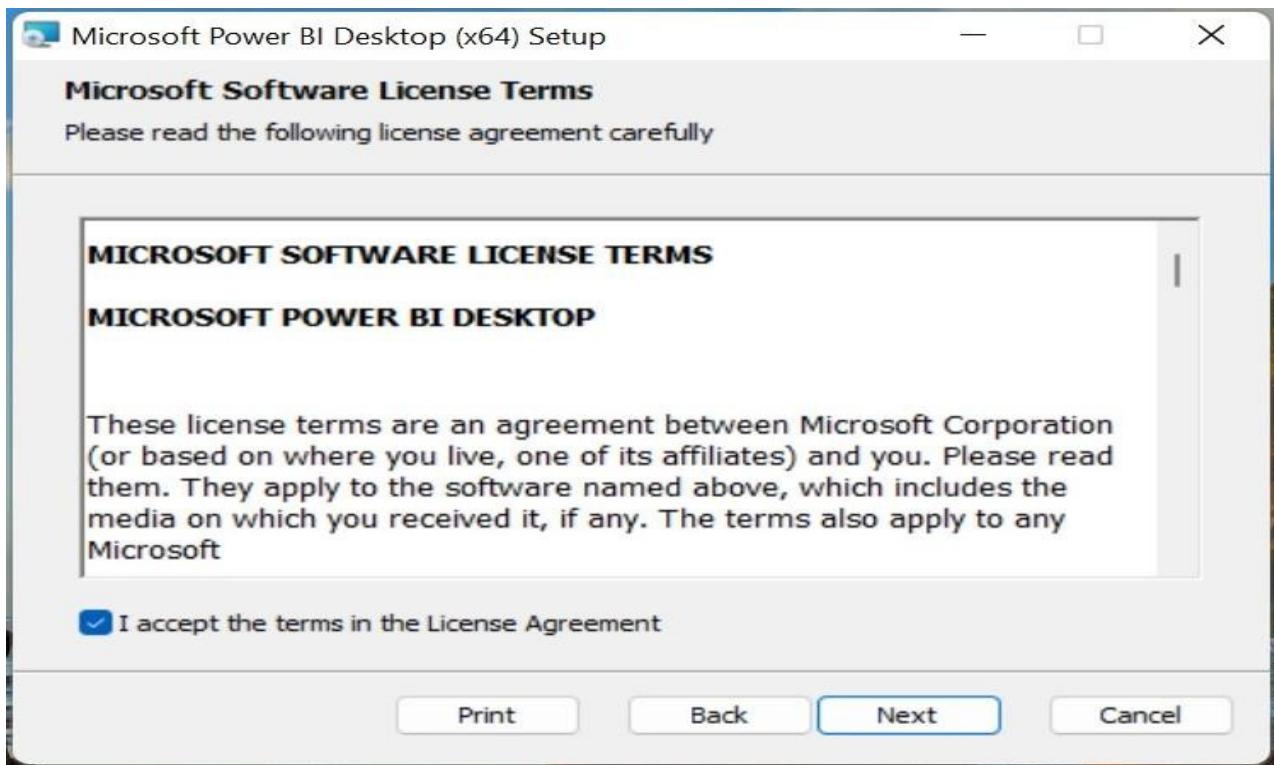
- PBIDesktop_x64.msi shows a 64-bit OS file. Select the file you want to install as per OS type and click Next. Save the installation file on the local drive.



- When you run the installation file, following screen is displayed.



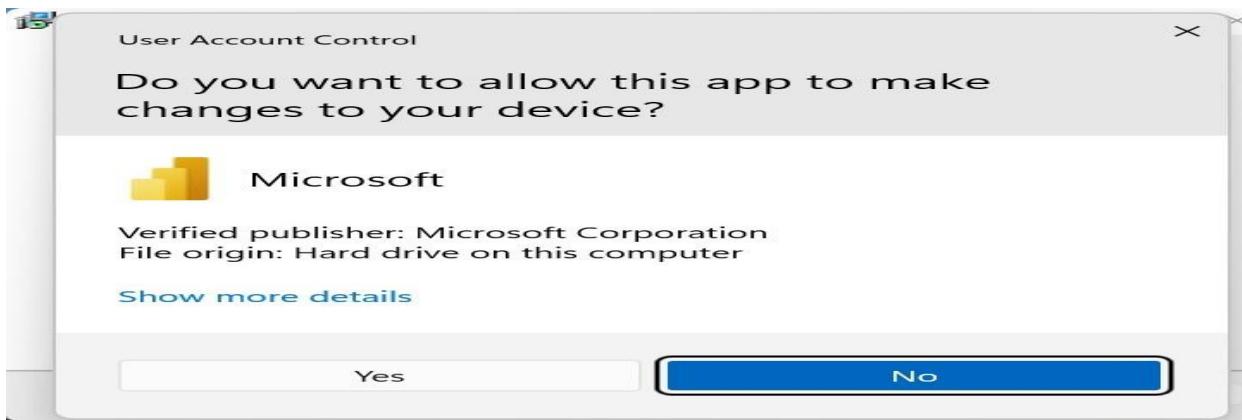
- Click on Next to continue the process of installing the software.



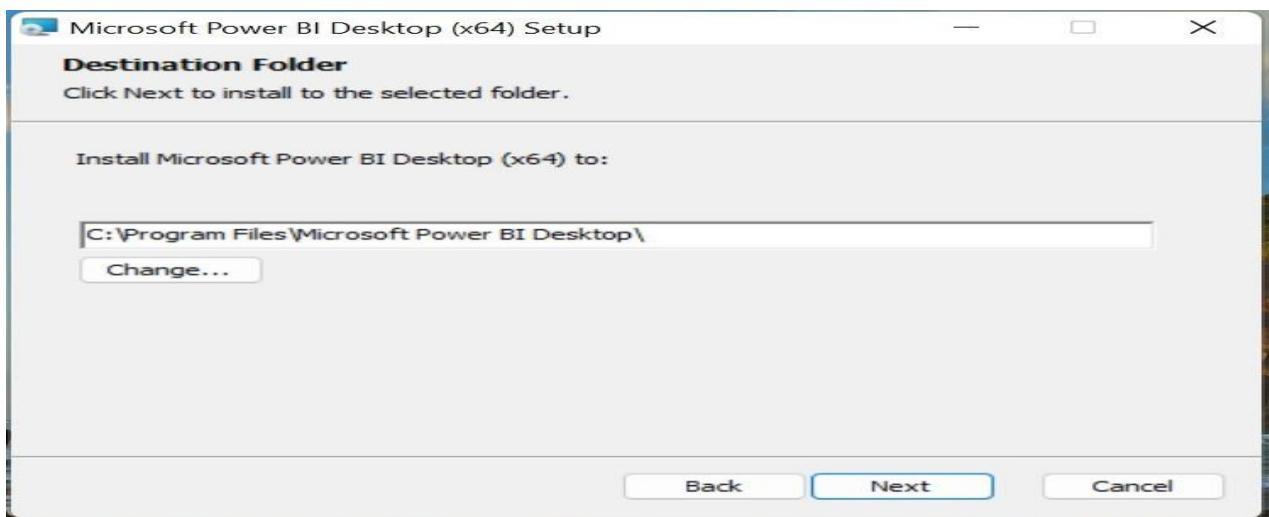
- Accept the License agreement and click on Next.



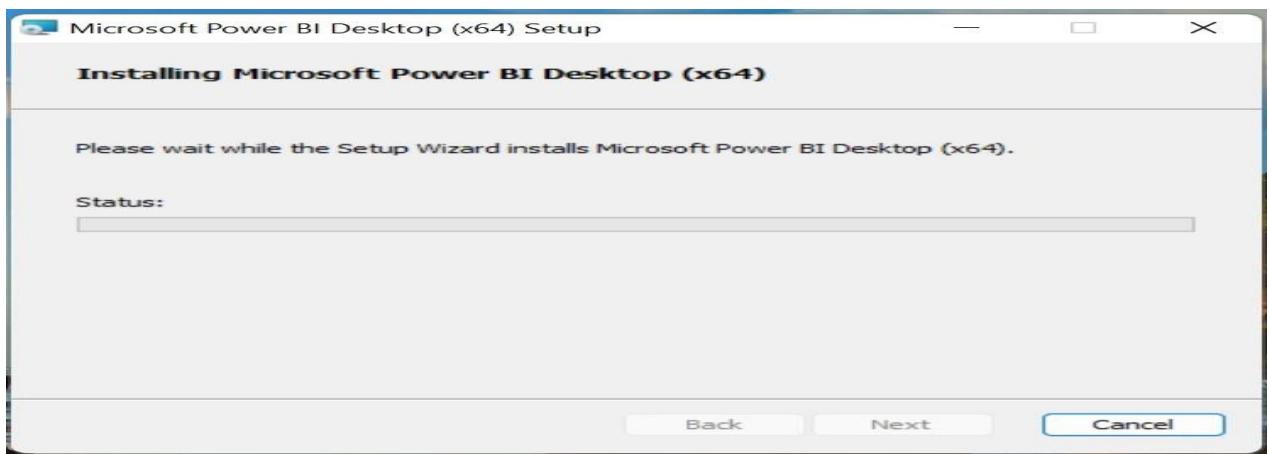
- Check the box for creating the desktop shortcut for easy access and then click install.

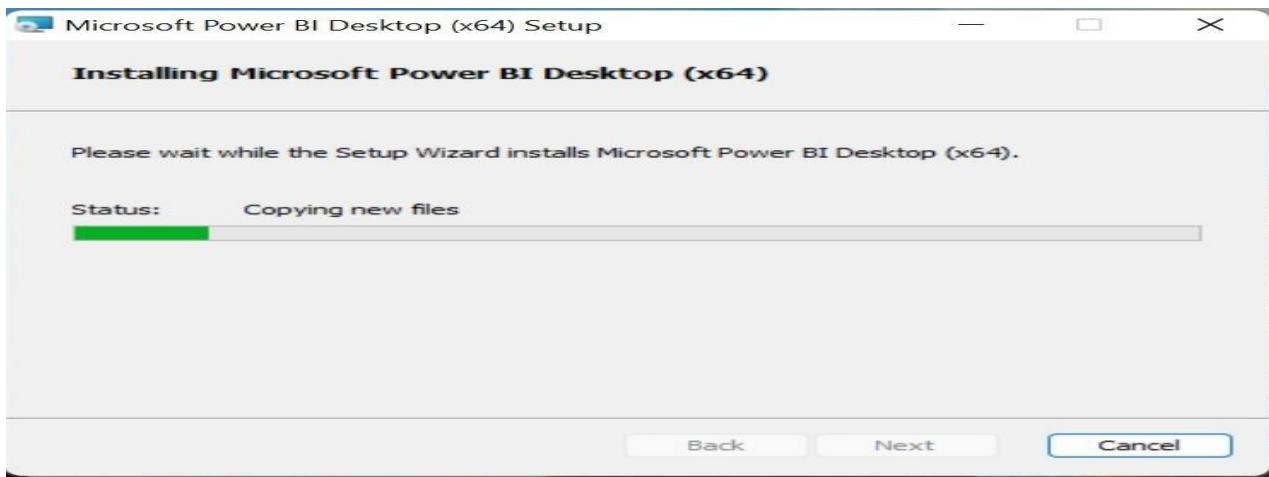


- Click on Yes to allow app to change in your device and choose the path where to install.

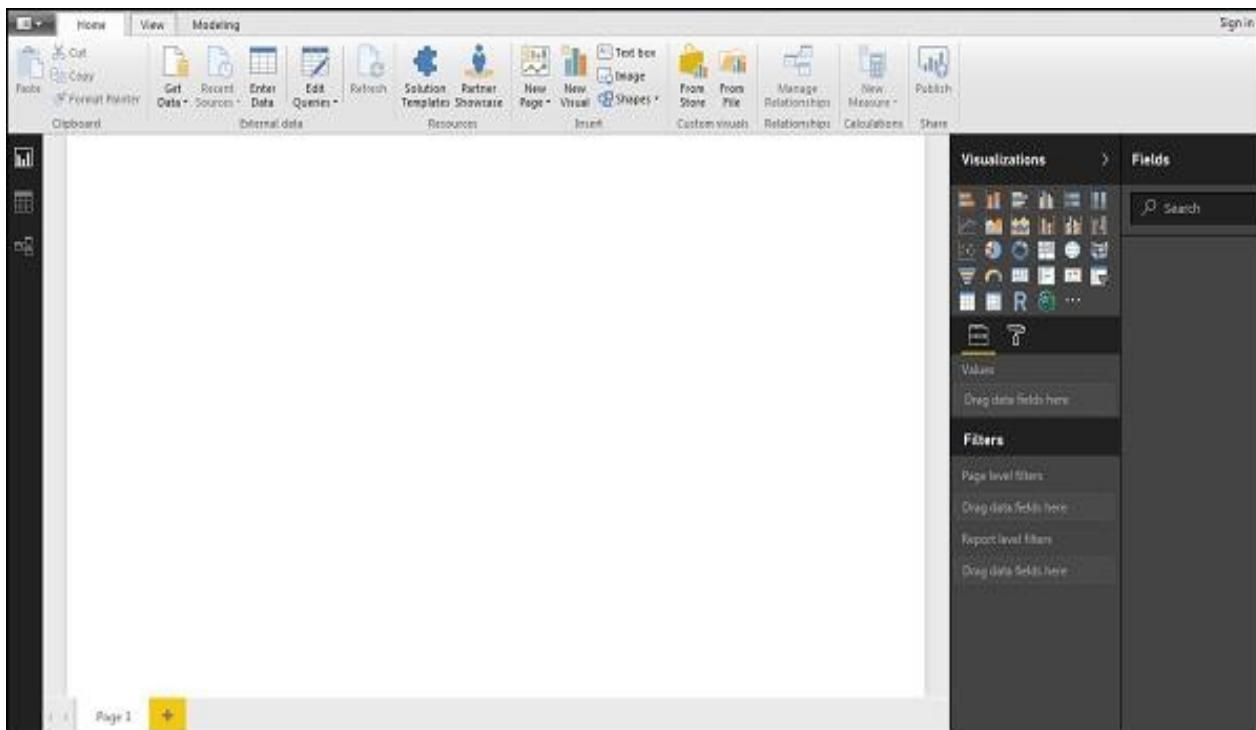


- Follow the status bar until the installation.





- When Power BI is installed, it launches a welcome screen. This screen is used to launch different options related to get data, enrich the existing data models, create reports as well as publish and share reports.



Experiment Number: 02

Aim:

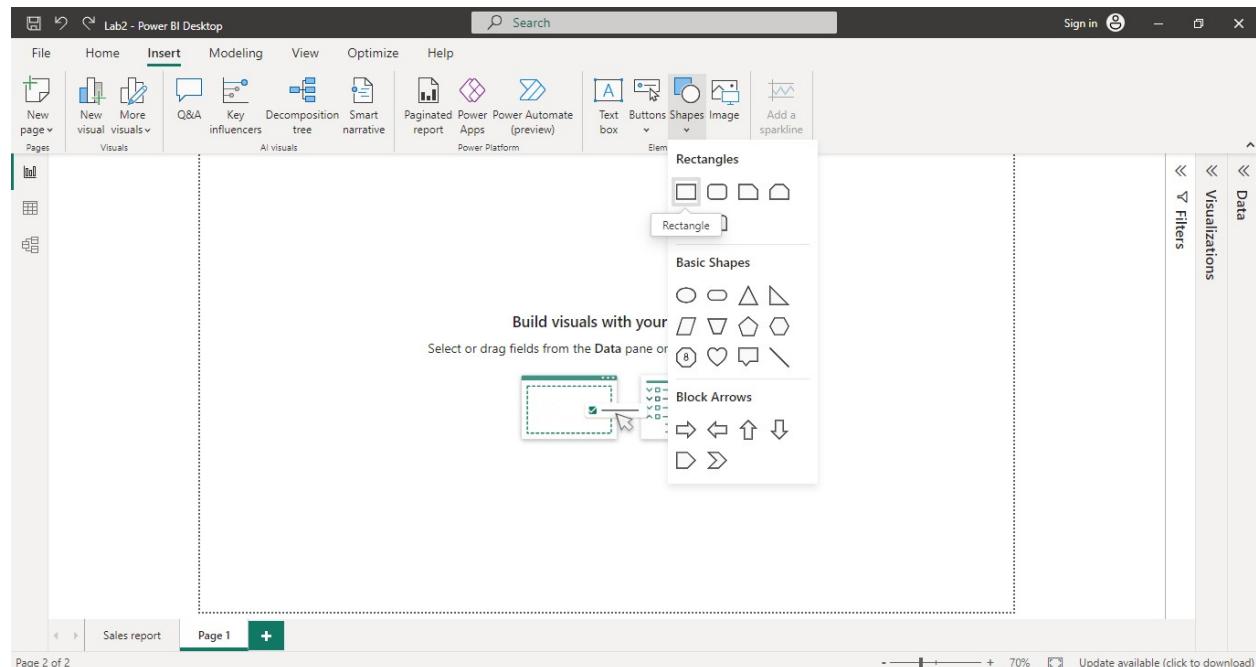
Import the data from different sources such as (Excel, SqlServer, Oracle etc.) and load in the target system.

Procedure:

1. Importing the Dataset:

- Launch Power BI Desktop.
- Click on "Get Data" in the Home tab of the ribbon.
- Select the appropriate data source option "Excel" and follow the prompts to import your sample dataset into Power BI.

2. Insert Rectangle Shape:



- Click on "Format tab" on right side and perform changes on visual.
- Shape > Style > #E66C37
- Shape > Text >Text = "Sales report" , Font Size = 46, Horizontal Alignment = "Center".

Output:

Sales report

3. Add Card with Current Date:

- With the card visualization selected, locate the "Fields" pane on the right-hand side.
- Right-click anywhere in the "Fields" pane and select "New Measure" from the context menu. This will open the formula bar at the top.
- In the formula bar, enter the following DAX formula to create a measure that calculates the current date:

CurrentDate = Now()

- Press Enter to apply the formula.
- Visualization >Format Visual > General > Effects > Background Color : #E6E6E6
- Visualization > Format Visual >Visual > Category Label > Font Size = 12

Output:



7/12/2023 11:23:00 AM

Time

4. Create Stacked Bar Chart:

- Visualizations >Build Visuals >Fields > Y –Axis ="Category"
- Visualizations >Build Visuals >Fields > X-Axis ="Sales"
- Visualizations >Format Visuals> Y-axis> Values >Color = #6B2328
- Visualizations >Format Visuals> Y-axis> Values >Title >Color = #E66C37
- Visualizations >Format Visuals> Y-axis> Values >Color = #6B2328
- Visualizations >Format Visuals> Y-axis> Values >Title >Color = #E66C37
- Visualizations >Format Visuals> Bar> Show All
- Visualizations >Format Visuals> Bar> Technology > Color = #A1343C
- Visualizations >Format Visuals> Bar> Furniture > Color = #6D5A00
- Visualizations >Format Visuals> Bar> Office Supplies> Color = #09124F
- Visualizations >Format Visuals> Data Labels > Options> Inside Center
- Visualizations >Format Visuals> Data Labels> Values > Font Size = 18
- Visualizations >Format Visuals> Title> Text ="Sale by Category"
- Visualizations >Format Visuals> Title> Font Size =25
- Visualizations >Format Visuals> Effects> Background Color = #E6E6E6

Output:



5. Create a Card to display Sum of Sales:

- With the card visualization selected, locate the "Fields" pane on the right-hand side.
- Drag "Sales" to "Fields".
- Visualization >Format Visual > General > Effects > Background Color : #E6E6E6
- Visualization > Format Visual >Visual > Category Label > Font Size = 24

Output:

Sum of Sales
2,326,534

6. Create a Card to display Total Orders:

- With the card visualization selected, locate the "Fields" pane on the right-hand side.
- Drag "OrderID" to "Fields" and change it to count orders.
- Visualization >Format Visual > General > Effects > Background Color : #E6E6E6
- Visualization > Format Visual >Visual > Category Label > Font Size = 24

Output:

Total Orders
5,111

7. Create a Card to display Total Orders:

- With the card visualization selected, locate the "Fields" pane on the right-hand side.
- Drag “Profit” to “Fields”.
- Visualization >Format Visual > General > Effects > Background Color : #E6E6E6
- Visualization > Format Visual >Visual > Category Label > Font Size = 24

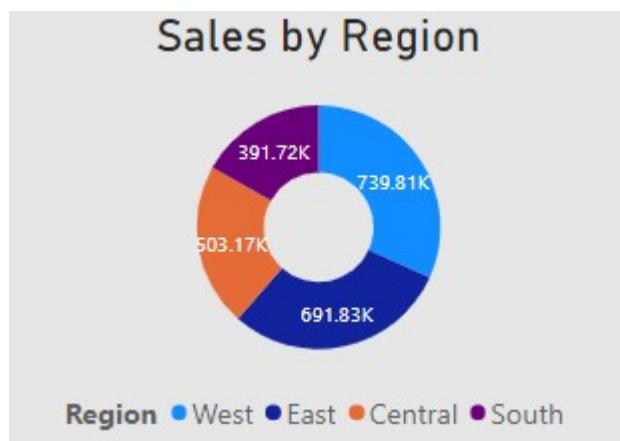
Output:



8. Create Donut Chart:

- Drag “Regions” to Legend , “Sum of Sales” to Values.
- Visualizations > Build Visual > Legend > option =”Bottom Center”
- Visualizations > Build Visual > Legend > Text>Font =12
- Visualizations > Build Visual > Detail Labels >Position =”Center”
- Visualization >Format Visual > General > Effects > Background Color : #E6E6E6
- Visualizations >Format Visuals> Data Labels> Values > Font Size = 14

Output:

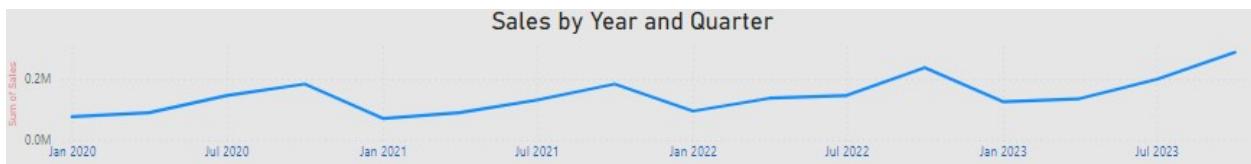


9. Create a Line Chart:

- Visualizations > Build Visual > X-axis =”Order Date” by Year, Quarter
- Visualizations > Build Visual > Y-axis =”Sum of Sales”
- Visualizations > Format Visual > Visual > X-axis > Color =#0D6ABF

- Visualizations > Format Visual > Visual > Y-axis > Color = #0D6ABF
- Visualizations > Format Visual > General > Title > Text > Font > 20
- Visualization >Format Visual > General > Effects > Background Color : #E6E6E6

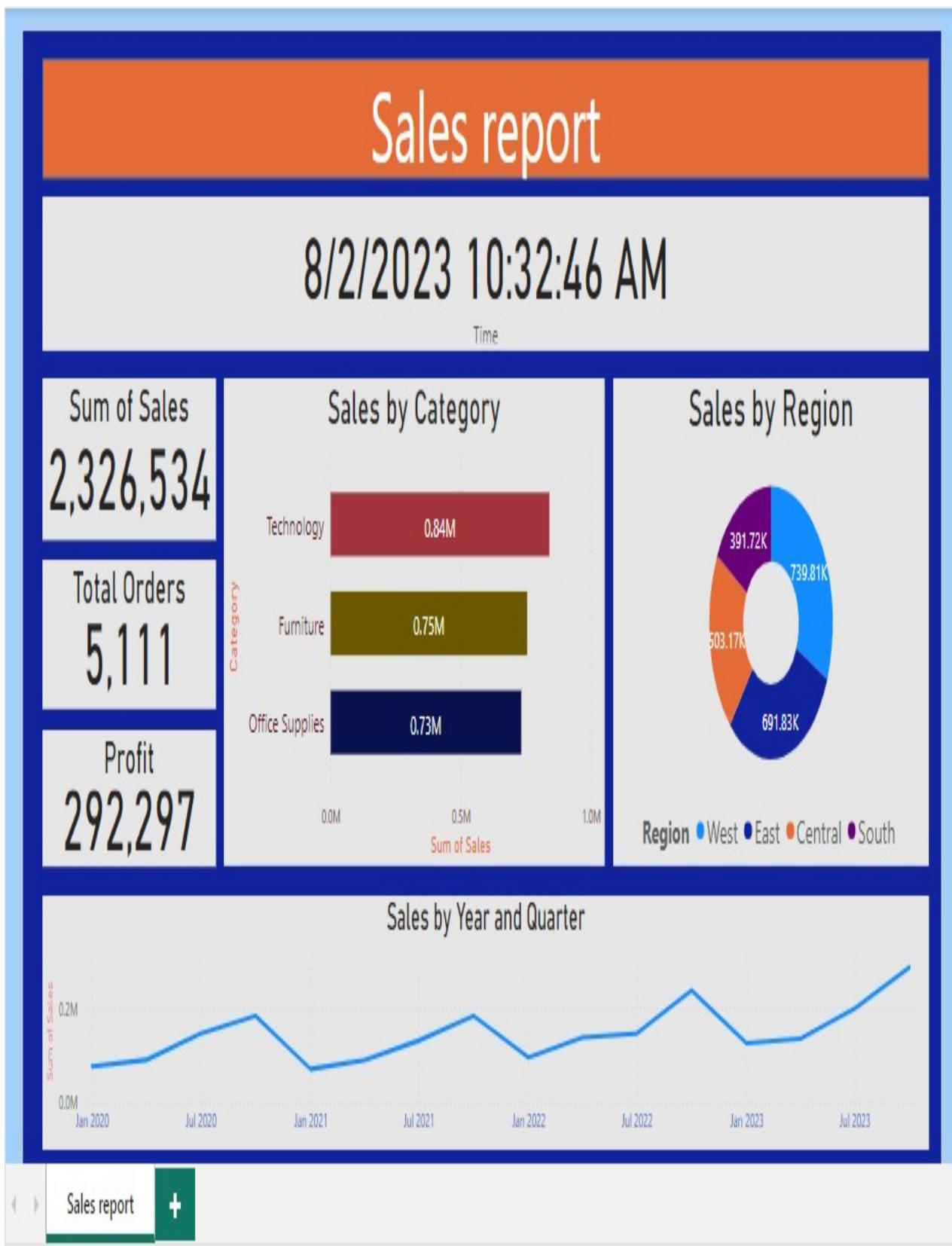
Output:



10. Final Visual Format:

- Visualizations > Page Information > Name ="Sales report"
- Visualizations > Canvas Background > color = #12239E
- Visualizations > WallPaper > Color = #A0D1FF

Output:



Experiment Number: 03

Aim:

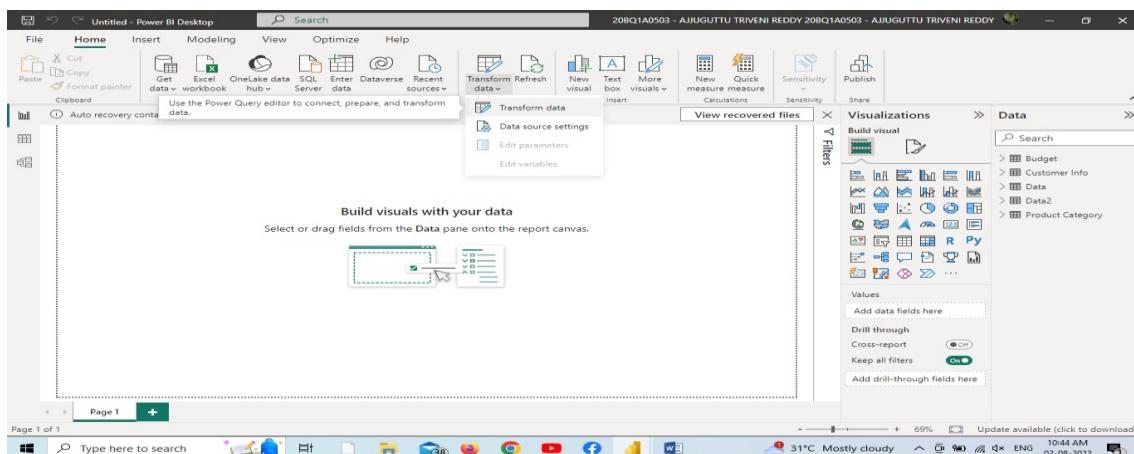
Perform the Extraction Transformation and Loading (ETL) on Data and build Relationship between Tables.

Procedure:

1. Importing the Dataset:

- Launch Power BI Desktop.
- Click on "Get Data" in the Home tab of the ribbon.
- Select the appropriate data source option "Excel" and follow the prompts to import your sample dataset into Power BI.

2. Transform the Data:



- Home > queries > Transform Data

Output:

A screenshot of the Power Query Editor. The ribbon at the top has 'Transform' selected. The main area shows a table with six columns and four rows of data. The first column is named 'Column1'. The data is as follows:

Column1	Column2	Column3	Column4	Column5
Location	01-01-2018	01-02-2018	01-03-2018	01-04-2018
Chennai	100000	100000	100000	130000
Bangalore	120000	120000	120000	150000
Hydrabad	125000	125000	125000	150000

On the right side, there are panes for 'Properties' (showing 'Name: Budget'), 'Applied Steps' (listing 'Source', 'Navigation', and 'Changed Type'), and 'Query Settings'.

3. Use First Row as Headers:

- Select the First row of the table.
- Home > Transform > Use First Row as Headers.

The screenshot shows a Power BI query editor window. On the left, there's a 'Queries [5]' pane listing 'Budget'. The main area displays a table with the following data:

Column1	Column2	Column3	Column4	Column5
Location	01-01-2018	01-02-2018	01-03-2018	01-04-2018
Chennai	100000	100000	100000	130000
Bangalore	120000	120000	120000	150000
Hyderabad	125000	125000	125000	150000

The 'Query Settings' pane on the right shows the 'APPLIED STEPS' section with 'Changed Type' selected.

Output:

The screenshot shows the same Power BI query editor window after applying the 'Use First Row as Headers' step. The table now has the following structure:

Location	01-01-2018	01-02-2018	01-03-2018	01-04-2018	01-05-2018
Chennai	100000	100000	100000	130000	
Bangalore	120000	120000	120000	150000	
Hyderabad	125000	125000	125000	150000	

The 'Query Settings' pane on the right shows the 'APPLIED STEPS' section with 'Promoted Headers' selected.

4. Replace Values:

- Select one of the column from table in which we replace values.
- Home > Transform > Replace Values
- Replace the values by giving Existed value and the new text that need to get replaced in the **Value to Find** and **Replace with** textboxes.

The screenshot shows the Power BI query editor with the 'Replace Values' dialog open. The dialog box contains the following fields:

- Value To Find: Hyderabad
- Replace With: Pune

The 'Query Settings' pane on the right shows the 'APPLIED STEPS' section with 'Replace Values' selected.

Output:

The screenshot shows the Power Query Editor interface. A query named "Budget" is selected. The main area displays a table with columns: Location, Date 1, Date 2, Date 3, Date 4, and Date 5. The data shows locations like Chennai, Bangalore, and Pune with corresponding dates and values. The "APPLIED STEPS" pane on the right lists steps such as "Source", "Navigation", "Changed Type", "Promoted Headers", "Changed Type1", and "Replaced Value".

5. Manage Columns:

- Home > Manage Columns > Choose Columns > Select the checkboxes of required columns
- Home > Manage Columns > Go to column > Select the req Column checkbox to go that column

The screenshot shows the Power Query Editor interface. A query named "Data2" is selected. The main area displays a table with columns: Sale date, Receipt no., Order type name, Item name, Category name, and Selling price. The "APPLIED STEPS" pane on the right lists steps such as "Source", "Navigation", and "Promoted Headers".

Output:

The screenshot shows the Power Query Editor interface. A query named "Data2" is selected. The main area displays a table with columns: Sale date, Receipt no., Selling price, and Item quantity. The "APPLIED STEPS" pane on the right lists steps such as "Source", "Navigation", "Promoted Headers", and "Removed Other Columns".

6. Reduce Rows:

- Home > Keep Rows > keep top rows > Specify num of rows(Fig1)
- Similarly, keep bottom rows, keep range of rows are done
- Home > Remove Rows > Remove bottom rows > specify num of rows to be removed from bottom(Fig2)
- Similarly, Remove top rows, remove alternate rows can be done.

Output:

The first screenshot shows a table with 10 rows and the formula `= Table.FirstN(#"Removed Other Columns",10)`. The applied steps list includes "Kept First Rows".

	Sale date	Receipt no	Selling price	Item quantity
1	06-03-2020	BL11	1100	1
2	06-03-2020	BL11	1100	1
3	06-03-2020	BL12	1100	1
4	06-03-2020	BL12	1100	1
5	06-03-2020	BL12	1100	1
6	06-03-2020	BL12	1100	1
7	06-03-2020	BL12	1100	2
8	06-03-2020	BL13	1100	1
9	06-03-2020	BL13	1100	1
10	06-03-2020	BL13	900	1

The second screenshot shows a table with 7 rows and the formula `= Table.RemoveLastN(#"Kept First Rows",3)`. The applied steps list includes "Removed Bottom Rows".

	Sale date	Receipt no	Selling price	Item quantity
1	06-03-2020	BL11	1100	1
2	06-03-2020	BL11	1100	1
3	06-03-2020	BL12	1100	1
4	06-03-2020	BL12	1100	1
5	06-03-2020	BL12	1100	1
6	06-03-2020	BL12	1100	1
7	06-03-2020	BL12	1100	2

7. Split Column:

The screenshot shows the Power Query Editor with the "Data Type" context menu open over the "Selling price" column. The menu options include "Split Column", "Group By", "Advanced Editor", "Choose Columns", "Remove Columns", "Keep Rows", "Remove Rows", "Reduce Rows", and "Sort".

The main area displays a table with columns: Sale date, Receipt no, Order type name, and Item name. The "Order type name" column contains values like "On Shop", "Online Order", and "Casual Wear".

The properties pane on the right shows the query is named "Data" and the applied steps list includes "Changed Type1".

Output:

- Split Column By Delimiter

A screenshot of the Power Query Editor interface. The main area shows a table with the following columns: Sale date, Receipt no., Order type name, Item name.1, Item name.2, and Category no. The data consists of 24 rows of purchase records. The 'Applied Steps' pane on the right shows the step 'Split Column by Delimiter' has been applied.

- Split Column By Number of Characters

A screenshot of the Power Query Editor interface. The main area shows a table with the following columns: Sale date, Receipt no., Order type name.1, Order type name.2, Item name, and Category no. The data consists of 24 rows. The 'Applied Steps' pane shows the step 'Changed Type1' has been applied.

- Split Column By Positions

A screenshot of the Power Query Editor interface. The main area shows a table with the following columns: Sale date, Receipt no.1, Receipt no.2, Order type name, Item name, and Category no. The data consists of 24 rows. The 'Applied Steps' pane shows the step 'Changed Type1' has been applied.

- Similarly, Split Column By Uppercase to Lowercase, Split Column By Lowercase to Uppercase, Split Column By Digit to non-digit, Split column by non-digit to digit can be done.

8. Sort:

- Home > Sort > Sort Descending (Sort Highest to Lowest)

If we want to sort from lowest to highest then select Sort Ascending.

Output:

The screenshot shows the Power Query Editor interface with a table of data. The table has columns: Sale date, Receipt no., Ordertype name, Item name, Category name, and Selling price. A sorting operation is applied to the Ordertype name column, ordered descending. The 'Applied Steps' pane on the right shows the step 'Kept First Rows'.

Sale date	Receipt no.	Ordertype name	Item name	Category name	Selling price
06-03-2020	BL14	Online Order	Jeans - Denim	Casual Wear	
06-03-2020	BL13	Online Order	Jeans - Denim	Casual Wear	
06-03-2020	BL13	Online Order	Jeans - Denim	Casual Wear	
06-03-2020	BL14	Online Order	Jeans - Denim	Casual Wear	
06-03-2020	BL14	Online Order	Jeans - Denim	Casual Wear	
06-03-2020	BL12	On Shop	Jeans - Denim	Casual Wear	
06-03-2020	BL12	On Shop	Jeans - Levi's	Casual Wear	
06-03-2020	BL12	On Shop	Jeans - Levi's	Casual Wear	
06-03-2020	BL13	On Shop	Jeans - Denim	Casual Wear	
06-03-2020	BL12	On Shop	Jeans - Levi's	Casual Wear	
06-03-2020	BL13	On Shop	Jeans - Levi's	Casual Wear	
06-03-2020	BL12	On Shop	Jeans - Levi's	Casual Wear	
06-03-2020	BL11	On Shop	Jeans - Levi's	Casual Wear	
06-03-2020	BL11	On Shop	Jeans - Levi's	Casual Wear	

9. Group By:

- Home > Group By > Specify the column to Group By > Give the new column name and Operation to get the desired output.

Output:

	Ordertype name	Count
1	On Shop	973
2	Online Order	63
3	null	1

10. Create table:

- Home > Enter data > Create table by giving values to the columns

Snowflake

Create Table

	SID	SName
1	1	Shiv
2	2	Ram
3	3	Mahi
4	4	Sakshi
5	5	Kritika

Name: Student

OK Cancel

Output:

TransformData - Power Query Editor

File Home Transform Add Column View Tools Help

Queries [5]

- Budget
- Customer Info
- Data
- Data2
- Product Category
- Sheet1
- Student Courses
- Course
- Student

Query Settings

Properties Name Student All Properties

Applied Steps Source Changed Type

	SID	SName
1	1	Shiv
2	2	Ram
3	3	Mahi
4	4	Sakshi
5	5	Kritika

11. Merge Queries:

- Home > Merge Queries > Select a table and matching columns to create a merging table

Power Query Editor

Add Column View Tools Help

Inter Data Data source settings Manage Parameters Refresh Advanced Editor Properties Choose Columns Remove Columns Keep Rows Remove Rows Sort Split Column Group By Use First Row as Headers Data Type: Whole Number Data Type: Text

Merge Queries Text Analytics

Merge Queries as New Merge Queries in Azure Machine Learning

Merge Queries as New Merge Queries in Machine Learning

Merge Queries as New Merge Queries in AI Insights

Query Settings

Properties Name Student Courses All Properties

Applied Steps Source Changed Type Renamed Columns

	SID	CourseID
1	1	10
2	1	20
3	3	20
4	3	50
5	2	40

Output:

Table.ExpandTableColumn(#"Merged Queries", "Student", {"SID", "SName"}, {"Student.SID", "Student.SName"})

	SID	CourseID	Student.SID	Student.SName
1	1	10	1	Shiv
2	1	20	1	Shiv
3	2	40	2	Ram
4	3	20	3	Mahi
5	3	50	3	Mahi

Query Settings

Properties Name Student Courses All Properties

Applied Steps Source Changed Type Renamed Columns Merged Queries Expanded Student

12. Replacing Null values By Fill down or Fill up:

- Select a Column > Right Click > Select Fill option > Select Down

The screenshot shows the Power Query Editor interface. A table is open with two columns: Column1 and Column2. Column1 contains several null entries. The formula bar at the top shows the formula: = Table.TransformColumnTypes(#"Product Category_Sheet",{{"Column1", type text}, {"Column2", type text}}). The 'APPLIED STEPS' pane on the right shows a step named 'Changed Type'.

Category name	Item name
Casual Wear	Jeans - Levi's
null	Jeans - Denim
null	Jeans - Zara
null	Jeans - Lega
Semi Formal	Shirt - PE
null	Legin
null	T-shirt
Formal	shirt
null	Shirt Louis
null	Indian Terrain
null	Shirt - Arrow
Accessories	Wallet
null	Chain

Output:

The screenshot shows the same table after applying the 'Fill Down' operation. All null values in Column1 have been replaced by the value from the row above, resulting in no null entries.

Category name	Item name
Casual Wear	Jeans - Levi's
Casual Wear	Jeans - Denim
Casual Wear	Jeans - Zara
Casual Wear	Jeans - Lega
Semi Formal	Shirt - PE
Semi Formal	Legin
Semi Formal	T-shirt
Formal	shirt
Formal	Shirt Louis
Formal	Indian Terrain
Formal	Shirt - Arrow
Accessories	Wallet
Accessories	Chain

13. Append Queries:

- Home > Append Queries > Select table to append
- Concatenate rows from two tables into a single table.

The screenshot shows the Power Query Editor with two tables being concatenated. The first table has columns SID and SName. The second table also has columns SID and SName. The formula bar shows the formula: = Table.TransformColumnTypes(Source,{{"SIC", type text}}). The 'APPLIED STEPS' pane on the right shows a step named 'Changed Type'.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000
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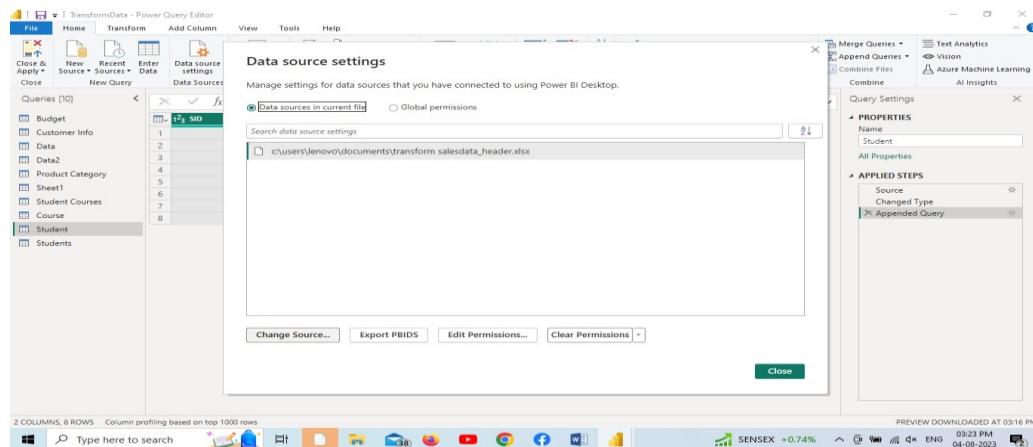
Output:

The screenshot shows the Power Query Editor interface. On the left, there is a preview pane displaying a table with two columns: SID and SName. The data consists of 8 rows with values: 1 Shiv, 2 Ram, 3 Mahi, 4 Sakshi, 5 Kritika, 6 Anushka, 7 Sweety, and 8 Shetty. On the right, the 'Query Settings' pane is open, showing the 'PROPERTIES' section with 'Name' set to 'Student' and the 'APPLIED STEPS' section which includes 'Source', 'Changed Type', and 'Appended Query'.

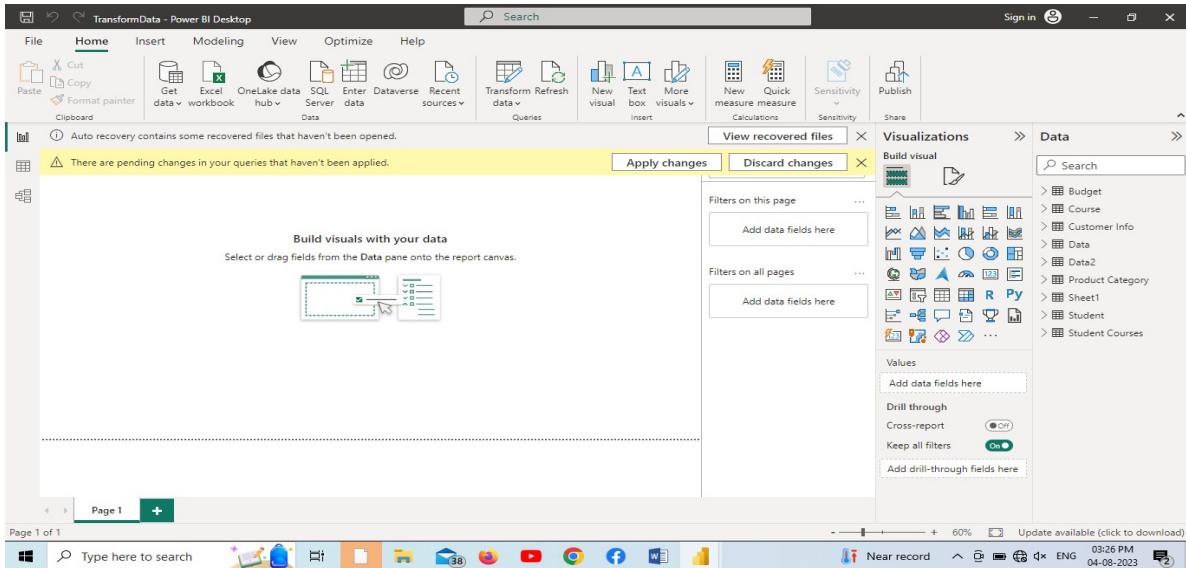
SID	SName
1	Shiv
2	Ram
3	Mahi
4	Sakshi
5	Kritika
6	Anushka
7	Sweety
8	Shetty

14. Data source Settings:

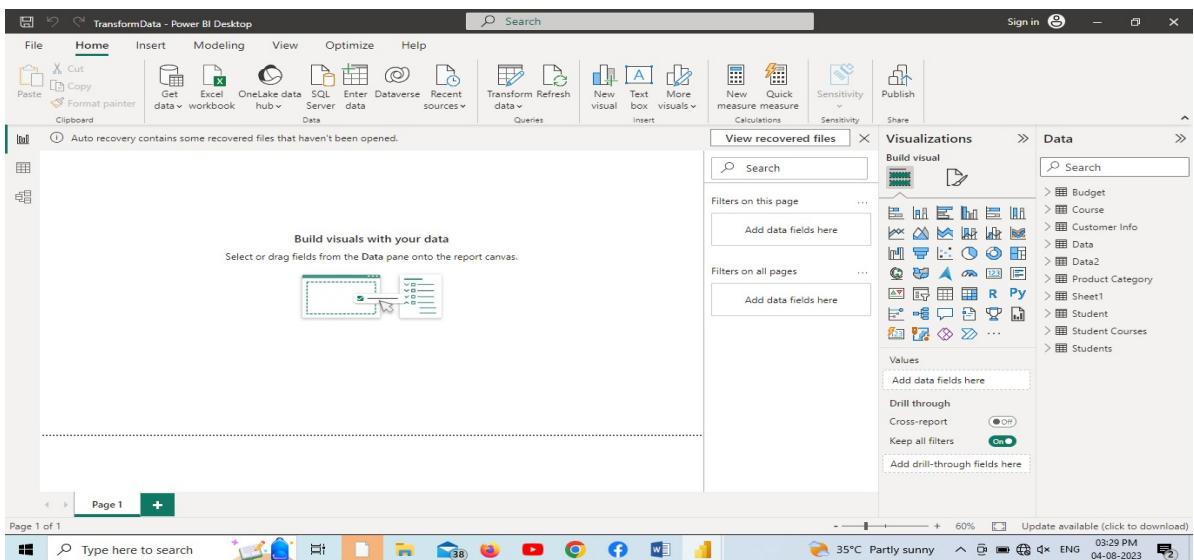
- Home > Data Source Settings > Change the path or loc of data (if needed).



- Open the power Bi desktop and Apply changes



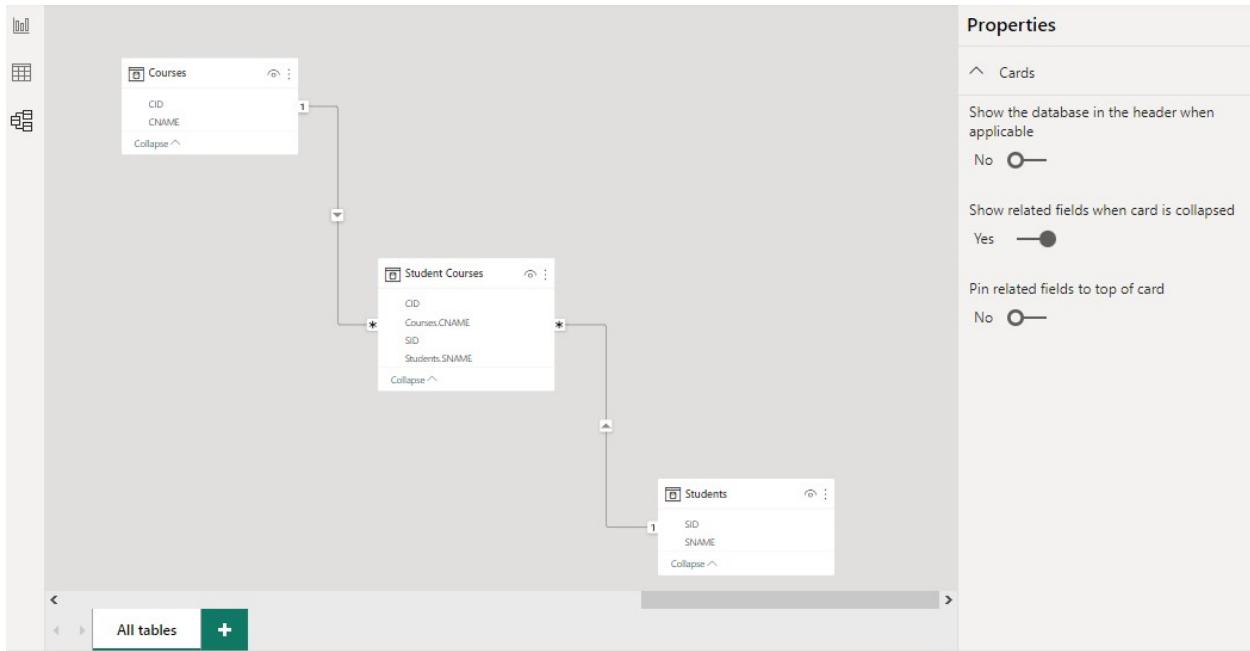
Output:



15. Relationships between tables:

- Select Model View at left vertical tab.
- Create table relations with correlations with them.

Output:



Experiment Number: 04

Aim:

Create different Advanced visualization in a report.

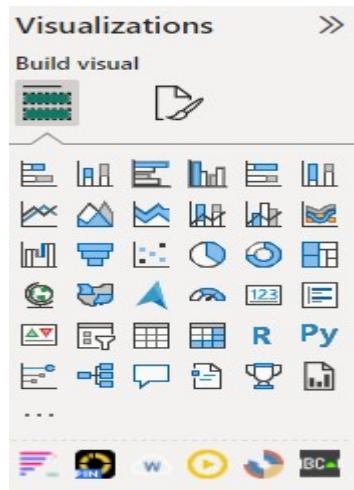
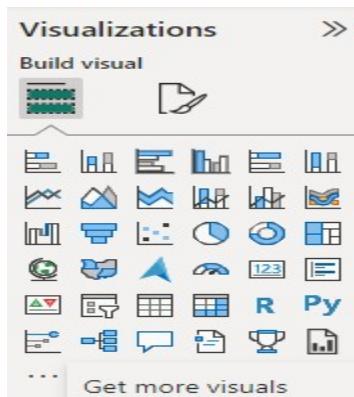
Procedure:

1. Importing the Dataset:

- Launch Power BI Desktop.
- Click on "Get Data" in the Home tab of the ribbon.
- Select the appropriate data source option "Excel" and follow the prompts to import your sample dataset into Power BI.

2. Importing Advance Visuals:

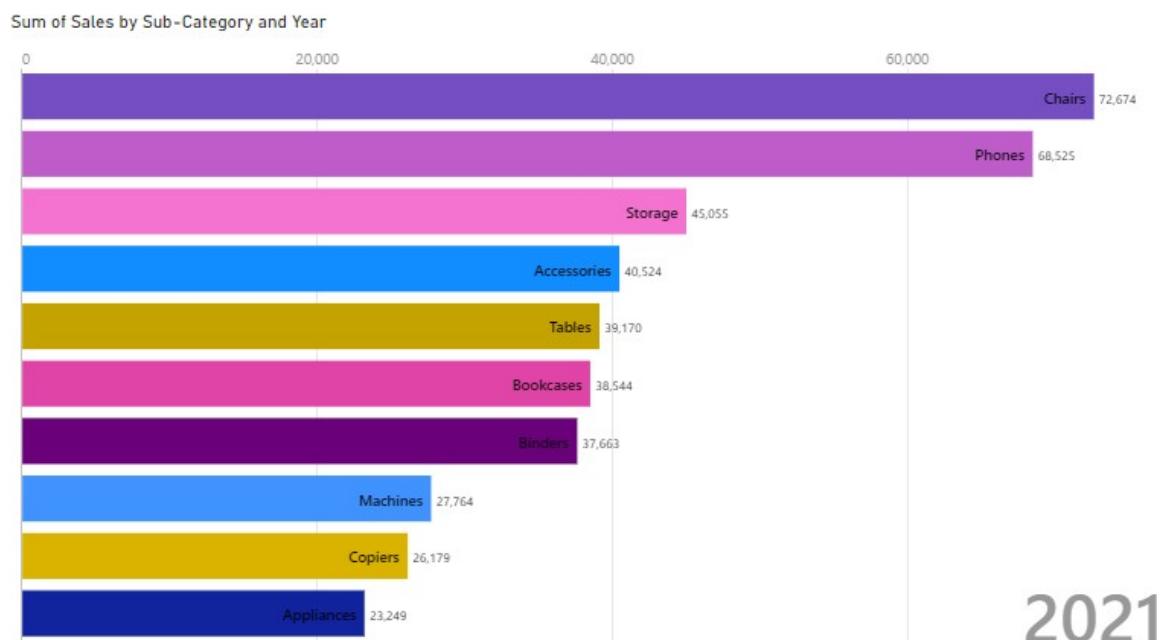
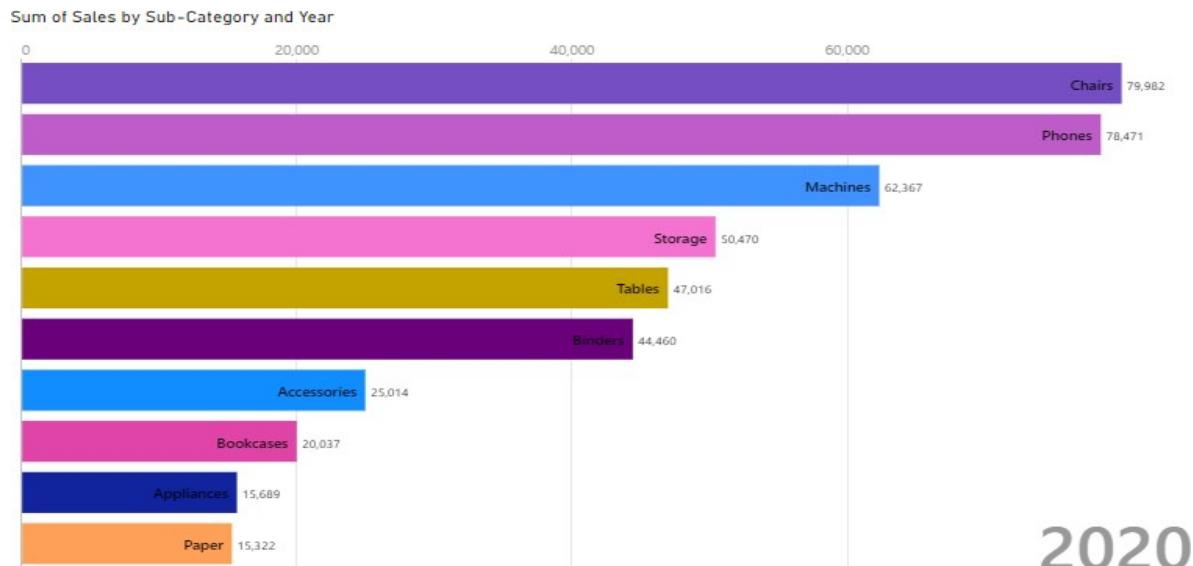
- To install them, first log in to the application
- Visualization > get more visuals > search for visuals > Click on ADD
- Add all mentioned visuals to the application i.e., Animated Bar Chart, Drill Down Donut Pro, Play Axis, WordCloud, SunBurst, Scroller



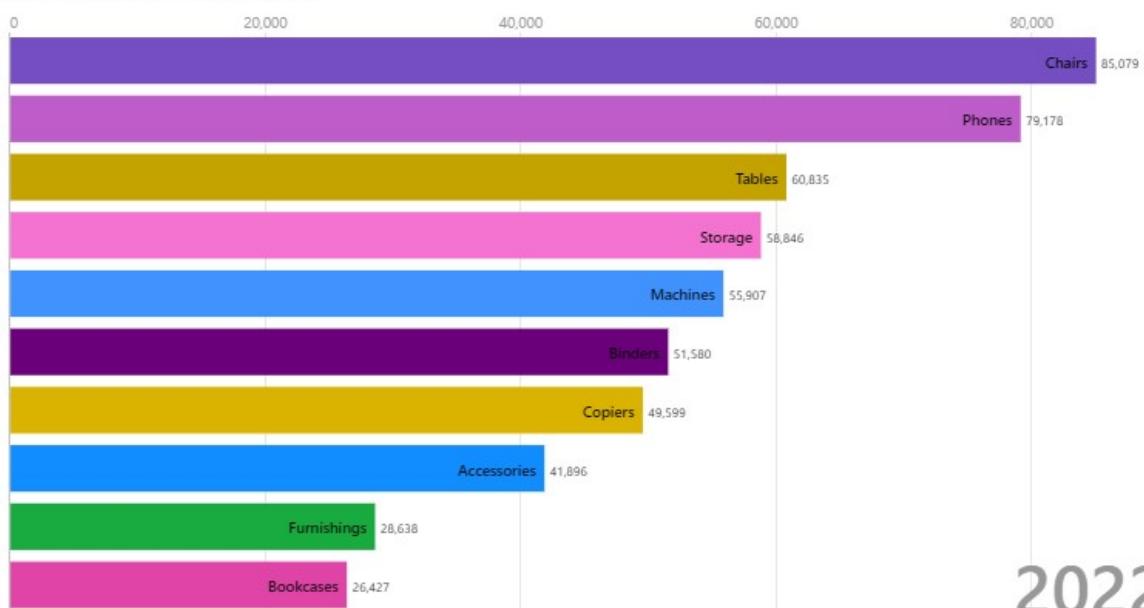
3. Creating Animated Bar Chart:

- Visualizations > Build Visual > Animated Bar Chart
- Visualizations > Build Visual > Name = "Sub Category"
- Visualizations > Build Visual > Value = "Sum of Sales"
- Visualizations > Build Visual > Period = "Order Date – Year"

Outputs per Year:

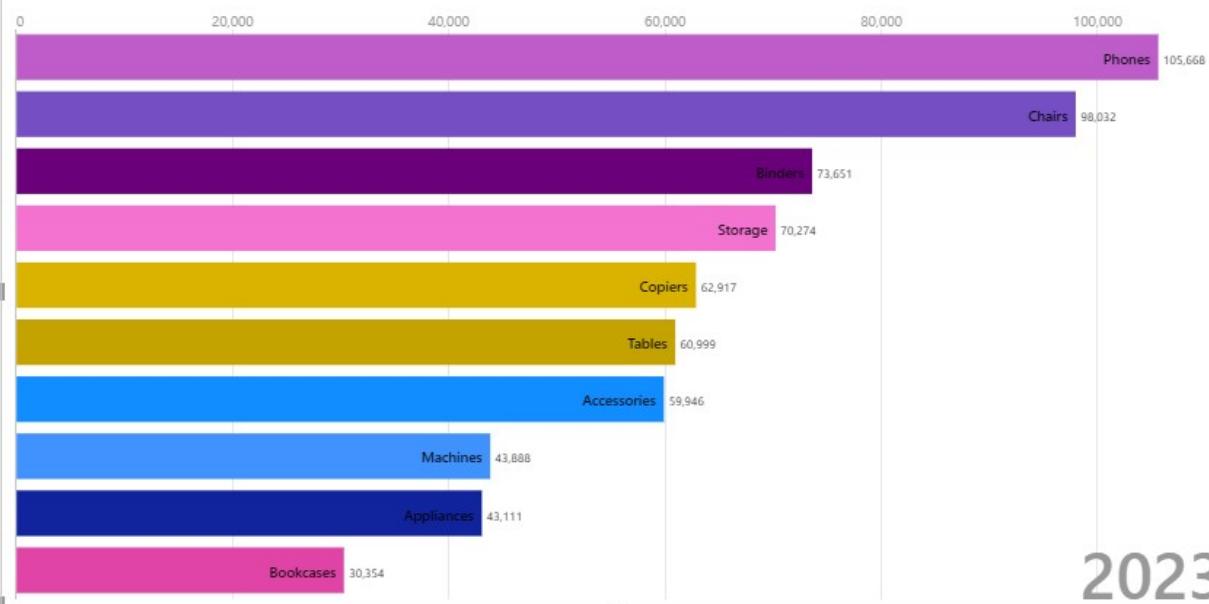


Sum of Sales by Sub-Category and Year



2022

Sum of Sales by Sub-Category and Year



2023

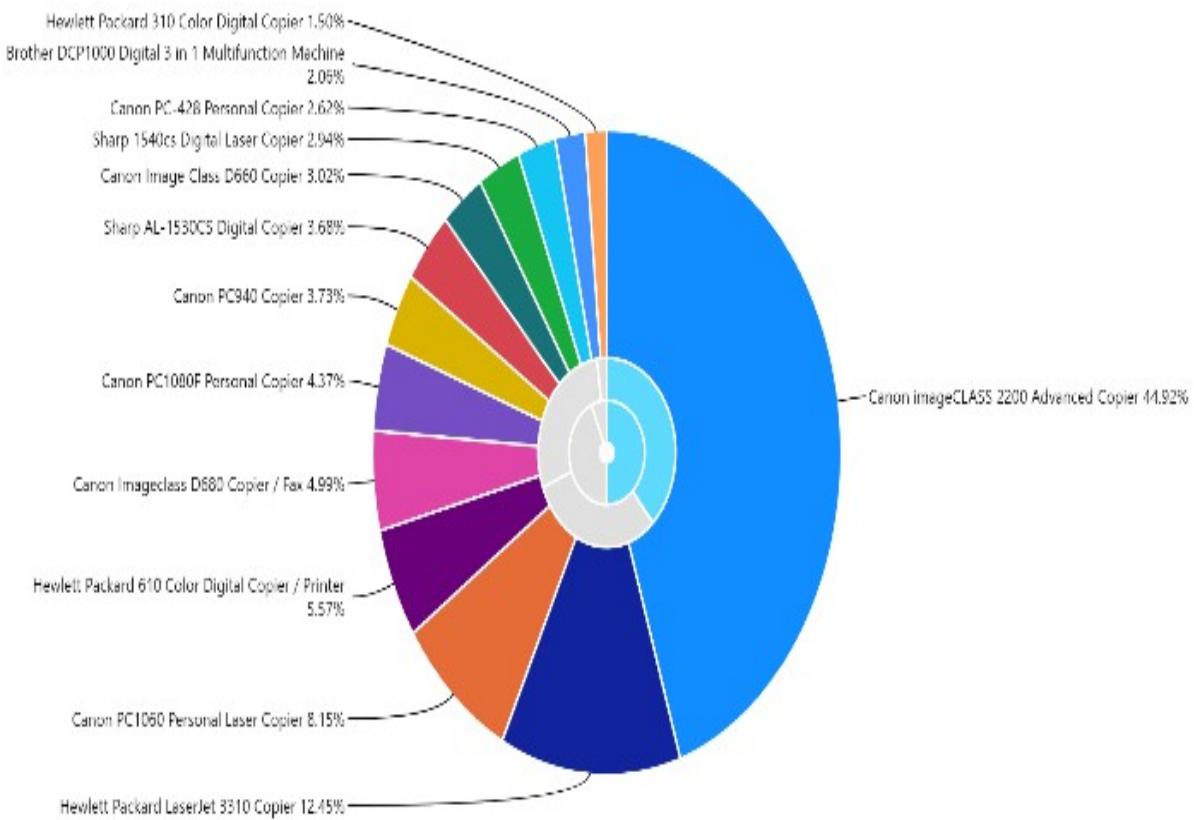
3. Creating Animated Bar Chart:

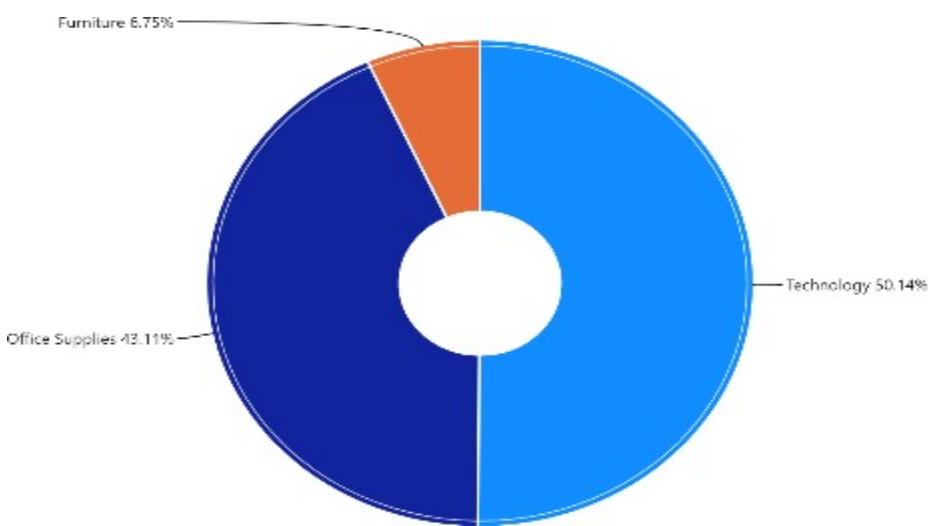
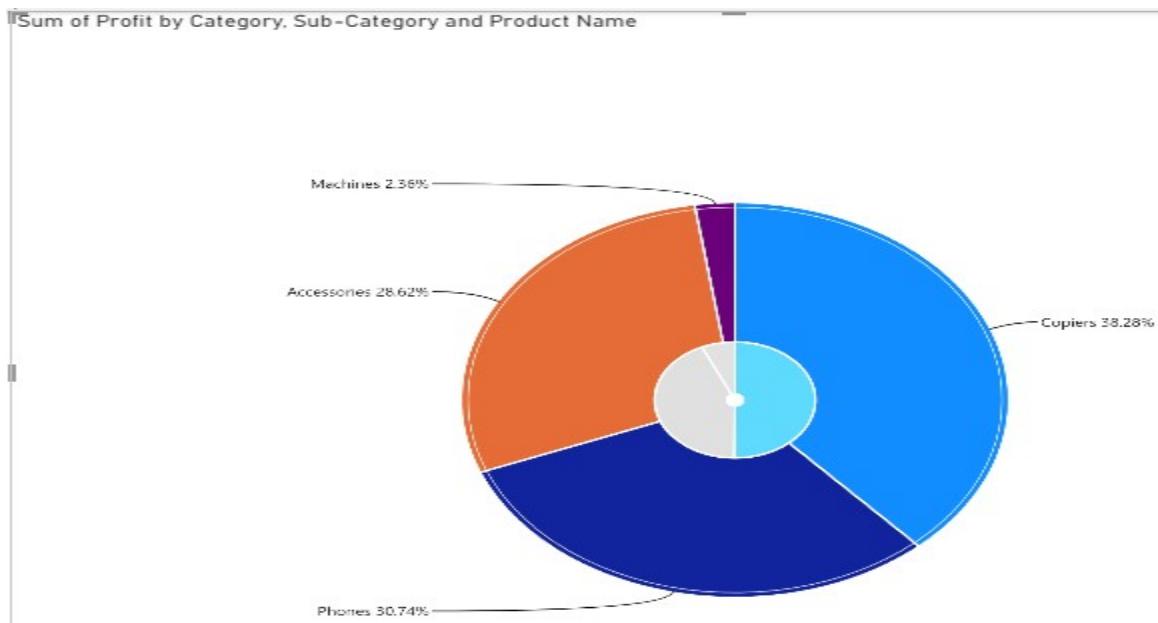
- Visualizations > Build Visual > Drill Down Donut Pro
- Visualizations > Build Visual > Category = “Category Hierarchy”
- Visualizations > Build Visual > Value = “Profit”
- Click on center to reverse to drill up and click on one part side to drill down.

Output:

Sum of Profit by Category, Sub-Category and Product Name

Y E ...
①





4. Creating Word Cloud:

- Visualizations > Build Visual > WordCloud
- Visualizations > Build Visual > Category = “State / Province”
- Visualizations > Build Visual > Value = “Sum of Profits”

➤ Click on Name of state to view its values.

Output:

Sum of Profit by State/Province



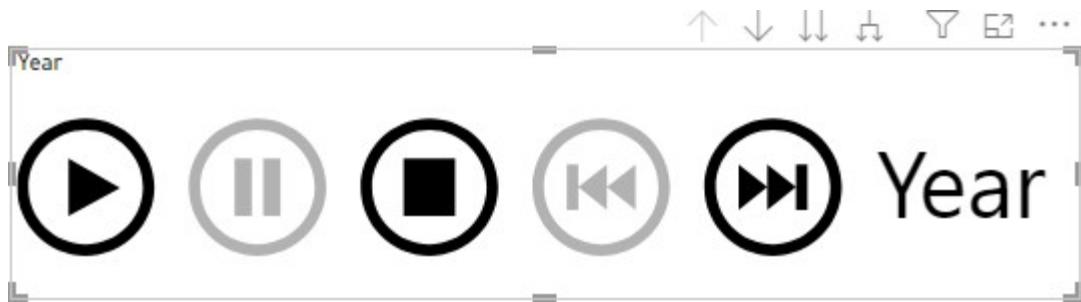
Sum of Profit by State/Province



5. Creating Play Axis:

- Visualizations > Build Visual > Play Axis
- Visualizations > Build Visual > Field= “Order Date”

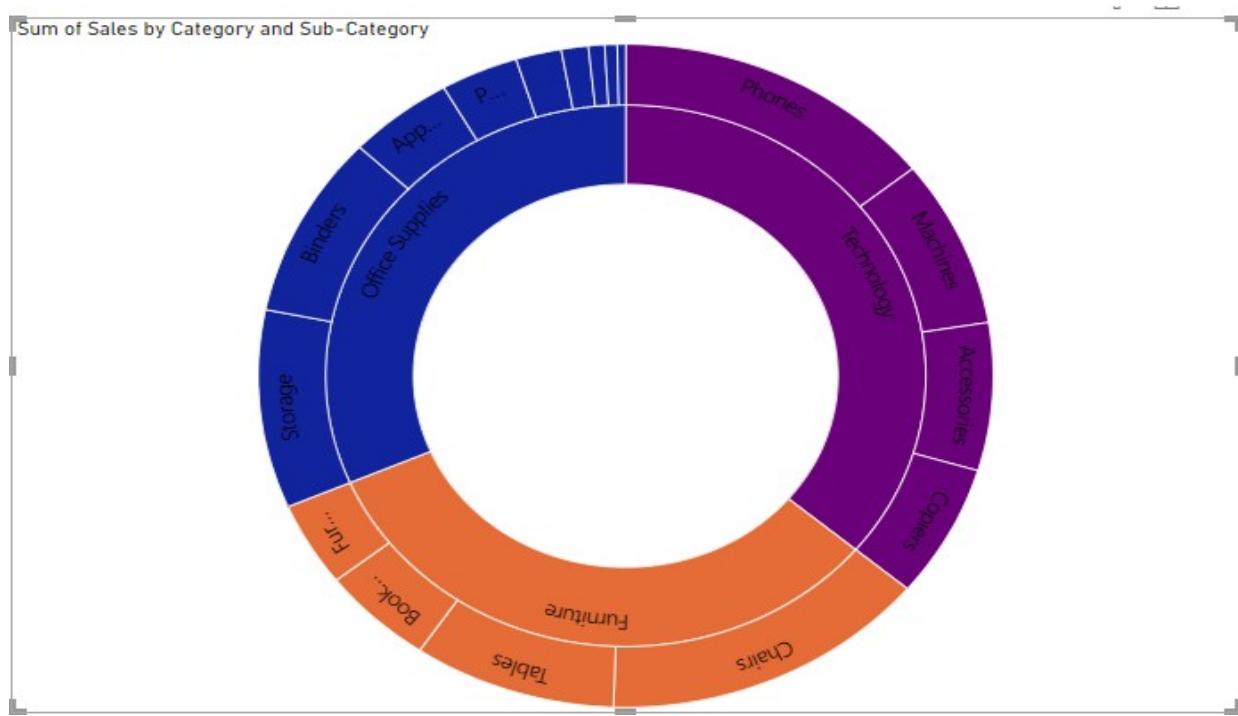
Output:

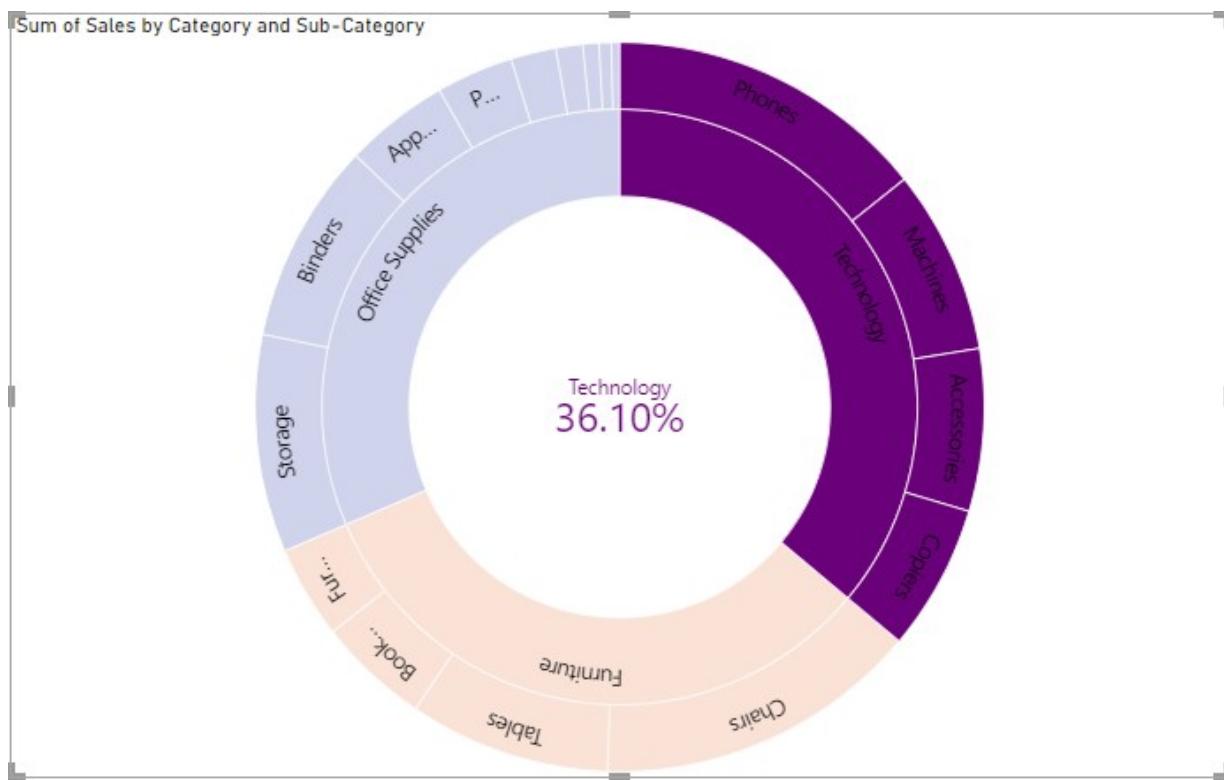


6. Creating Sun Burst:

- Visualizations > Build Visual > Sun Burst
- Visualizations > Build Visual > Groups= “Category, Sub Category”
- Visualizations > Build Visual > Values = “sum of sales”
- Drill down by selecting category name on the chart and drill up by click on it again.

Output:

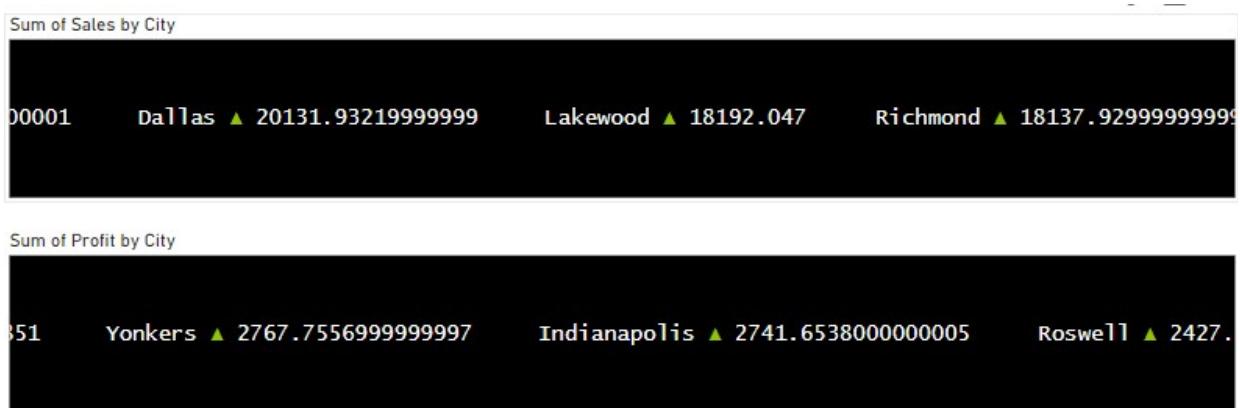




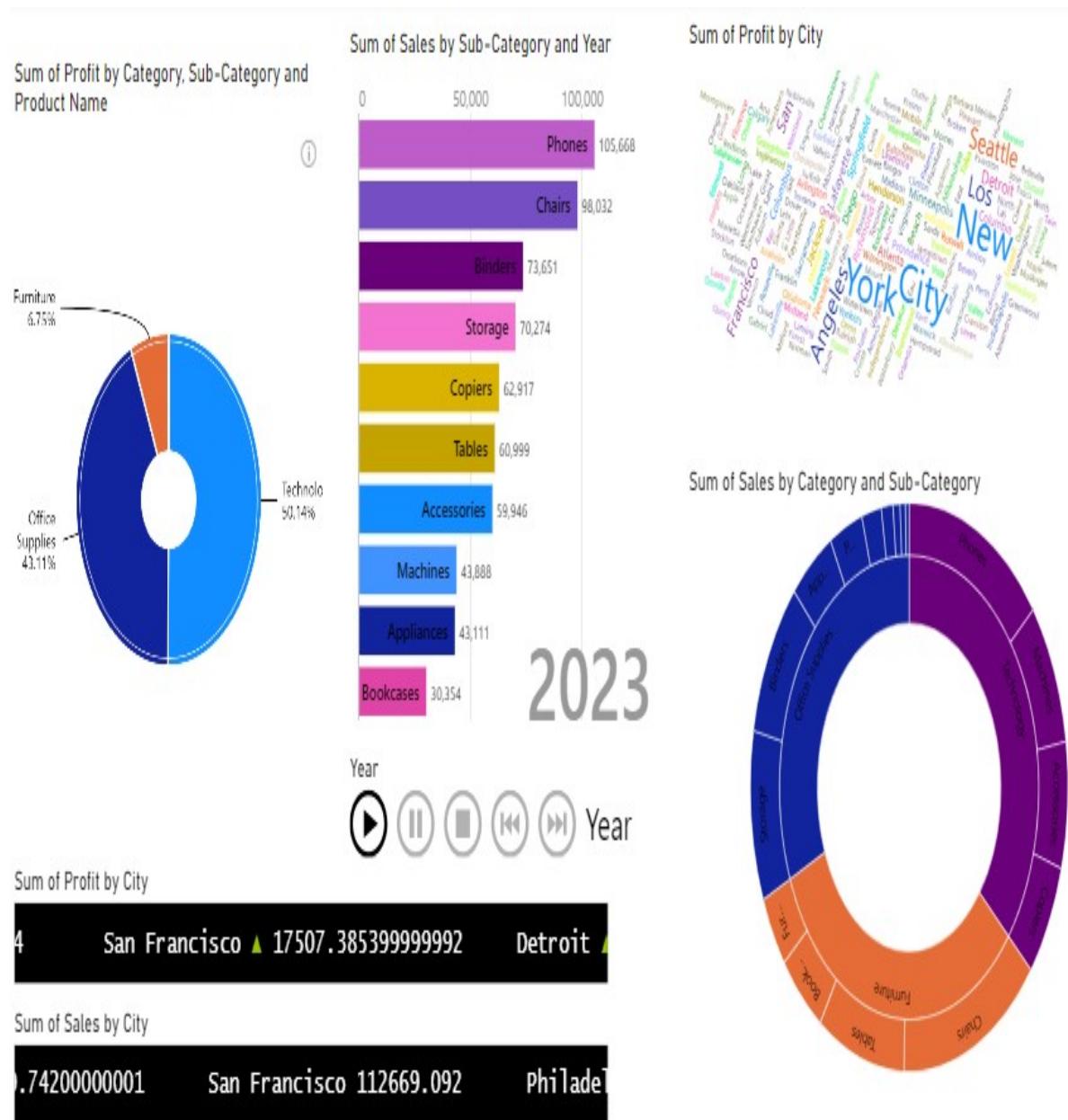
6. Creating Scroller:

- Visualizations > Build Visual > Scroller
- Visualizations > Build Visual > Category= “City”
- Visualizations > Build Visual > Measure = “sum of sales”
- Visualizations > Build Visual > Category= “City”
- Visualizations > Build Visual > Measure = “Sum of profits”

Output:



7. Final Report output:



Experiment Number: 05

Aim:

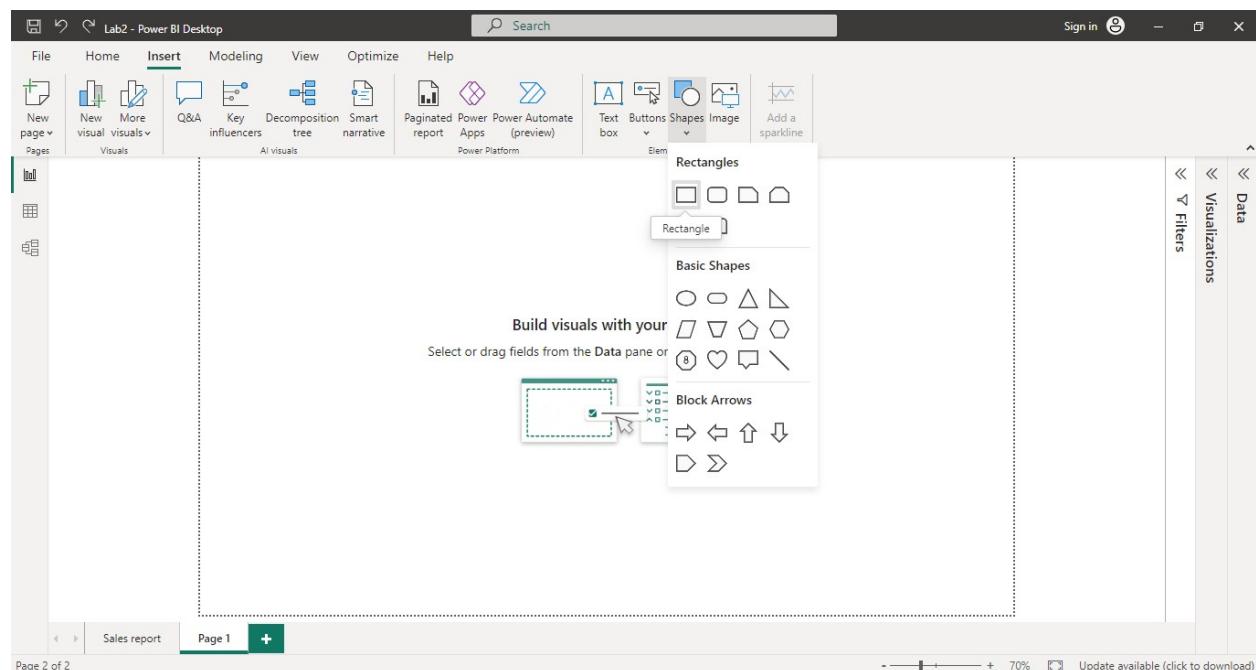
Create Reports Using set Interactions between Visuals, Hierarchies and Drilldown, Drill through into Power BI.

Procedure:

1. Importing the Dataset:

- Launch Power BI Desktop.
- Click on "Get Data" in the Home tab of the ribbon.
- Select the appropriate data source option "Excel" and follow the prompts to import your sample dataset into Power BI.

2. Insert Rectangle Shape:



- Click on "Format tab" on right side and perform changes on visual.
- Shape > Style > #E66C37
- Shape > Text >Text = "Sales report" , Font Size = 46, Horizontal Alignment = "Center".

Output:

Sales report

3. Create a Slicer:

- Visualizations > Build Visual > Slicer
- Visualizations > Build Visual > Field = “Location”
- Visualizations >Format Visuals> Title> Font Size =14
- Visualizations >Format Visuals> Effects> Background Color = #9B0065
- Visualizations >Format Visuals> Effects> Height= 79
- Visualizations >Format Visuals> Effects> Width = 582

Output:



4. Add Card with Current Date:

- With the card visualization selected, locate the "Fields" pane on the right-hand side.
- Right-click anywhere in the "Fields" pane and select "New Measure" from the contextmenu. This will open the formula bar at the top.
- In the formula bar, enter the following DAX formula to create a measure that calculates the current date:
 - **CurrentDate = Now()**
- Press Enter to apply the formula.
- Visualization >Format Visual > General > Effects > Background Color : #F18F49
- Visualization > Format Visual >Visual > Category Label > Font Size = 12

Output:

02-08-2023 17:44:12

5. Create Stacked Bar Chart:

- Visualizations >Build Visuals >Fields > Y –Axis =”Category Name Hierarchy”
- Visualizations >Build Visuals >Fields > X-Axis =”Sum of Selling Price”
- Visualizations >Format Visuals> Y-axis> Values >Color = #5F6B6D
- Visualizations >Format Visuals> Y-axis> Values >Title >Color = #374649
- Visualizations >Format Visuals> X-axis> Values >Color = #5F6B6D
- Visualizations >Format Visuals> X-axis> Values >Title >Color = #374649
- Visualizations >Format Visuals> Bar> Show All
- Visualizations >Format Visuals> Bar> Accessories> Color = #374649
- Visualizations >Format Visuals> Bar> Formal>color = #D2B04C
- Visualizations >Format Visuals> Bar> SemiFormal> Color = #00ACFC
- Visualizations >Format Visuals> Bar> Casual Wear> Color = #C83D95
- Visualizations >Format Visuals> Data Labels > Options> Inside Center
- Visualizations >Format Visuals> Data Labels> Values > Font Size = 18
- Visualizations >Format Visuals> Title> Text =”Sum of selling Price By Category Name”
- Visualizations >Format Visuals> Title> Font Size =24
- Visualizations >Format Visuals> Effects> Background Color = #F1792

Output:

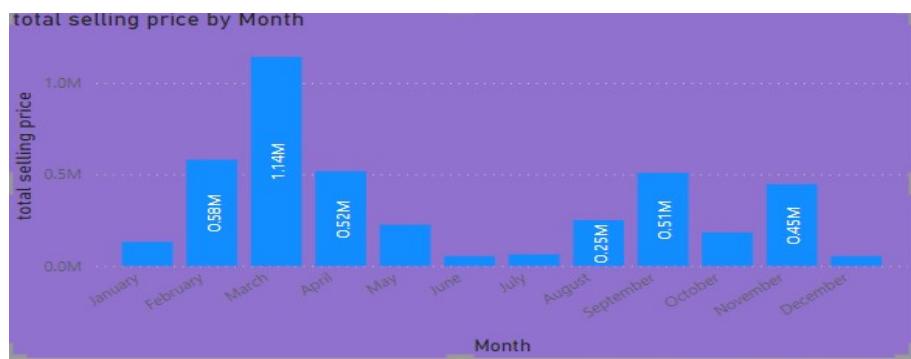


6. Create Stacked Column Chart:

- Visualizations >Build Visuals >Fields > Y –Axis =”selling price”
- Visualizations >Build Visuals >Fields > X-Axis =”Month”
- Visualizations >Format Visuals> Y-axis> Values >Color = #374649
- Visualizations >Format Visuals> Y-axis> Values >Title >Color = #5F6B6D

- Visualizations >Format Visuals> X-axis> Values >Color = #374649
- Visualizations >Format Visuals> X-axis> Values >Title >Color = #5F6B6D
- Visualizations >Format Visuals> Bar> Show All
- Visualizations >Format Visuals> Data Labels > Options> Inside Center
- Visualizations >Format Visuals> Data Labels> Values > Font Size = 14
- Visualizations >Format Visuals> Title> Text ="total selling price by month"
- Visualizations >Format Visuals> Title> Font Size =20
- Visualizations >Format Visuals> Effects> Background Color = #5C2D91

Output:



7. Create a Card to display Selling Price:

- With the card visualization selected, locate the "Fields" pane on the right-hand side.
- Right-click anywhere in the "Fields" pane and select "New Measure" from the contextmenu. This will open the formula bar at the top.
- In the formula bar, enter the following DAX formula to create a measure that calculates the total selling price:
 - total selling price = `SUMX(Data,Data[Sales price]*Data[Item quantity])`
- Drag "Total Selling Price" to "Fields".
- Visualization >Format Visual > General > Effects > Background Color : #5B2D71
- Visualization > Format Visual >Visual > Category Label > Font Size = 20

Output:



8. Create a Card to display Total Item Count:

- With the card visualization selected, locate the "Fields" pane on the right-hand side.
- Right-click anywhere in the "Fields" pane and select "New Measure" from the

contextmenu. This will open the formula bar at the top.

- Drag “Total Item Count” to “Fields”.
- In the formula bar, enter the following formula to create a measure that calculates the total item count:
 - **total item count = countx(data,Data[Item quantity])**
- Visualization >Format Visual > General > Effects > Background Color : #AF916D
- Visualization > Format Visual >Visual > Category Label > Font Size = 20

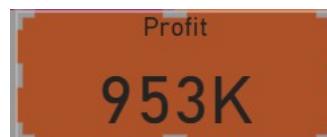
Output:



9. Create a Card to display Profit:

- With the card visualization selected, locate the "Fields" pane on the right-hand side.
- Right-click anywhere in the "Fields" pane and select "New Measure" from the contextmenu. This will open the formula bar at the top.
- Drag “profit” to “Fields”.
- In the formula bar, enter the following formula to create a measure that calculates the profit:
 - **profit = Data[total selling price]-[total cost price]**
- Visualization >Format Visual > General > Effects > Background Color :#5C0001
- Visualization > Format Visual >Visual > Category Label > Font Size = 20

Output:



10. Create a Card to display Profit %:

- With the card visualization selected, locate the "Fields" pane on the right-hand side.
- Right-click anywhere in the "Fields" pane and select "New Measure" from the contextmenu. This will open the formula bar at the top.
- Drag “profit %” to “Fields”.
- In the formula bar, enter the following formula to create a measure that calculates the profit%:
 - **%Profit = (Data[profit]/Data[total cost price])*100**
- Visualization >Format Visual > General > Effects > Background Color : #F8BCBD

- Visualization > Format Visual > Visual > Category Label > Font Size = 20

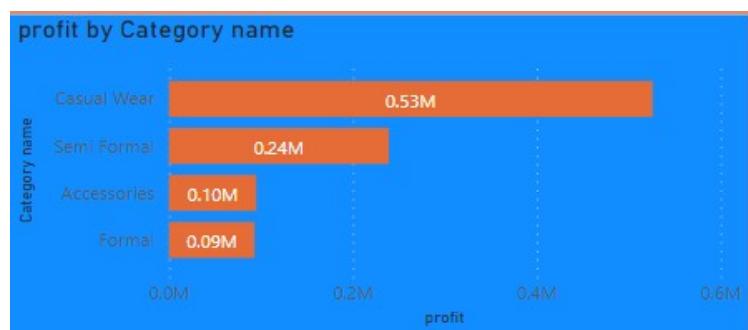
Output:



11. Create Stacked Bar Chart:

- Visualizations > Build Visuals > Fields > Y -Axis = "Category Name"
- Visualizations > Build Visuals > Fields > X-Axis = "Profit"
- Visualizations > Format Visuals > Y-axis > Values > Color = #5F6B6D
- Visualizations > Format Visuals > Y-axis > Values > Title > Color = #374649
- Visualizations > Format Visuals > X-axis > Values > Color = #5F6B6D
- Visualizations > Format Visuals > X-axis > Values > Title > Color = #374649
- Visualizations > Format Visuals > Bar > Show All
- Visualizations > Format Visuals > Bar > Accessories > Color = # F18F49
- Visualizations > Format Visuals > Bar > Formal > color = # F18F49
- Visualizations > Format Visuals > Bar > SemiFormal > Color = # F18F49
- Visualizations > Format Visuals > Bar > Casual Wear > Color = # F18F49
- Visualizations > Format Visuals > Data Labels > Options > Inside Center
- Visualizations > Format Visuals > Data Labels > Values > Font Size = 18
- Visualizations > Format Visuals > Title > Text = "Profit By Category Name"
- Visualizations > Format Visuals > Title > Font Size = 18
- Visualizations > Format Visuals > Effects > Background Color = #008cEEE

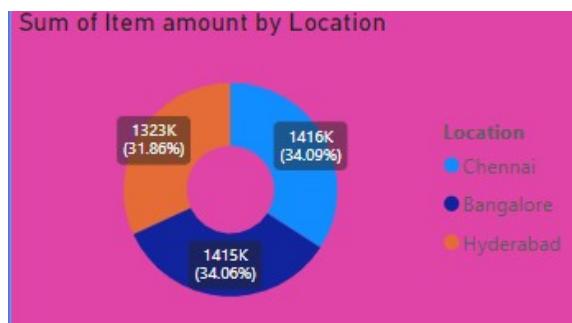
Output:



12. Create Donut Chart:

- Visualizations >Build Visuals >Fields > Legend="Location"
- Visualizations >Build Visuals >Fields > Values="Sum of Item Count"
- Visualizations >Format Visuals> Legend> slices >Color ="374649"
- Visualizations >Format Visuals> Values >Color = #5F6B6D
- Visualizations >Format Visuals> Legend> slices>Chennai >Color = #1DD5EE
- Visualizations >Format Visuals> Legend> slices>Bangalore >Color = #5C2D91
- Visualizations >Format Visuals> Legend> slices >Hyderabad>Color = #F18F49
- Visualizations >Format Visuals> Bar> Show All
- Visualizations >Format Visuals> Data Labels > Options> Inside Center
- Visualizations >Format Visuals> Data Labels> Values > Font Size = 14
- Visualizations >Format Visuals> Title> Text ="Sum of Item amount by Location"
- Visualizations >Format Visuals> Title> Font Size =18
- Visualizations >Format Visuals> Effects> Background Color = #EF008C

Output:

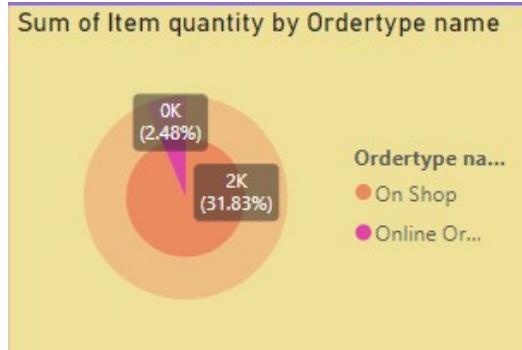


13. Create Pie-Chart:

- Visualizations >Build Visuals >Fields > Legend="Ordertype Name"
- Visualizations >Build Visuals >Fields > Values="Sum of Item quantity"
- Visualizations >Format Visuals> Legend> slices >Color = #374649
- Visualizations >Format Visuals> Values >Color = #374649
- Visualizations >Format Visuals> Legend> slices>on line>Color = #FE6D86
- Visualizations >Format Visuals> Legend> slices>On Shop >Color = #F18F49
- Visualizations >Format Visuals> Bar> Show All
- Visualizations >Format Visuals> Data Labels > Options> Inside Center

- Visualizations >Format Visuals> Data Labels> Values > Font Size = 14
- Visualizations >Format Visuals> Title> Text ="Sum of Item quantiy by ordertype name"
- Visualizations >Format Visuals> Title> Font Size =16
- Visualizations >Format Visuals> Effects> Background Color = #FFD86C

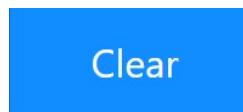
Output:



14. Create a Filter to clear Button:

- Insert > Shapes > Select “Rectangle Shape”
- Visualizations > Format > Shape > Text > “ON” > Text = “Clear”
- Visualizations > Format > Shape > Action > “ON”
- Now make all visuals to initial state the follow next step
- View > BookMark > Add BookMark =”Clear”
- Visualizations > Format > Shape > Action > Select = “BookMark”
- Visualizations > Format> Shape > Action > BookMark =”Clear”

Output:



15. Creating Hierarchy for drill down and drill up operations:

- Data > Category Name > Create hierarchy
- Data > Item Name > Add to hierarchy

- Place cursor on visual > Click “↓” to drill down
- Place cursor on visual > Click “↓” to drill next level of hierarchy

Output:

Initial:

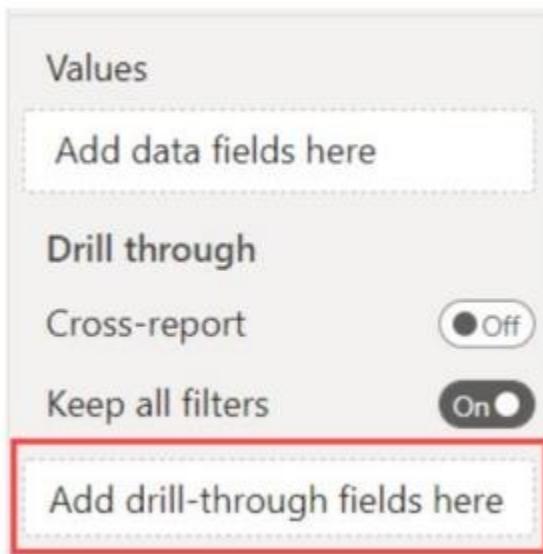


After Drill Down:



Drill through:

- To set up drillthrough, create a target report page that has the visuals you want for the type of entity that you're going to provide drillthrough for.
- Then, on that drillthrough target page, in the **Build visual** section of the Visualizations pane, drag the **field** for which you want to enable drillthrough into the Drill through well.



- Add drill-through field = "CategoryName"

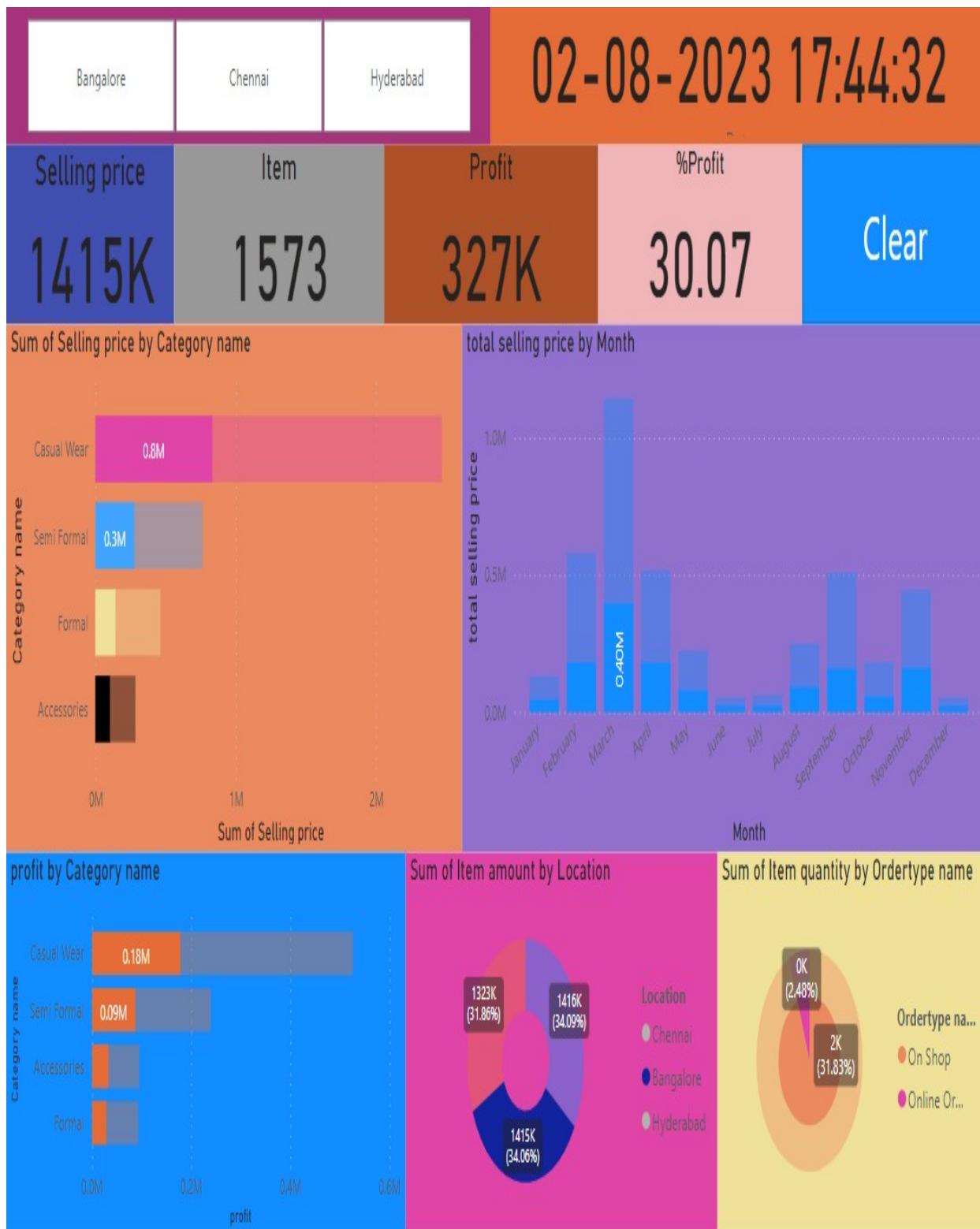
Output:

The screenshot displays the Power BI desktop environment. On the left, there is a table visualization showing sales data with columns: Receipt no, Category name, Item name, Location, Order type name, Sum of Cost Price, Sum of item amount, Year, Quarter, Month, Day, Sum of Selling price, and Sum c. The data includes rows for various items like Jeans - Denim from Bangalore and Chennai, and categories like Casual Wear and Formal. On the right, there is a 'Visualizations' pane with icons for different chart types, a 'Filters' pane, and a detailed 'Filters' pane for the 'Category name' column. This detailed pane shows a dropdown menu set to 'Used as category' with an option to 'Search'. Below it, there is a list of categories: Accessories (470), Casual Wear (2470, checked), and Formal (462).

16. Final Visual Format:

- Visualizations > Page Information > Name = "Page1"
- Visualizations > canvas Background > color = "#D8D7BF"
- Visualizations > Wall Paper > color = "#FFFFFF"

Output:



Experiment Number: 06

Aim:

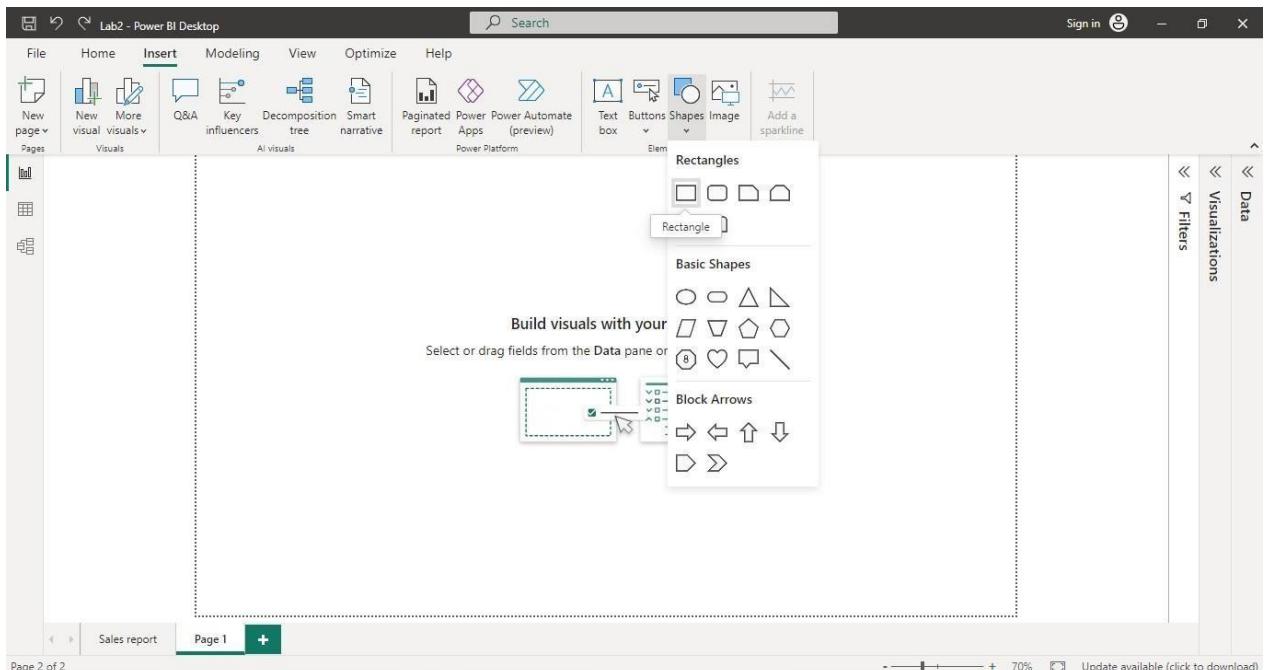
Create Reports using Aggregation functions calculate a value such as count, sum, average, minimum or maximum for all rows in a column or table as defined by the expression.

Procedure:

1. Importing the Dataset:

- Launch Power BI Desktop.
- Click on "Get Data" in the Home tab of the ribbon.
- Select the appropriate data source option "Excel" and follow the prompts to import yoursample dataset into Power BI.

2. Insert Rectangle Shape:



- Click on “Format tab” on right side and perform changes on visual.
- Shape > Style > #E66C37
- Shape > Text >Text = “Sales report”, Font Size = 46, Horizontal Alignment = “Center”.

3. Add card for Displaying Sum Values of Profit and sales :

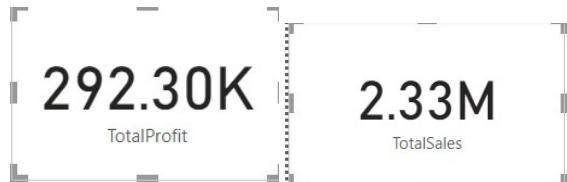
- With the card visualization selected, locate the "Fields" pane on the right-hand side.
- Right-click anywhere in the "Fields" pane and select "New Measure" from the contextmenu. This will open the formula bar at the top.

In the formula bar, enter the following DAX formula to create a measure that calculates the total profit and sales.

```
TotalProfit = CALCULATE(SUM(ORDERS[PROFIT]))  
TotalSales = CALCULATE(sum(Orders[Sales]))
```

- Press Enter to apply the formula.
- Visualization > Format Visual > General > Effects > Background Color : #E6E6E6
- Visualization > Format Visual > Visual > Category Label > Font Size = 12

Output:



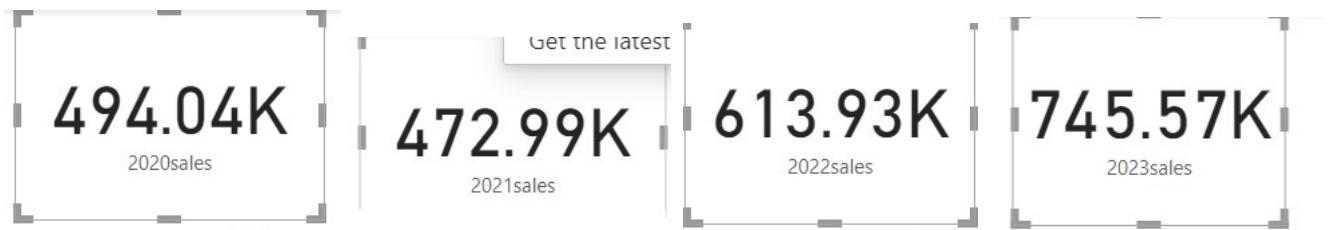
Similarly, calculate the individual years total profit by using the below formulas:

- 2020Profit = CALCULATE(SUM(ORDERS[PROFIT]), year(Orders[Order Date])=2020)

Similarly, calculate the individual years total sales by using the below formulas:

- 2020sales = calculate(sum(Orders[Sales]), year(Orders[Order Date])=2020)

OUTPUT:



4. Add card for Displaying Average Values of Profit and sales :

- With the card visualization selected, locate the "Fields" pane on the right-hand side.
- Right-click anywhere in the "Fields" pane and select "New Measure" from the contextmenu. This will open the formula bar at the top.
- In the formula bar, enter the following DAX formula to create a measure that calculates the average profit and sales

```
avgprofit = CALCULATE(AVERAGE(Orders[Profit]))  
avgsales = CALCULATE(AVERAGE(Orders[Sales]))
```

- Press Enter to apply the formula.
- Visualization > Format Visual > General > Effects > Background Color : #B6E6E6
- Visualization > Format Visual > Visual > Category Label > Font Size = 12

Output:



Similarly, calculate the individual years average profit by using the below formulas:

- 2020avgProfit = CALCULATE(AVERAGE(ORDERS[PROFIT]), year(Orders[Order Date])=2020)
- 2021avgProfit = CALCULATE(AVERAGE(ORDERS[PROFIT]), year(Orders[Order Date])=2021)
- 2022avgProfit = CALCULATE(AVERAGE(ORDERS[PROFIT]), year(Orders[Order Date])=2022)
- 2023avgProfit = CALCULATE(AVERAGE(ORDERS[PROFIT]), year(Orders[Order Date])=2023)

Similarly, calculate the individual years average sales by using the below formulas:

- 2020avgsales = CALCULATE(AVERAGE(Orders[Sales]), year(Orders[Order Date])=2020)
- 2021avgsales = CALCULATE(AVERAGE(Orders[Sales]), year(Orders[Order Date])=2021)
- 2022avgsales = CALCULATE(AVERAGE(Orders[Sales]), year(Orders[Order Date])=2022)
- 2023avgsales = CALCULATE(AVERAGE(Orders[Sales]), year(Orders[Order Date])=2023)

OUTPUT:



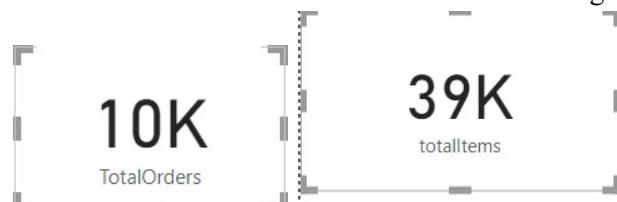
5. Add card for Displaying count of items and orders:

- With the card visualization selected, locate the "Fields" pane on the right-hand side.
- Right-click anywhere in the "Fields" pane and select "New Measure" from the contextmenu. This will open the formula bar at the top.
- In the formula bar, enter the following DAX formula to create a measure that calculates the no of items and orders

```
totalItems = CALCULATE(sum(orders[quantity]))  
TotalOrders = CALCULATE(COUNT(Orders[Order ID]))
```

Press Enter to apply the formula.

- Visualization > Format Visual > General > Effects > Background Color : #E6F2g6
- Visualization > Format Visual > Visual > Category Label > Font Size = 12



Similarly, calculate the individual years orders by using the below formulas:

- 2020OrderCount = CALCULATE(count(Orders[Order ID]), year(Orders[Order Date])=2020)
- 2021OrderCount = CALCULATE(count(Orders[Order ID]), year(Orders[Order Date])=2021)
- 2022OrderCount = CALCULATE(count(Orders[Order ID]), year(Orders[Order Date])=2022)
- 2023OrderCount = CALCULATE(count(Orders[Order ID]), year(Orders[Order Date])=2023)

Output:



Similarly, calculate the individual year items by using the below formulas:

- 2020items = calculate(sum(Orders[Quantity]), year(Orders[Order Date])=2020)
- 2021items = calculate(sum(Orders[Quantity]), year(Orders[Order Date])=2021)
- 2022items = calculate(sum(Orders[Quantity]), year(Orders[Order Date])=2022)
- 2023items = calculate(sum(Orders[Quantity]), year(Orders[Order Date])=2023)

Output:



7. Add card for Displaying max and min no of orders:

- With the card visualization selected, locate the "Fields" pane on the right-hand side.
- Right-click anywhere in the "Fields" pane and select "New Measure" from the contextmenu. This will open the formula bar at the top.
- In the formula bar, enter the following DAX formula to create a measure that calculates the max and min no of orders

```
maxCount = CALCULATE(MAX(Orders[Order ID]))  
minCount = CALCULATE(MIN(Orders[Order ID]))
```

Press Enter to apply the formula.

- Visualization > Format Visual > General > Effects > Background Color : #E6F2g6
- Visualization > Format Visual > Visual > Category Label > Font Size = 14

OUTPUT:



Similarly, calculate the individual year max orders by using the below formulas

- 2020maxCount = CALCULATE(max(Orders[Order ID]),year(Orders[Order Date])=2020)
- 2021maxCount = CALCULATE(max(Orders[Order ID]),year(Orders[Order Date])=2021)
- 2022maxCount = CALCULATE(max(Orders[Order ID]),year(Orders[Order Date])=2022)
- 2023maxCount = CALCULATE(max(Orders[Order ID]),year(Orders[Order Date])=2023)

OUTPUT:



Similarly, calculate the individual year min orders by using the below formulas:

- 2020minCount = CALCULATE(min(Orders[Order ID]),year(Orders[Order Date])=2020)
- 2021minCount = CALCULATE(min(Orders[Order ID]),year(Orders[Order Date])=2021)
- 2022minCount = CALCULATE(min(Orders[Order ID]),year(Orders[Order Date])=2022)
- 2023minCount = CALCULATE(min(Orders[Order ID]),year(Orders[Order Date])=2023)

OUTPUT:



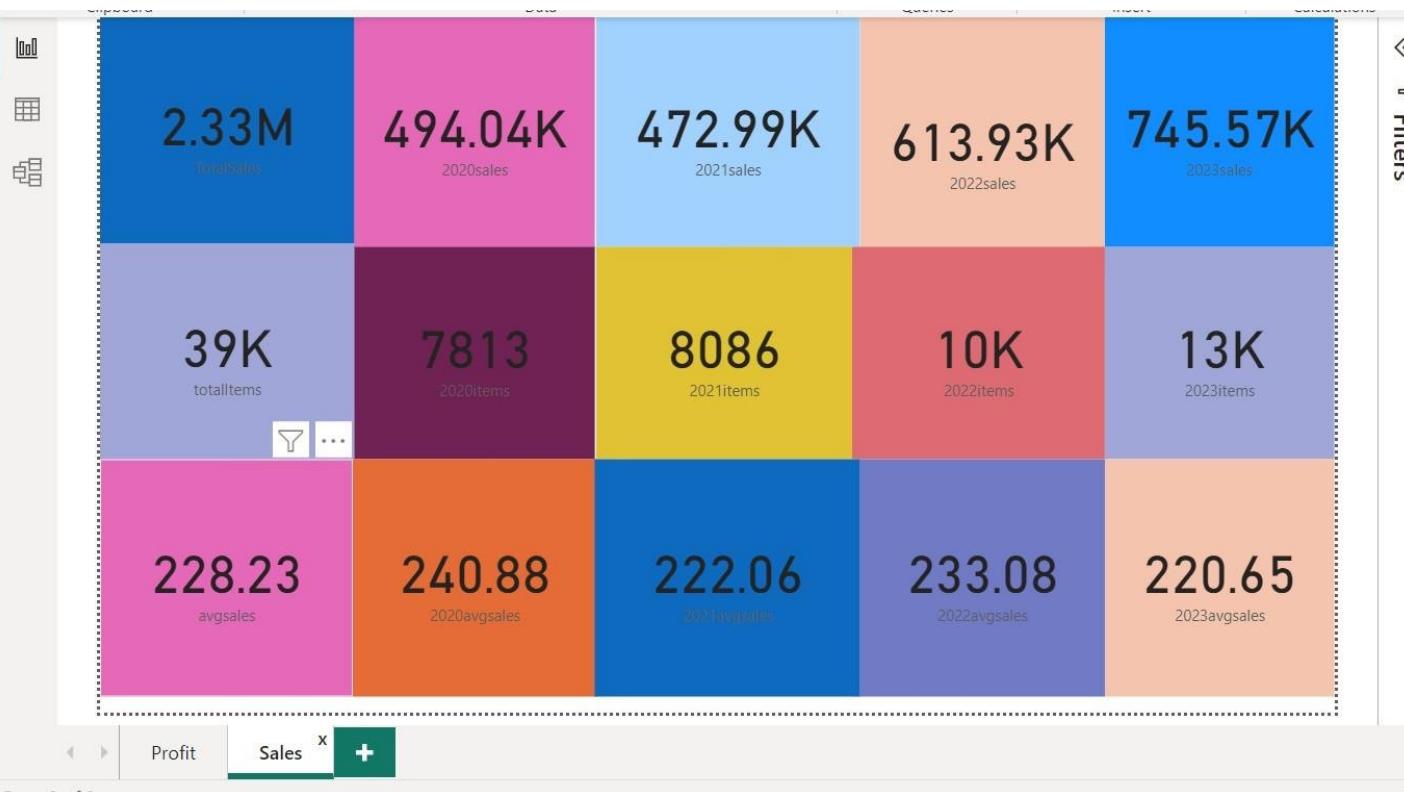
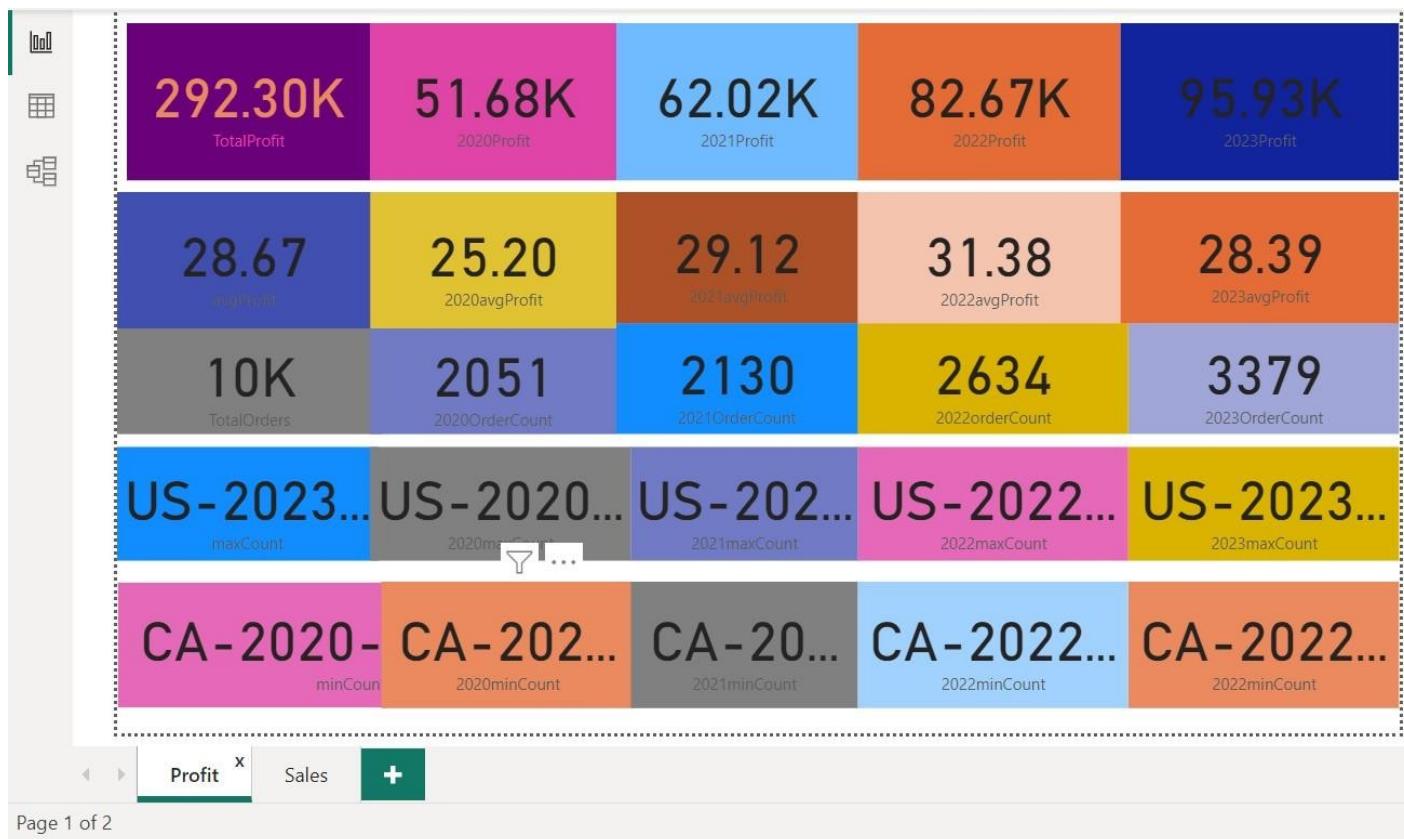
8. Final Visual Format for profit page:

- Visualizations > Page Information > Name =”Profit”
- Visualizations > Canvas Background > color =#12239E
- Visualizations > WallPaper > Color = #A0D1FF

9.Final Visual Format for sales page:

- Visualizations > Page Information > Name =”Sales”
- Visualizations > Canvas Background > color =#12239E
- Visualizations > WallPaper > Color = #A0D1F

Output:



Experiment Number: 07

Aim:

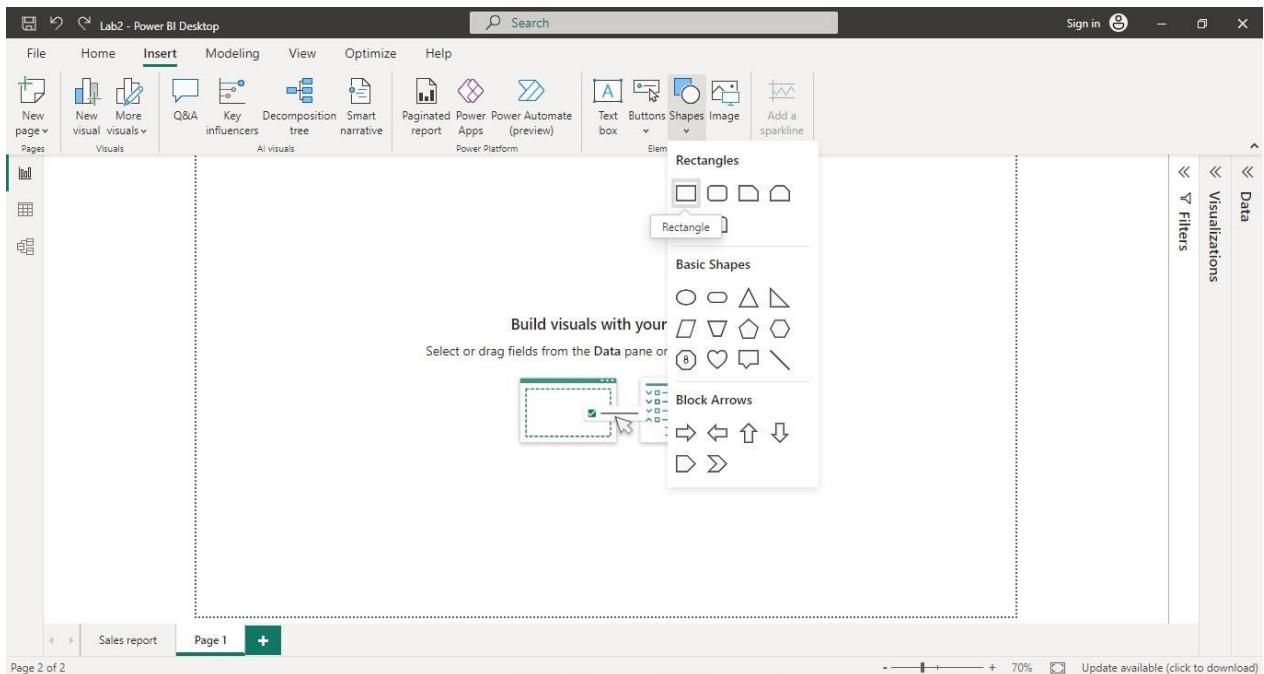
Create reports using calculations based on dates and times.

Procedure:

1. Importing the Dataset:

- Launch Power BI Desktop.
- Click on "Get Data" in the Home tab of the ribbon.
- Select the appropriate data source option "Excel" and follow the prompts to import your sample dataset into Power BI.

2. Insert Rectangle Shape:



- Click on “Format tab” on right side and perform changes on visual.
- Shape > Style > #E66C37
- Shape > Text >Text = “Dates and Time”, Font Size = 46, Horizontal Alignment = “Center”

3.Create Stacked Column Chart:

- Visualizations >Build Visuals >Fields > Y –Axis =”sum of profit”
- Visualizations >Build Visuals >Fields > X-Axis =”day”
- For day data field create a new column measure
- Orders->NewColumn->and enter the below dax formula:

```
Day = DAY(Orders[Order Date].[Date])
```
- Visualizations >Format Visuals> Y-axis> Values >Color = #374649
- Visualizations >Format Visuals> Y-axis> Values >Title >Color = #5
- Visualizations >Format Visuals> X-axis> Values >Color = #374649
- Visualizations >Format Visuals> X-axis> Values >Title >Color = #5F6B6D
- Visualizations >Format Visuals> Bar> Show All
- Visualizations >Format Visuals> Data Labels > Options> Inside Center
- Visualizations >Format Visuals> Data Labels> Values > Font Size = 14
- Visualizations >Format Visuals> Title> Text =”sum of profit by day”
- Visualizations >Format Visuals> Title> Font Size =20
- Visualizations >Format Visuals> Effects> Background Color = #5C2D91



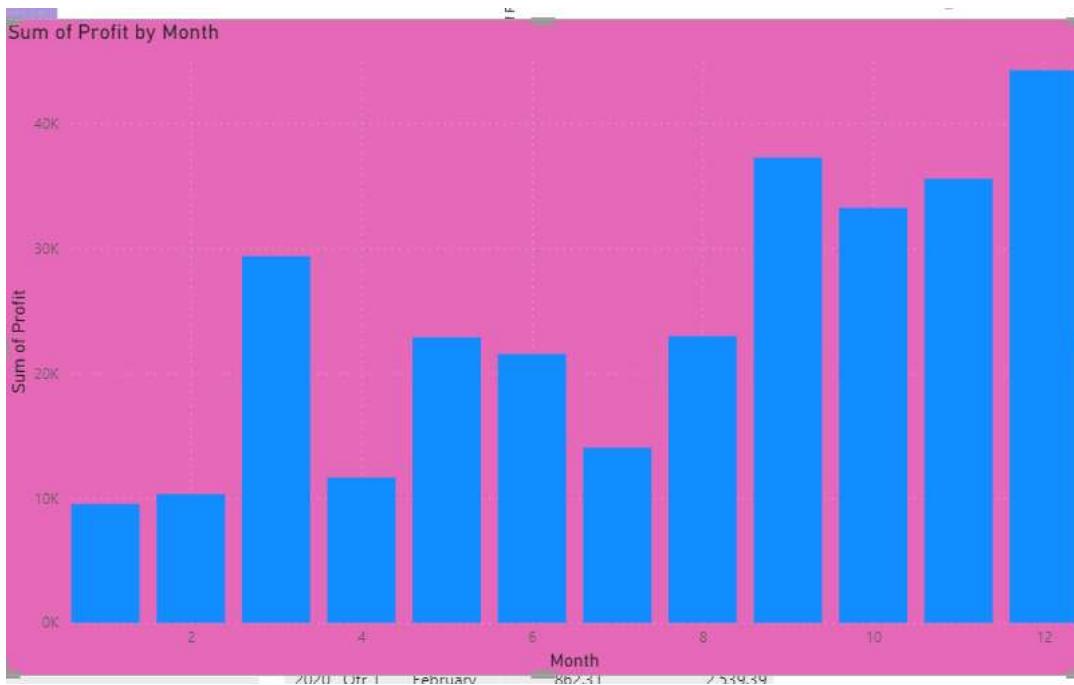
4.Create Stacked Column Chart:

Visualizations >Build Visuals >Fields > Y –Axis =”sum of profit”

- Visualizations >Build Visuals >Fields > X-Axis =”month”
- For month data field create a new column measure
- Orders->NewColumn->and enter the below dax formula:

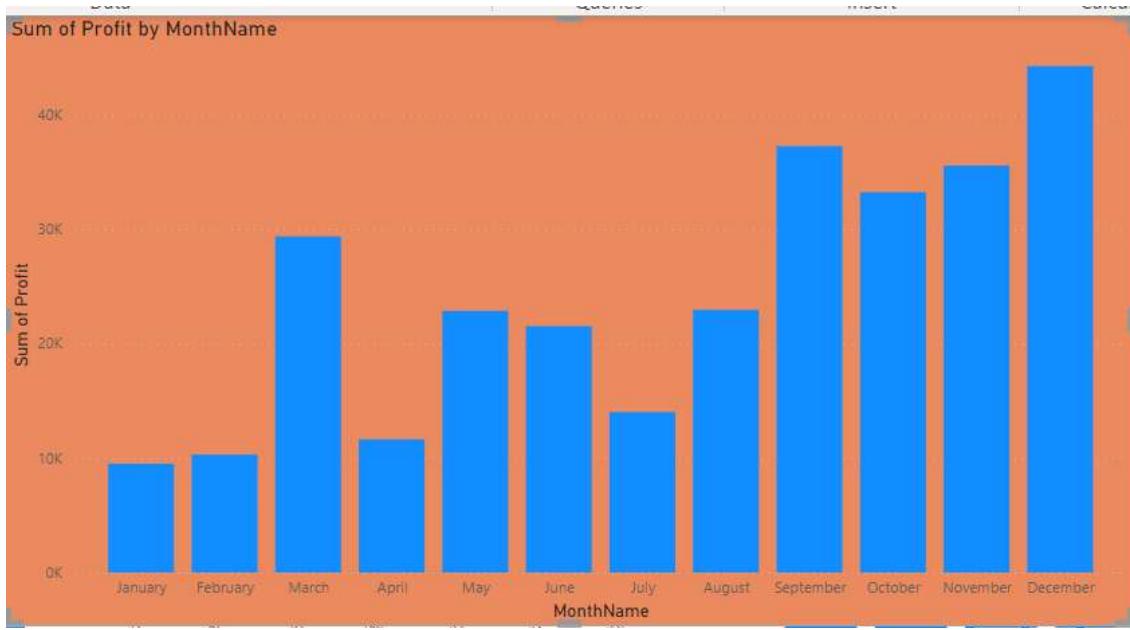
```
Month = MONTH(Orders[Order Date].[Date])
```
- Visualizations >Format Visuals> Y-axis> Values >Color = #374649
- Visualizations >Format Visuals> Y-axis> Values >Title >Color = #5
- Visualizations >Format Visuals> X-axis> Values >Color = #374649
- Visualizations >Format Visuals> X-axis> Values >Title >Color = #5F6B6D

- Visualizations >Format Visuals> Bar> Show All
- Visualizations >Format Visuals> Data Labels > Options> Inside Center
- Visualizations >Format Visuals> Data Labels> Values > Font Size = 14
- Visualizations >Format Visuals> Title> Text ="sum of profit by month"
- Visualizations >Format Visuals> Title> Font Size =20
- Visualizations >Format Visuals> Effects> Background Color = #e6b999



5.Create Stacked Column Chart:

- Visualizations >Build Visuals >Fields > Y –Axis ="sum of profit"
- Visualizations >Build Visuals >Fields > X-Axis ="month name"
- For monthname data field create a new column measure
- Orders->NewColumn->and enter the below dax formula:
`MonthName = Orders[Order Date].[Month]`
Visualizations >Format Visuals> Y-axis> Values >Color = #374649
- Visualizations >Format Visuals> Y-axis> Values >Title >Color = #5
- Visualizations >Format Visuals> X-axis> Values >Color = #374649
- Visualizations >Format Visuals> X-axis> Values >Title >Color = #5F6B6D
- Visualizations >Format Visuals> Bar> Show All
- Visualizations >Format Visuals> Data Labels > Options> Inside Center
- Visualizations >Format Visuals> Data Labels> Values > Font Size = 14
- Visualizations >Format Visuals> Title> Text ="sum of profit by month name"
- Visualizations >Format Visuals> Title> Font Size =20
- Visualizations >Format Visuals> Effects> Background Color = #ebf89f



6. Create Stacked Column Chart:

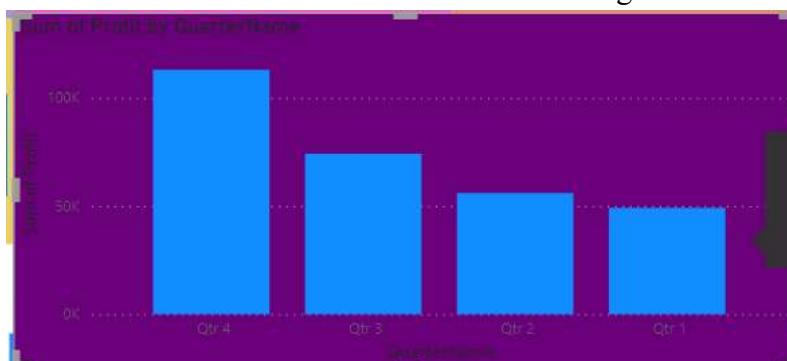
- Visualizations >Build Visuals >Fields > Y –Axis =”sum of profit”
- Visualizations >Build Visuals >Fields > X-Axis =”quarter”
- For quarter data field create a new column measure
- Orders->NewColumn->and enter the below dax formula:
Quarter = QUARTER(Orders[Order Date].[Date])
- Visualizations >Format Visuals> Y-axis> Values >Color = #374649
- Visualizations >Format Visuals> Y-axis> Values >Title >Color = #5
- Visualizations >Format Visuals> X-axis> Values >Color = #374649
- Visualizations >Format Visuals> X-axis> Values >Title >Color = #5F6B6D
- Visualizations >Format Visuals> Bar> Show All
- Visualizations >Format Visuals> Data Labels > Options> Inside Center
- Visualizations >Format Visuals> Data Labels> Values > Font Size = 14
- Visualizations >Format Visuals> Title> Text =”sum of profit by quarter”
- Visualizations >Format Visuals> Title> Font Size =20
- Visualizations >Format Visuals> Effects> Background Color = #e8d166



7.Create Stacked Column Chart:

- Visualizations >Build Visuals >Fields > Y –Axis =”sum of profit”
- Visualizations >Build Visuals >Fields > X-Axis =”quarter name”
- For quartername data field create a new column measure
- Orders->NewColumn->and enter the below dax formula:

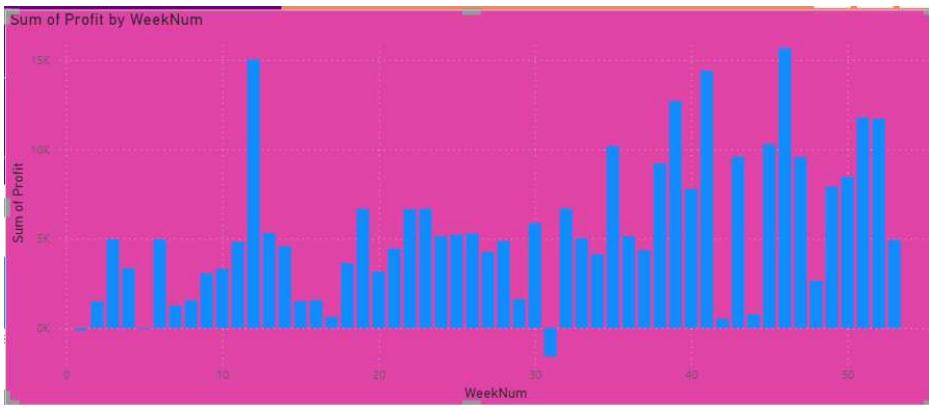
```
QuarterName = Orders[Order Date].[Quarter]
```
- Visualizations >Format Visuals> Y-axis> Values >Color = #374649
- Visualizations >Format Visuals> Y-axis> Values >Title >Color = #5
- Visualizations >Format Visuals> X-axis> Values >Color = #374649
- Visualizations >Format Visuals> X-axis> Values >Title >Color = #5F6B6D
- Visualizations >Format Visuals> Bar> Show All
- Visualizations >Format Visuals> Data Labels > Options> Inside Center
- Visualizations >Format Visuals> Data Labels> Values > Font Size = 14
- Visualizations >Format Visuals> Title> Text =”sum of profit by quarter name”
- Visualizations >Format Visuals> Title> Font Size =20
- Visualizations >Format Visuals> Effects> Background Color = #6b0010



8.Create Stacked Column Chart:

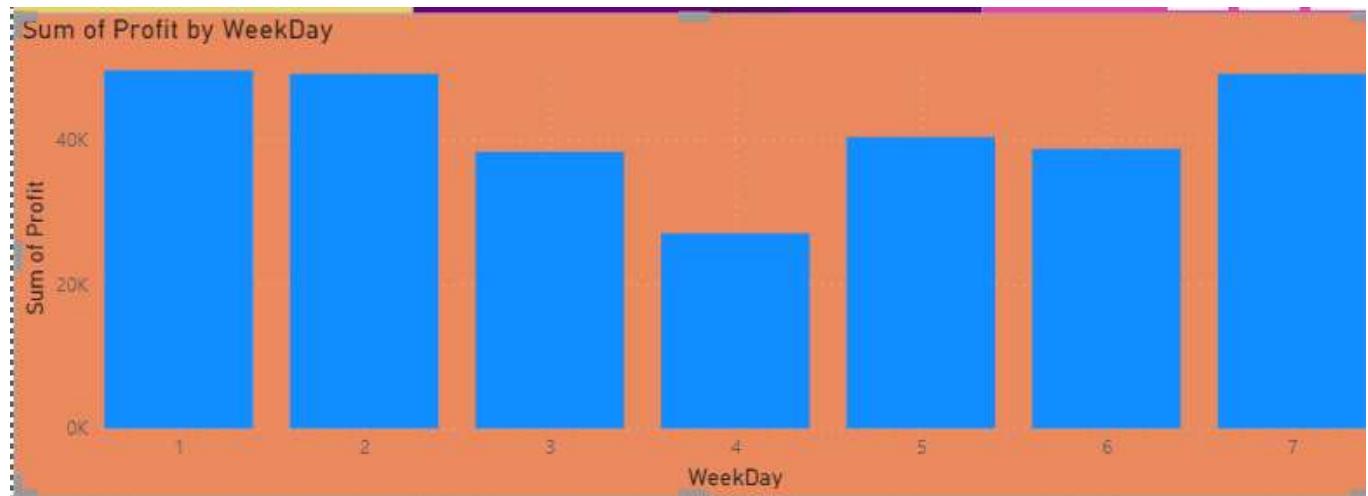
- Visualizations >Build Visuals >Fields > Y –Axis =”sum of profit”
- Visualizations >Build Visuals >Fields > X-Axis =”week number”
- For weeknum data field create a new column measure
- Orders->NewColumn->and enter the below dax formula:

```
WeekNum = WEEKNUM(Orders[Order Date].[Date])
```
- Visualizations >Format Visuals> Y-axis> Values >Color = #374649
- Visualizations >Format Visuals> Y-axis> Values >Title >Color = #5
- Visualizations >Format Visuals> X-axis> Values >Color = #374649
- Visualizations >Format Visuals> X-axis> Values >Title >Color = #5F6B6D
- Visualizations >Format Visuals> Bar> Show All
- Visualizations >Format Visuals> Data Labels > Options> Inside Center
- Visualizations >Format Visuals> Data Labels> Values > Font Size = 14
- Visualizations >Format Visuals> Title> Text =”sum of profit by week num”
- Visualizations >Format Visuals> Title> Font Size =20
- Visualizations >Format Visuals> Effects> Background Color = #EO0047



9. Create Stacked Column Chart:

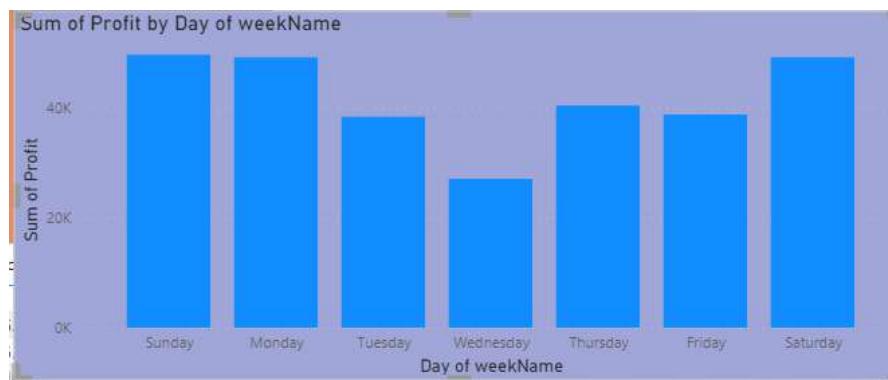
- Visualizations >Build Visuals >Fields > Y –Axis =”sum of profit”
- Visualizations >Build Visuals >Fields > X-Axis =”week day”
- For weekday data field create a new column measure
- Orders->NewColumn->and enter the below dax formula:
`WeekDay = WEEKDAY(Orders[Order Date].[Date])`
- Visualizations >Format Visuals> Y-axis> Values >Color = #374649
- Visualizations >Format Visuals> Y-axis> Values >Title >Color = #5
- Visualizations >Format Visuals> X-axis> Values >Color = #374649
- Visualizations >Format Visuals> X-axis> Values >Title >Color = #5F6B6D
- Visualizations >Format Visuals> Bar> Show All
- Visualizations >Format Visuals> Data Labels > Options> Inside Center
- Visualizations >Format Visuals> Data Labels> Values > Font Size = 14
- Visualizations >Format Visuals> Title> Text =”sum of profit by week day”
- Visualizations >Format Visuals> Title> Font Size =20
- Visualizations >Format Visuals> Effects> Background Color = #ebf567



10. Create Stacked Column Chart:

- Visualizations >Build Visuals >Fields > Y –Axis =”sum of profit”
- Visualizations >Build Visuals >Fields > X-Axis =”day of week name”
- For weekname data field create a new column measure
- Orders->NewColumn->and enter the below dax formula:

```
Day of weekName = FORMAT(Orders[Order Date], "ddd")
```
- Visualizations >Format Visuals> Y-axis> Values >Color = #374649
- Visualizations >Format Visuals> Y-axis> Values >Title >Color = #5
- Visualizations >Format Visuals> X-axis> Values >Color = #374649
- Visualizations >Format Visuals> X-axis> Values >Title >Color = #5F6B6D
- Visualizations >Format Visuals> Bar> Show All
- Visualizations >Format Visuals> Data Labels > Options> Inside Center
- Visualizations >Format Visuals> Data Labels> Values > Font Size = 14
- Visualizations >Format Visuals> Title> Text =”sum of profit by day of week name”
- Visualizations >Format Visuals> Title> Font Size =20
- Visualizations >Format Visuals> Effects> Background Color = #a0A078

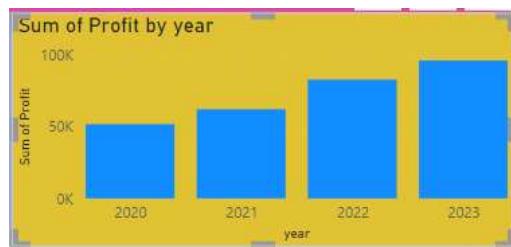


11. Create Stacked Column Chart:

- Visualizations >Build Visuals >Fields > Y –Axis =”sum of profit”
- Visualizations >Build Visuals >Fields > X-Axis =”year”
- For year data field create a new column measure
- Orders->NewColumn->and enter the below dax formula:

```
year = YEAR(Orders[Order Date].[Date])
```
- Visualizations >Format Visuals> Y-axis> Values >Color = #374649
- Visualizations >Format Visuals> Y-axis> Values >Title >Color = #5
- Visualizations >Format Visuals> X-axis> Values >Color = #374649
- Visualizations >Format Visuals> X-axis> Values >Title >Color = #5F6B6D
- Visualizations >Format Visuals> Bar> Show All
- Visualizations >Format Visuals> Data Labels > Options> Inside Center
- Visualizations >Format Visuals> Data Labels> Values > Font Size = 14
- Visualizations >Format Visuals> Title> Text =”sum of profit by year”

- Visualizations >Format Visuals> Title> Font Size =20
- Visualizations >Format Visuals> Effects> Background Color = #a0A078



12. Create table:

- Home > Enter data > Create table by giving values to the columns
- Visualizations >Columns>orderDate>profit>previousYear Profit
- Orders->NewColumn->and enter the below dax formula:

```
previousDayProfit = CALCULATE(SUM(Orders[Profit]), PREVIOUSDAY(Orders[Order Date].[Date]))
```

Year	Quarter	Month	Day	Sum of Profit	previousDayProfit
2020	Qtr 1	January	3	5.55	
2020	Qtr 1	January	4	-65.99	5.55
2020	Qtr 1	January	5	4.88	-65.99
2020	Qtr 1	January	6	1,358.05	4.88
2020	Qtr 1	January	7	-71.96	1,358.05
2020	Qtr 1	January	8		-71.96
2020	Qtr 1	January	9	10.92	
2020	Qtr 1	January	10	22.65	10.92
2020	Qtr 1	January	11	3.08	22.65
2020	Qtr 1	January	12		3.08
2020	Qtr 1	January	13	673.64	
2020	Qtr 1	January	14	-53.29	673.64
2020	Qtr 1	January	15	65.98	-53.29
2020	Qtr 1	January	16	-5.93	65.98
2020	Qtr 1	January	17		-5.93
2020	Qtr 1	January	18	6.49	
2020	Qtr 1	January	19	-288.00	6.49
2020	Qtr 1	January	20	584.37	-288.00
Total				2,92,296.81	

13. Create table:

- Home > Enter data > Create table by giving values to the columns
- Visualizations >Columns>orderDate>profit>previousMonthProfit
- Orders->NewColumn->and enter the below dax formula:

```
previousMonthProfit = CALCULATE(SUM(Orders[Profit]), PREVIOUSMONTH(Orders[Order Date].[Date]))
```

Year	Quarter	Month	Sum of Profit	previousMonthProfit
2020	Qtr 1	January	2,539.39	
2020	Qtr 1	February	862.31	2,539.39
2020	Qtr 1	March	693.45	862.31
2020	Qtr 2	April	3,488.84	693.45
2020	Qtr 2	May	3,196.39	3,488.84
2020	Qtr 2	June	4,999.76	3,196.39
Total				2,92,296.81

14. Create table:

- Home > Enter data > Create table by giving values to the columns
- Visualizations > Columns > orderDate > profit > previousqtrProfit
- Orders -> NewColumn -> and enter the below dax formula:

```
previousqtrProfit = CALCULATE(SUM(Orders[Profit]), PREVIOUSQUARTER(Orders[Order Date].[Date]))
```

Year	Quarter	previousqtrProfit	Sum of Profit
2020	Qtr 1		4,095.15
2020	Qtr 2	4,095.15	11,684.99
2020	Qtr 3	11,684.99	13,517.37
2020	Qtr 4	13,517.37	22,386.79
2021	Qtr 1	22,386.79	9,554.66
2021	Qtr 2	9,554.66	12,200.19
2021	Qtr 3	12,200.19	16,880.30
2021	Qtr 4	16,880.30	23,385.82
2022	Qtr 1	23,385.82	11,628.49
2022	Qtr 2	11,628.49	16,594.68
2022	Qtr 3	16,594.68	16,247.49
2022	Qtr 4	16,247.49	38,194.55
2023	Qtr 1	38,194.55	23,858.60
2023	Qtr 2	23,858.60	15,503.91
2023	Qtr 3	15,503.91	27,545.38
2023	Qtr 4	27,545.38	29,018.46
Total			2,92,296.81

15. Create table:

- Home > Enter data > Create table by giving values to the columns
- Visualizations > Columns > orderDate > profit > previousyearprofit
- Orders -> NewColumn -> and enter the below dax formula:

```
previousyearProfit = CALCULATE(SUM(Orders[Profit]), PREVIOUSYEAR(Orders[Order Date].[Date]))
```

Year	Sum of Profit	previousyearProfit
2020	51,684.30	
2021	62,020.97	51,684.30
2022	82,665.20	62,020.97
2023	95,926.35	82,665.20
Total	2,92,296.81	

16. Create Clustered Column Chart:

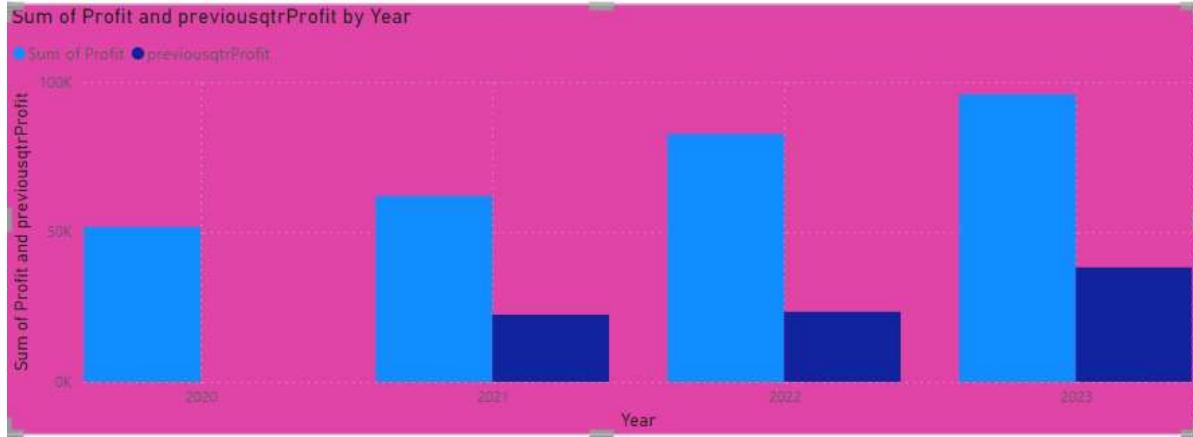
- Visualizations > Build Visuals > Fields > Y -Axis = "sum of profit, previousyearprofit"
- Visualizations > Build Visuals > Fields > X-Axis = "order date"

- For previousyearprofit data field create a new column measure
- Orders -> NewColumn -> and enter the below dax formula:

```
previousyearProfit = CALCULATE(SUM(Orders[Profit]), PREVIOUSYEAR(Orders[Order Date].[Date]))
```

- Visualizations > Format Visuals > Y-axis > Values > Color = #374649
- Visualizations > Format Visuals > Y-axis > Values > Title > Color = #5F6B6D
- Visualizations > Format Visuals > X-axis > Values > Color = #374649
- Visualizations > Format Visuals > X-axis > Values > Title > Color = #5F6B6D
- Visualizations > Format Visuals > Bar > Show All

- Visualizations >Format Visuals> Data Labels > Options> Inside Center
- Visualizations >Format Visuals> Data Labels> Values > Font Size = 14
- Visualizations >Format Visuals> Title> Text ="sum of profit and previousprofit by year"
- Visualizations >Format Visuals> Title> Font Size =20
- Visualizations >Format Visuals> Effects> Background Color = #E044A7



17. Create Clustered Column Chart:

- Visualizations >Build Visuals >Fields > Y –Axis ="sum of profit,previousqtrprofit"
- Visualizations >Build Visuals >Fields > X-Axis ="order date"
- For previousqtrprofit data field create a new column measure
- Orders->NewColumn->and enter the below dax formula:


```
previousqtrProfit = CALCULATE(SUM(Orders[Profit]), PREVIOUSQUARTER(Orders[Order Date].[Date]))
```

 - Visualizations >Format Visuals> Y-axis> Values >Color = #374649
 - Visualizations >Format Visuals> Y-axis> Values >Title >Color = #5
 - Visualizations >Format Visuals> X-axis> Values >Color = #374649
 - Visualizations >Format Visuals> X-axis> Values >Title >Color = #5F6B6D
 - Visualizations >Format Visuals> Bar> Show All
 - Visualizations >Format Visuals> Data Labels > Options> Inside Center
 - Visualizations >Format Visuals> Data Labels> Values > Font Size = 14
 - Visualizations >Format Visuals> Title> Text ="sum of profit and previousqtrprofit by quarter"
 - Visualizations >Format Visuals> Title> Font Size =20
 - Visualizations >Format Visuals> Effects> Background Color = #fc67e9

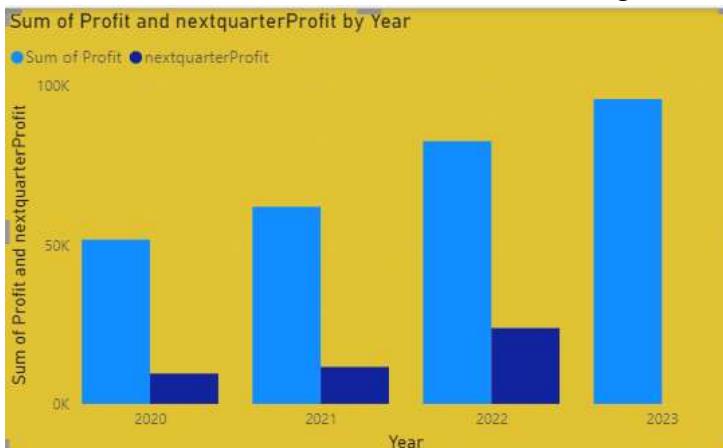


18. Create Clustered Column Chart:

- Visualizations >Build Visuals >Fields > Y –Axis =”sum of profit,nextqtrprofit”
- Visualizations >Build Visuals >Fields > X-Axis =”order date”
- For nextqtrprofit data field create a new column measure
- Orders->NewColumn->and enter the below dax formula:

```
nextquarterProfit = CALCULATE(SUM(Orders[Profit]),NEXTQUARTER(Orders[Order Date].[Date]))
```

Visualizations >Format Visuals> Y-axis> Values >Color = #374649
- Visualizations >Format Visuals> Y-axis> Values >Title >Color = #5
- Visualizations >Format Visuals> X-axis> Values >Color = #374649
- Visualizations >Format Visuals> X-axis> Values >Title >Color = #5F6B6D
- Visualizations >Format Visuals> Bar> Show All
- Visualizations >Format Visuals> Data Labels > Options> Inside Center
- Visualizations >Format Visuals> Data Labels> Values > Font Size = 14
- Visualizations >Format Visuals> Title> Text =”sum of profit and nextqtrprofit by year”
- Visualizations >Format Visuals> Title> Font Size =20
- Visualizations >Format Visuals> Effects> Background Color = #e1c233



19. Create table:

- Home > Enter data > Create table by giving values to the columns
- Visualizations >Columns>orderDate>profit>nextmonthprofit
- Visualizations >Columns>orderDate>profit>nextquarterprofit
- Visualizations >Columns>orderDate>profit>nextyearprofit
- Orders->NewColumn->and enter the below dax formula:

```
nextmonthProfit = CALCULATE(SUM(Orders[Profit]),NEXTMONTH(Orders[Order Date].[Date]))  
nextquarterProfit = CALCULATE(SUM(Orders[Profit]),NEXTQUARTER(Orders[Order Date].[Date]))  
nextyearProfit = CALCULATE(SUM(Orders[Profit]),NEXTYEAR(Orders[Order Date].[Date]))
```

Year	Quarter	Month	Sum of Profit	nextmonthProfit	Year	Sum of Profit	nextyearProfit
2020	Qtr 4	November	9,502.90	9,554.00	2020	51,684.30	62,020.97
2020	Qtr 4	December	9,554.66	-3,189.80	2020	62,020.97	82,665.20
2021	Qtr 1	January	-3,189.80	2,813.85	2021	82,665.20	95,926.35
2021	Qtr 1	February	2,813.85	9,930.61	2021	95,926.35	
2021	Qtr 1	March	9,930.61	4,187.50	Total	2,92,296.81	
2021	Qtr 2	April	4,187.50	4,677.14	Total	2,92,296.81	
2021	Qtr 2	May	4,677.14	3,335.56			
2021	Qtr 2	June	3,335.56	3,288.65			
2021	Qtr 3	July	3,288.65	5,371.63			
2021	Qtr 3	August	5,371.63	8,220.03			
2021	Qtr 3	September	8,220.03	2,817.97			
2021	Qtr 4	October	2,817.97	12,474.70			
Total			2,92,296.81				

20. Create Clustered Column Chart:

- Visualizations >Build Visuals >Fields > Y –Axis =”sum of profit,nextyearprofit”
- Visualizations >Build Visuals >Fields > X-Axis =”order date”
- For nextqtrprofit data field create a new column measure
- Orders->NewColumn->and enter the below dax formula:

nextyearProfit = `CALCULATE(SUM(Orders[Profit]),NEXTYEAR(Orders[Order Date].[Date]))`

Visualizations >Format Visuals> Y-axis> Values >Color = #374649

- Visualizations >Format Visuals> Y-axis> Values >Title >Color = #5
- Visualizations >Format Visuals> X-axis> Values >Color = #374649
- Visualizations >Format Visuals> X-axis> Values >Title >Color = #5F6B6D
- Visualizations >Format Visuals> Bar> Show All
- Visualizations >Format Visuals> Data Labels > Options> Inside Center
- Visualizations >Format Visuals> Data Labels> Values > Font Size = 14
- Visualizations >Format Visuals> Title> Text =”sum of profit and nextyearprofit by year,quarter,month and day”
- Visualizations >Format Visuals> Title> Font Size =20
- Visualizations >Format Visuals> Effects> Background Color = #f5ac4af



21. Create table:

- Home > Enter data > Create table by giving values to the columns
- Visualizations > Columns > orderDate > profit > 3daysaheadprofit
- Visualizations > Columns > orderDate > profit > 3daysbackprofit
- Orders -> NewColumn -> and enter the below dax formula:

```
3daysaheadprofit = CALCULATE(sum(Orders[Profit]),DATEADD(Orders[Order Date].[Date],3,DAY))  
3DaysBackprofit = CALCULATE(sum(Orders[Profit]),DATEADD(Orders[Order Date].[Date],-3,DAY))
```

Year	Quarter	Month	Day	Sum of Profit	3daysaheadprofit	3DaysBackprofit
2020	Qtr 1	January	1	-181.41		
2020	Qtr 1	January	2	-207.05		
2020	Qtr 1	January	3	5.55	704.28	
2020	Qtr 1	January	4	-65.99		
2020	Qtr 1	January	5	4.88		
2020	Qtr 1	January	6	1,358.05	15.52	5.55
2020	Qtr 1	January	7	-71.96	758.72	-65.99
2020	Qtr 1	January	8		80.37	4.88
2020	Qtr 1	January	9	10.92	-228.74	1,358.05
2020	Qtr 1	January	10	22.65		-71.96
2020	Qtr 1	January	11	3.08		
2020	Qtr 1	January	12		-1,101.52	10.92
Total				2,92,296.81	95,926.35	2,91,485.89

22. Create table:

- Home > Enter data > Create table by giving values to the columns
- Visualizations > Columns > orderDate > profit > 3monthsaheadprofit
- Visualizations > Columns > orderDate > profit > 3monthsbackprofit
- Orders -> NewColumn -> and enter the below dax formula:

```
3monthsaheadprofit = CALCULATE(sum(Orders[Profit]),DATEADD(Orders[Order Date].[Date],3,MONTH))
```

```
3monthsBackprofit = CALCULATE(sum(Orders[Profit]),DATEADD(Orders[Order Date].[Date],-3,MONTH))
```

Year	Quarter	Month	3monthsaheadprofit	3monthsBackprofit	Sum of Profit
2020	Qtr 1	January	7,231.64		2,539.39
2020	Qtr 1	February	1,613.87		862.31
2020	Qtr 1	March	15,013.09		693.45
2020	Qtr 2	April	957.53	2,539.39	3,488.84
2020	Qtr 2	May	6,299.81	862.31	3,196.39
2020	Qtr 2	June	8,246.57	693.45	4,999.76
2020	Qtr 3	July	7,006.50	3,488.84	-841.48
2020	Qtr 3	August	9,488.07	3,196.39	5,765.23
2020	Qtr 3	September	11,050.80	4,999.76	8,593.63
2020	Qtr 4	October	10,670.53	-841.48	3,469.17
2020	Qtr 4	November	9,692.10	5,765.23	9,362.96
2020	Qtr 4	December	8,655.83	8,593.63	9,554.66
2021	Qtr 1	January		3,469.17	-3,189.80
2021	Qtr 1	February		9,362.96	2,813.85
2021	Qtr 1	March		9,554.66	9,930.61
2021	Qtr 2	April		-3,189.80	4,187.50
2021	Qtr 2	May		2,813.85	4,677.14
Total			95,926.35	2,63,278.35	2,92,296.81

23. Create table:

- Home > Enter data > Create table by giving values to the columns
- Visualizations > Columns > orderDate > profit > 3quarteraheadprofit
- Visualizations > Columns > orderDate > profit > 3quarterbackprofit

- Orders->NewColumn->and enter the below dax formula:

```
3quartersaheadprofit = CALCULATE(sum(Orders[Profit]),DATEADD(Orders[Order Date].[Date],3,QUARTER))
3quartersBackprofit = CALCULATE(sum(Orders[Profit]),DATEADD(Orders[Order Date].[Date],-3,QUARTER))
```

Year	Quarter	Sum of Profit	3quarterBackprofit	3quartersaheadprofit
2022	Qtr 1	11,628.49	12,200.19	
2021	Qtr 1	9,554.66	11,684.99	
2022	Qtr 4	38,194.55	11,628.49	
2021	Qtr 4	23,385.82	9,554.66	
2020	Qtr 4	22,386.79	4,095.15	29,018.46
2020	Qtr 1	4,095.15		23,858.60
2020	Qtr 2	11,684.99		15,503.91
2020	Qtr 3	13,517.37		27,545.38
Total		2,92,296.81	2,20,229.07	95,926.35

24.Create table:

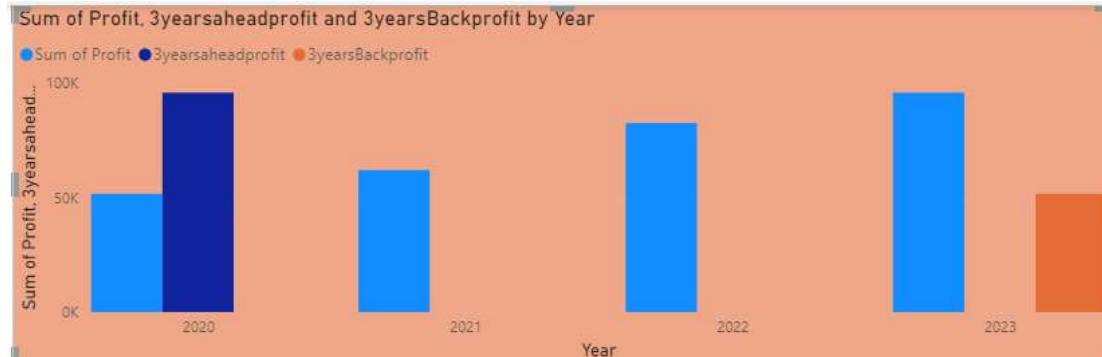
- Home > Enter data > Create table by giving values to the columns
 - Visualizations >Columns>orderDate>profit>3yearsaheadprofit
 - Visualizations >Columns>orderDate>profit>3yearsbackprofit
 - Orders->NewColumn->and enter the below dax formula:
- ```
3yearsaheadprofit = CALCULATE(sum(Orders[Profit]),DATEADD(Orders[Order Date].[Date],3,year))
3yearsBackprofit = CALCULATE(sum(Orders[Profit]),DATEADD(Orders[Order Date].[Date],-3,year))
```

| Year         | Sum of Profit      | 3yearsaheadprofit | 3yearsBackprofit |
|--------------|--------------------|-------------------|------------------|
| 2020         | 51,684.30          | 95,926.35         |                  |
| 2021         | 62,020.97          |                   |                  |
| 2022         | 82,665.20          |                   |                  |
| 2023         | 95,926.35          |                   | 51,684.30        |
| <b>Total</b> | <b>2,92,296.81</b> | <b>95,926.35</b>  | <b>51,684.30</b> |

## 25.Create Clustered Column Chart:

- Visualizations >Build Visuals >Fields > Y –Axis =”sum of profit,3yearsbackprofit,3yearsaheadprofit”
  - Visualizations >Build Visuals >Fields > X-Axis =”order date”
  - For 3yearsaheadprofit, 3yearsBackprofit data field create a new column measure
  - Orders->NewColumn->and enter the below dax formula:
- ```
3yearsaheadprofit = CALCULATE(sum(Orders[Profit]),DATEADD(Orders[Order Date].[Date],3,year))
3yearsBackprofit = CALCULATE(sum(Orders[Profit]),DATEADD(Orders[Order Date].[Date],-3,year))
```
- Visualizations >Format Visuals> Y-axis> Values >Color = #374649
- Visualizations >Format Visuals> Y-axis> Values >Title >Color = #5
 - Visualizations >Format Visuals> X-axis> Values >Color = #374649
 - Visualizations >Format Visuals> X-axis> Values >Title >Color = #5F6B6D
 - Visualizations >Format Visuals> Bar> Show All

- Visualizations >Format Visuals> Data Labels > Options> Inside Center
- Visualizations >Format Visuals> Data Labels> Values > Font Size = 14
- Visualizations >Format Visuals> Title> Text ="sum of profit ,3yearsaheadprofit and 3yearsbackprofit by year.
- Visualizations >Format Visuals> Title> Font Size =20
- Visualizations >Format Visuals> Effects> Background Color = #f0af87



26. Create Clustered Column Chart:

- Visualizations >Build Visuals >Fields > Y –Axis ="sum of profit,3quartersbackprofit,3quarteraheadprofit"
 - Visualizations >Build Visuals >Fields > X-Axis ="order date"
 - For 3yearsaheadprofit , 3yearsBackprofit data field create a new column measure
 - Orders->NewColumn->and enter the below dax formula:
- ```
3quartersaheadprofit = CALCULATE(sum(Orders[Profit]),DATEADD(Orders[Order Date].[Date],3,QUARTER))
3quartersBackprofit = CALCULATE(sum(Orders[Profit]),DATEADD(Orders[Order Date].[Date],-3,QUARTER))
```
- Visualizations >Format Visuals> Y-axis> Values >Color = #374649
- Visualizations >Format Visuals> Y-axis> Values >Title >Color = #5
  - Visualizations >Format Visuals> X-axis> Values >Color = #374649
  - Visualizations >Format Visuals> X-axis> Values >Title >Color = #5F6B6D
  - Visualizations >Format Visuals> Bar> Show All
  - Visualizations >Format Visuals> Data Labels > Options> Inside Center
  - Visualizations >Format Visuals> Data Labels> Values > Font Size = 14
  - Visualizations >Format Visuals> Title> Text ="sum of profit ,3yearsaheadprofit and 3yearsbackprofit by year.
  - Visualizations >Format Visuals> Title> Font Size =20
  - Visualizations >Format Visuals> Effects> Background Color = # E044A7



## 27. Create table:

- Home > Enter data > Create table by giving values to the columns
- Visualizations > Columns > orderDate > profit > sameperiodlastyearprofit
- Orders -> New Column -> and enter the below DAX formula:  
sameperiodlastyearprofit = `CALCULATE(SUM(Orders[Profit]), SAMEPERIODLASTYEAR(Orders[Order Date].[Date]))`

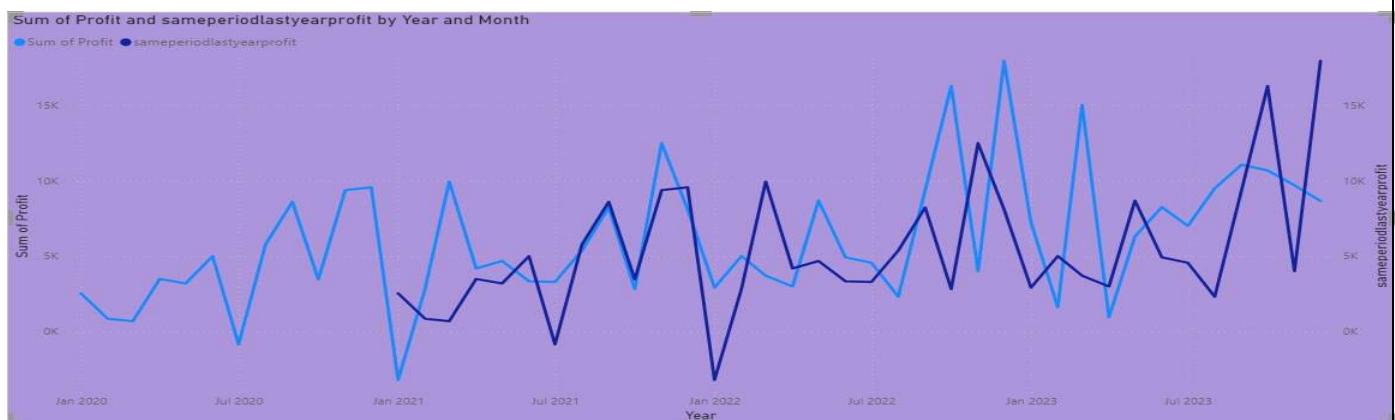
| Year  | Sum of Profit | sameperiodlastyearprofit |
|-------|---------------|--------------------------|
| 2020  | 51,684.30     |                          |
| 2021  | 62,020.97     | 51684                    |
| 2022  | 82,665.20     | 62021                    |
| 2023  | 95,926.35     | 82665                    |
| Total | 2,92,296.81   | 196370                   |

## 28. Create Line Chart:

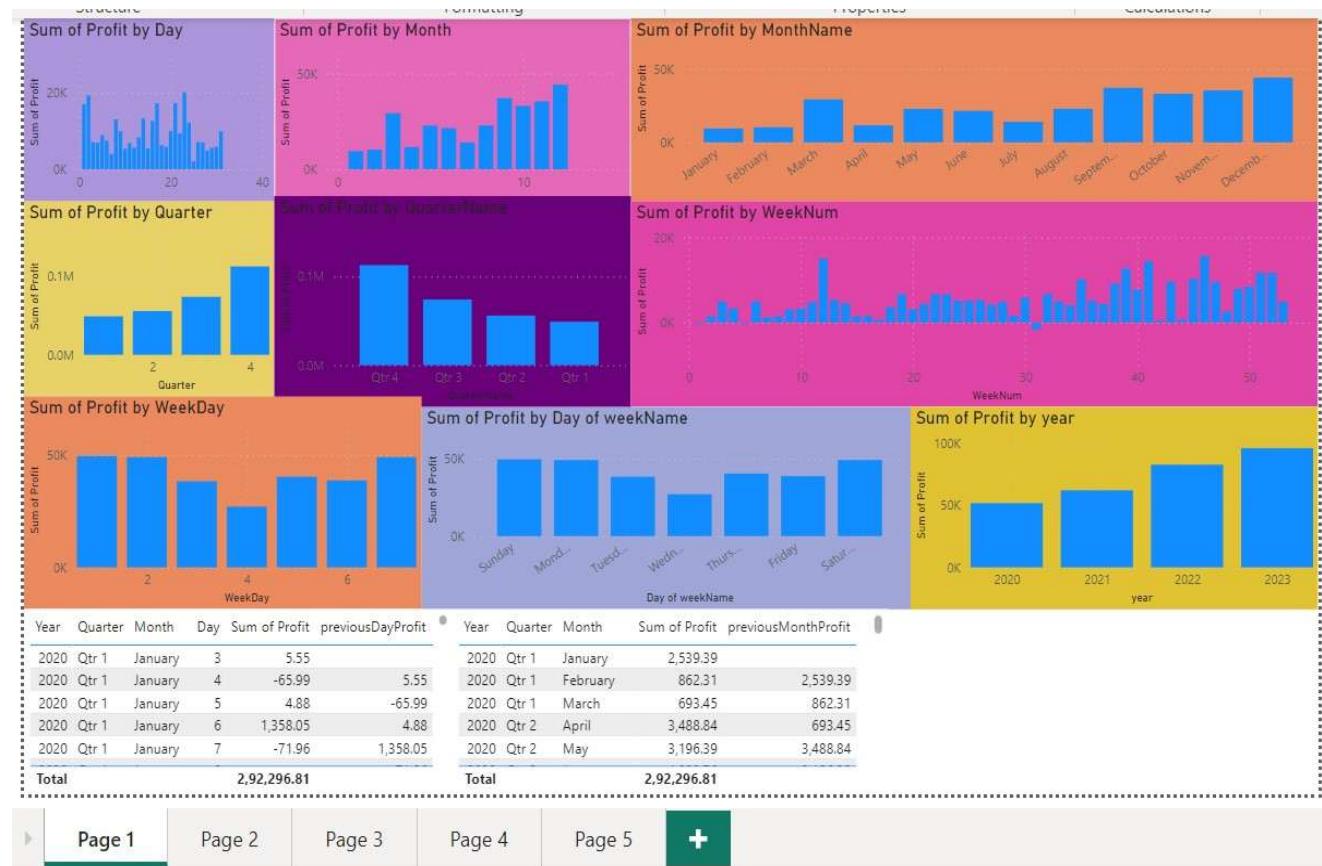
- Visualizations > Build Visuals > Fields > Y-Axis = "sum of profit,"
- Visualizations > Build Visuals > Fields > Second chart - Y-Axis = sameperiodlastyear"
- Visualizations > Build Visuals > Fields > X-Axis = "order date"
- For sameperiodlastyear data field create a new column measure
- Orders -> New Column -> and enter the below DAX formula:

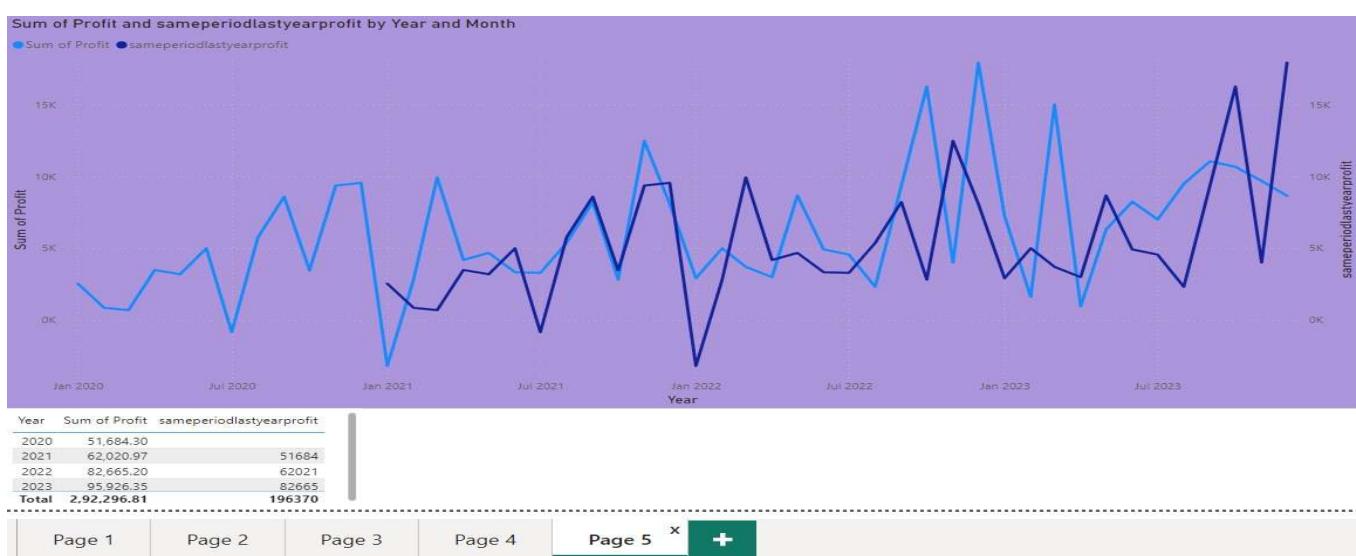
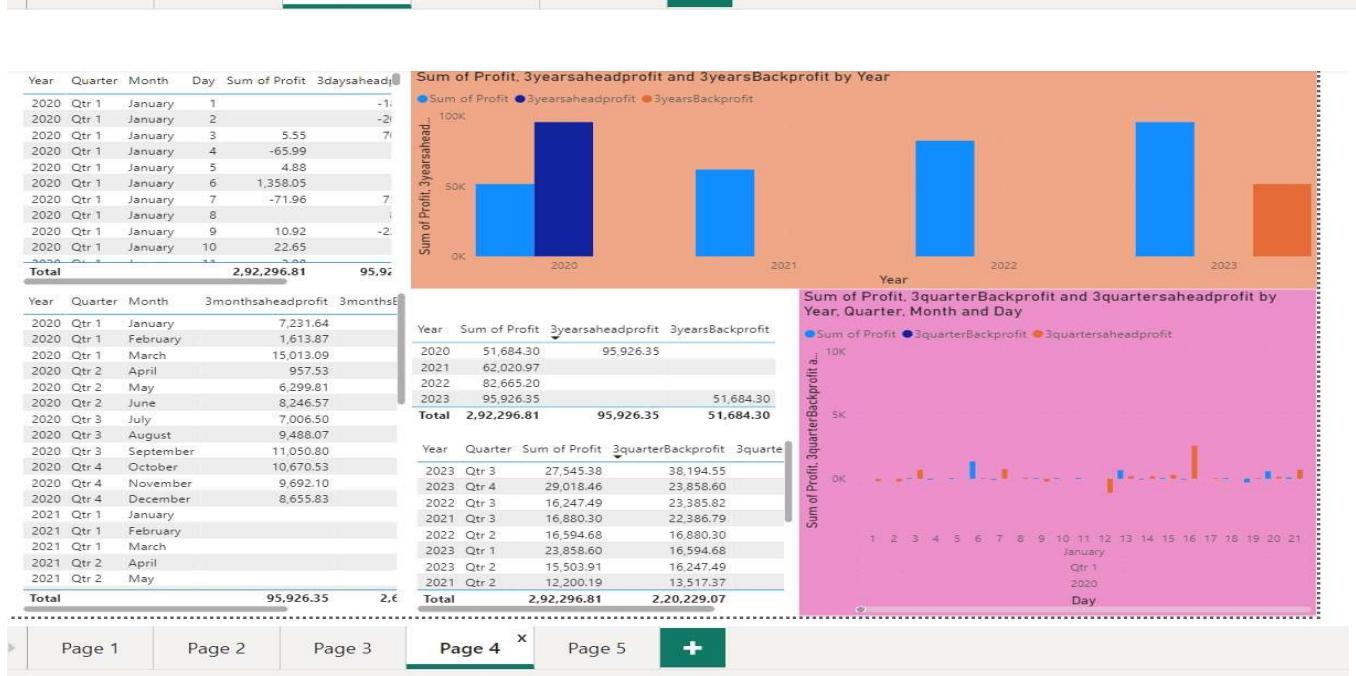
sameperiodlastyearprofit = `CALCULATE(SUM(Orders[Profit]), SAMEPERIODLASTYEAR(Orders[Order Date].[Date]))`

- Visualizations > Format Visuals > Y-axis > Values > Color = #374649
- Visualizations > Format Visuals > Y-axis > Values > Title > Color = #5
- Visualizations > Format Visuals > X-axis > Values > Color = #374649
- Visualizations > Format Visuals > X-axis > Values > Title > Color = #5F6B6D
- Visualizations > Format Visuals > Bar > Show All
- Visualizations > Format Visuals > Data Labels > Options > Inside Center
- Visualizations > Format Visuals > Data Labels > Values > Font Size = 14
- Visualizations > Format Visuals > Title > Text = "sum of profit and sameperiodlastyearprofit by year and month"
- Visualizations > Format Visuals > Title > Font Size = 20
- Visualizations > Format Visuals > Effects > Background Color = # Ef567w



# Final Output:





## **Experiment Number: 08**

### **Aim:**

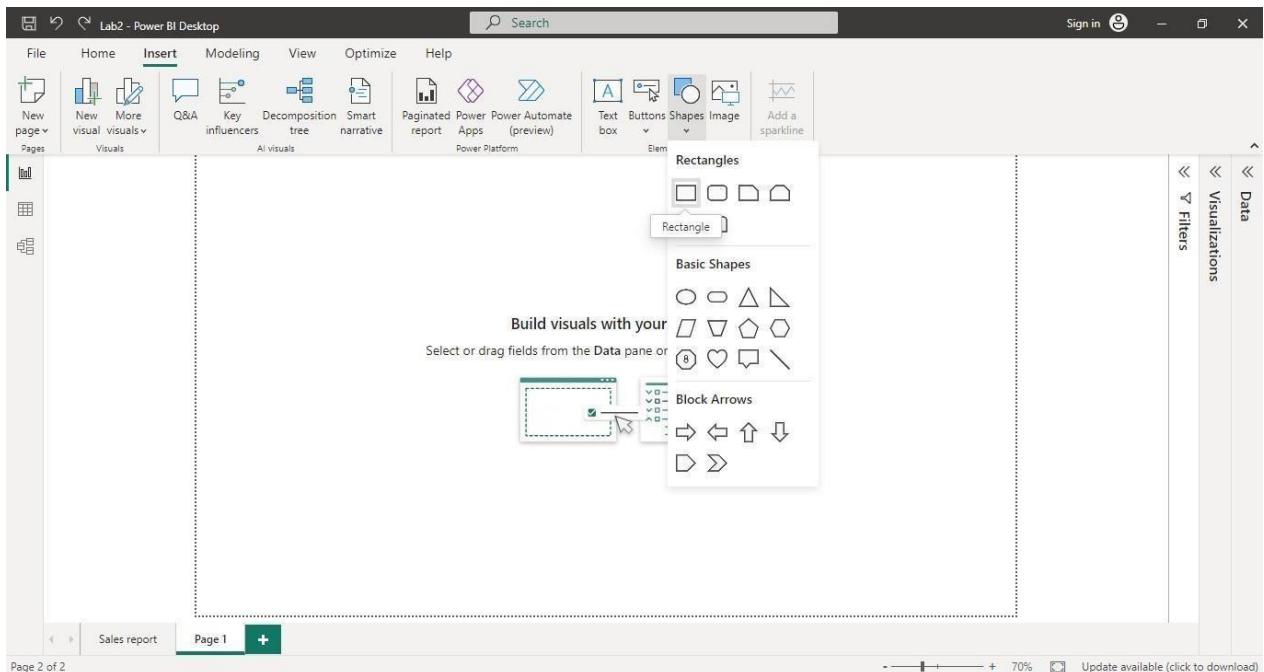
**Create reports using MTD,YTD,QTD In power-bi?**

### **Procedure:**

#### **1. Importing the Dataset:**

- Launch Power BI Desktop.
- Click on "Get Data" in the Home tab of the ribbon.
- Select the appropriate data source option "Excel" and follow the prompts to import yoursample dataset into Power BI.

#### **2. Insert Rectangle Shape:**



- Click on “Format tab” on right side and perform changes on visual.
- Shape > Style > #E66C37
- Shape > Text >Text = “Page1”, Font Size = 46, Horizontal Alignment = “Center”.

### 3.Create table:

- Home > Enter data > Create table by giving values to the columns
- Visualizations >Columns>orderDate>Quantity>mtd item quantity
- Click on new measure>and enter the below dax formula:  
`Mtd item qty = TOTALMTD(SUM(Orders[Quantity]),Orders[Order Date].[Date])`

| Year  | Quarter | Month    | Day | Sum of Quantity | Mtd item qty |
|-------|---------|----------|-----|-----------------|--------------|
| 2020  | Qtr 1   | January  | 25  | 25              | 25           |
| 2020  | Qtr 1   | January  | 26  | 38              | 291          |
| 2020  | Qtr 1   | January  | 27  | 8               | 299          |
| 2020  | Qtr 1   | January  | 28  | 1               | 300          |
| 2020  | Qtr 1   | January  | 29  |                 | 300          |
| 2020  | Qtr 1   | January  | 30  | 4               | 304          |
| 2020  | Qtr 1   | January  | 31  | 2               | 306          |
| 2020  | Qtr 1   | February | 1   | 6               | 6            |
| 2020  | Qtr 1   | February | 2   | 12              | 18           |
| 2020  | Qtr 1   | February | 3   | 5               | 23           |
| 2020  | Qtr 1   | February | 4   | 9               | 32           |
| 2020  | Qtr 1   | February | 5   |                 | 32           |
| 2020  | Qtr 1   | February | 6   | 12              | 44           |
| Total |         |          |     | 38654           | 1820         |

### 4.Create table:

- Home > Enter data > Create table by giving values to the columns
- Visualizations >Columns>orderDate>Quantity>qtd item quantity
- Click on new measure>and enter the below dax formula:  
`qtd item qty = TOTALQTD(SUM(Orders[Quantity]),Orders[Order Date].[Date])`

| Year  | Quarter | Month     | Sum of Quantity | qtd item qty |
|-------|---------|-----------|-----------------|--------------|
|       | Qtr 2   | April     | 536             | 536          |
|       | Qtr 2   | May       | 504             | 1040         |
|       | Qtr 2   | June      | 524             | 1564         |
|       | Qtr 3   | July      | 550             | 550          |
|       | Qtr 3   | August    | 624             | 1174         |
|       | Qtr 3   | September | 1015            | 2189         |
|       | Qtr 4   | October   | 605             | 605          |
|       | Qtr 4   | November  | 1235            | 1840         |
|       | Qtr 4   | December  | 1158            | 2998         |
|       | Qtr 1   | January   | 260             | 260          |
|       | Qtr 1   | February  | 239             | 499          |
|       | Qtr 1   | March     | 528             | 1027         |
|       | Qtr 2   | April     | 543             | 543          |
| Total |         |           |                 | 38654 4828   |

### 5.Create table:

- Home > Enter data > Create table by giving values to the columns
- Visualizations >Columns>orderDate>Quantity>ytd item quantity
- Click on new measure>and enter the below dax formula:

`Ytd item qty = TOTALYTD(SUM(Orders[Quantity]),Orders[Order Date].[Date])`

| Year        | Quarter | Sum of Quantity | ytd item qty |
|-------------|---------|-----------------|--------------|
| 2020        | Qtr 1   | 1062            | 1062         |
| 2020        | Qtr 2   | 1564            | 2626         |
| 2020        | Qtr 3   | 2189            | 4815         |
| 2020        | Qtr 4   | 2998            | 7813         |
| 2021        | Qtr 1   | 1027            | 1027         |
| 2021        | Qtr 2   | 1624            | 2651         |
| 2021        | Qtr 3   | 2250            | 4901         |
| 2021        | Qtr 4   | 3185            | 8086         |
| 2022        | Qtr 1   | 1280            | 1280         |
| 2022        | Qtr 2   | 2283            | 3563         |
| 2022        | Qtr 3   | 2803            | 6366         |
| 2022        | Qtr 4   | 3652            | 10018        |
| 2023        | Qtr 1   | 1808            | 1808         |
| Total       |         |                 |              |
| 38654 12737 |         |                 |              |

## 6.Create table:

- Home > Enter data > Create table by giving values to the columns
- Visualizations >Columns>orderDate>Total Mtd Orders
- Visualizations >Columns>orderDate>Total qtd Orders
- Visualizations >Columns>orderDate>Total ytd Orders
- Click on new measure>and enter the below dax formula:

Total Mtd Orders = `TOTALMTD(Count(Orders[Order ID]),Orders[Order Date].[date])`

Total Qtd Orders = `TOTALQTD(Count(Orders[Order ID]),Orders[Order Date].[date])`

Total Ytd Orders = `TOTALYTD(Count(Orders[Order ID]),Orders[Order Date].[date])`

| Year         | Quarter | Month     | Total Mtd Orders | Total qtd Orders | Total Ytd Orders |
|--------------|---------|-----------|------------------|------------------|------------------|
| 2020         | Qtr 1   | January   | 84               | 84               | 84               |
| 2020         | Qtr 1   | February  | 46               | 130              | 130              |
| 2020         | Qtr 1   | March     | 159              | 289              | 289              |
| 2020         | Qtr 2   | April     | 135              | 135              | 424              |
| 2020         | Qtr 2   | May       | 132              | 267              | 556              |
| 2020         | Qtr 2   | June      | 136              | 403              | 692              |
| 2020         | Qtr 3   | July      | 143              | 143              | 835              |
| 2020         | Qtr 3   | August    | 158              | 301              | 993              |
| 2020         | Qtr 3   | September | 273              | 574              | 1266             |
| 2020         | Qtr 4   | October   | 168              | 168              | 1434             |
| 2020         | Qtr 4   | November  | 320              | 488              | 1754             |
| 2020         | Qtr 4   | December  | 297              | 785              | 2051             |
| 2021         | Qtr 1   | January   | 64               | 64               | 64               |
| 2021         | Qtr 1   | February  | 64               | 128              | 128              |
| 2021         | Qtr 1   | March     | 141              | 269              | 269              |
| 2021         | Qtr 2   | April     | 160              | 160              | 420              |
| <b>Total</b> |         |           | <b>482</b>       | <b>1251</b>      | <b>3379</b>      |

## 7.Create table:

- Home > Enter data > Create table by giving values to the columns
- Visualizations >Columns>orderDate>profit>mtdProfit
- Click on new measure>and enter the below dax formula:

MTDprofit = `CALCULATE(sum(Orders[Profit]),DATESMTD(Orders[Order Date].[Date]))`

| Year         | Quarter | Month    | Day | Sum of Profit      | MTDprofit       |
|--------------|---------|----------|-----|--------------------|-----------------|
| 2020         | Qtr 1   | January  | 26  | 1,500.00           | 1,500.00        |
| 2020         | Qtr 1   | January  | 27  | 9.68               | 2,523.00        |
| 2020         | Qtr 1   | January  | 28  | 1.33               | 2,524.32        |
| 2020         | Qtr 1   | January  | 29  | 2,524.32           |                 |
| 2020         | Qtr 1   | January  | 30  | 11.65              | 2,535.97        |
| 2020         | Qtr 1   | January  | 31  | 3.42               | 2,539.39        |
| 2020         | Qtr 1   | February | 1   | 206.32             | 206.32          |
| 2020         | Qtr 1   | February | 2   | 7.15               | 213.47          |
| 2020         | Qtr 1   | February | 3   | 31.56              | 245.03          |
| 2020         | Qtr 1   | February | 4   | 51.14              | 296.17          |
| 2020         | Qtr 1   | February | 5   | 296.17             |                 |
| 2020         | Qtr 1   | February | 6   | 76.48              | 372.66          |
| 2020         | Qtr 1   | February | 7   | 59.35              | 432.01          |
| 2020         | Qtr 1   | February | 8   | 5.53               | 437.54          |
| 2020         | Qtr 1   | February | 9   | 437.54             |                 |
| 2020         | Qtr 1   | February | 10  | 437.54             |                 |
| <b>Total</b> |         |          |     | <b>2,92,296.81</b> | <b>8,655.83</b> |

## 8.Create table:

- Home > Enter data > Create table by giving values to the columns
- Visualizations >Columns>orderDate>profit>qtdProfit
- Click on new measure>and enter the below dax formula:

QTDprofit = `CALCULATE(sum(Orders[Profit]),DATESQTD(Orders[Order Date].[Date]))`

| Year         | Quarter | Month     | Sum of Profit      | QTDprofit        |
|--------------|---------|-----------|--------------------|------------------|
| 2021         | Qtr 1   | January   | -3,189.80          | -3,189.80        |
| 2021         | Qtr 1   | February  | 2,813.85           | -375.95          |
| 2021         | Qtr 1   | March     | 9,930.61           | 9,554.66         |
| 2021         | Qtr 2   | April     | 4,187.50           | 4,187.50         |
| 2021         | Qtr 2   | May       | 4,677.14           | 8,864.63         |
| 2021         | Qtr 2   | June      | 3,335.56           | 12,200.19        |
| 2021         | Qtr 3   | July      | 3,288.65           | 3,288.65         |
| 2021         | Qtr 3   | August    | 5,371.63           | 8,660.28         |
| 2021         | Qtr 3   | September | 8,220.03           | 16,880.30        |
| 2021         | Qtr 4   | October   | 2,817.97           | 2,817.97         |
| 2021         | Qtr 4   | November  | 12,474.79          | 15,292.75        |
| 2021         | Qtr 4   | December  | 8,093.06           | 23,385.82        |
| 2022         | Qtr 1   | January   | 2,916.02           | 2,916.02         |
| 2022         | Qtr 1   | February  | 5,004.58           | 7,920.60         |
| 2022         | Qtr 1   | March     | 3,707.89           | 11,628.49        |
| <b>Total</b> |         |           | <b>2,92,296.81</b> | <b>29,018.46</b> |

## 9..Create table:

- Home > Enter data > Create table by giving values to the columns
- Visualizations > Columns > orderDate > profit > ytdProfit
- Click on new measure > and enter the below dax formula:

YTDprofit = `CALCULATE(sum(Orders[Profit]),DATESYTD(Orders[Order Date].[Date]))`

| Year         | Quarter | Sum of Profit | YTDprofit          |
|--------------|---------|---------------|--------------------|
| 2020         | Qtr 1   | 4,095.15      | 4,095.15           |
| 2020         | Qtr 2   | 11,684.99     | 11,684.99          |
| 2020         | Qtr 3   | 13,517.37     | 13,517.37          |
| 2020         | Qtr 4   | 22,386.79     | 22,386.79          |
| 2021         | Qtr 1   | 9,554.66      | 9,554.66           |
| 2021         | Qtr 2   | 12,200.19     | 12,200.19          |
| 2021         | Qtr 3   | 16,880.30     | 16,880.30          |
| 2021         | Qtr 4   | 23,385.82     | 23,385.82          |
| 2022         | Qtr 1   | 11,628.49     | 11,628.49          |
| 2022         | Qtr 2   | 16,594.68     | 16,594.68          |
| 2022         | Qtr 3   | 16,247.49     | 16,247.49          |
| 2022         | Qtr 4   | 38,194.55     | 38,194.55          |
| 2023         | Qtr 1   | 23,858.60     | 23,858.60          |
| 2023         | Qtr 2   | 15,503.91     | 15,503.91          |
| 2023         | Qtr 3   | 27,545.38     | 27,545.38          |
| <b>Total</b> |         |               | <b>2,92,296.81</b> |
|              |         |               | <b>29,018.46</b>   |

## Final Output:

The screenshot displays a Microsoft Power BI report interface. On the left, there are three navigation icons: a grid for reports, a calendar for dates, and a document for pages. The main area contains two tables of data.

**Table 1: Sales Data (Quantity)**

| Year         | Quarter | Month    | Day | Sum of Quantity | Mtd item qty |
|--------------|---------|----------|-----|-----------------|--------------|
| 2020         | Qtr 1   | January  | 27  | 8               | 299          |
| 2020         | Qtr 1   | January  | 28  | 1               | 300          |
| 2020         | Qtr 1   | January  | 29  |                 | 300          |
| 2020         | Qtr 1   | January  | 30  | 4               | 304          |
| 2020         | Qtr 1   | January  | 31  | 2               | 306          |
| 2020         | Qtr 1   | February | 1   | 6               | 6            |
| 2020         | Qtr 1   | February | 2   | 12              | 18           |
| 2020         | Qtr 1   | February | 3   | 5               | 23           |
| 2020         | Qtr 1   | February | 4   | 9               | 32           |
| 2020         | Qtr 1   | February | 5   |                 | 32           |
| 2020         | Qtr 1   | February | 6   | 12              | 44           |
| 2020         | Qtr 1   | February | 7   | 11              | 55           |
| <b>Total</b> |         |          |     | <b>38654</b>    | <b>1820</b>  |

**Table 2: Profit Data (Profit)**

| Year         | Quarter | Month   | Day | Sum of Profit      | MTDprofit       |
|--------------|---------|---------|-----|--------------------|-----------------|
| 2020         | Qtr 1   | January | 16  | 6.49               | 1,934.07        |
| 2020         | Qtr 2   | January | 19  | -288.00            | 1,666.07        |
| 2020         | Qtr 3   | January | 20  | 584.37             | 2,250.44        |
| 2020         | Qtr 4   | January | 21  | 93.30              | 2,343.75        |
| 2021         | Qtr 1   | January | 22  |                    | 2,343.75        |
| 2021         | Qtr 2   | January | 23  | 19.24              | 2,362.99        |
| 2021         | Qtr 3   | January | 24  |                    | 2,362.99        |
| 2021         | Qtr 4   | January | 25  |                    | 2,362.99        |
| 2022         | Qtr 1   | January | 26  | 150.33             | 2,513.31        |
| 2022         | Qtr 2   | January | 27  | 9.68               | 2,523.00        |
| 2022         | Qtr 3   | January | 28  | 1.33               | 2,524.32        |
| 2022         | Qtr 4   | January | 29  |                    | 2,524.32        |
| 2023         | Qtr 1   | January | 30  | 11.65              | 2,535.97        |
| 2023         | Qtr 2   | January | 31  | 3.42               | 2,539.39        |
| <b>Total</b> |         |         |     | <b>2,92,296.81</b> | <b>8,655.83</b> |

**Table 3: Sales Data (Quantity)**

| Year         | Quarter | Month     | Sum of Quantity | qtd item qt |
|--------------|---------|-----------|-----------------|-------------|
| 2020         | Qtr 1   | January   | 306             | 30          |
| 2020         | Qtr 1   | February  | 159             | 46          |
| 2020         | Qtr 1   | March     | 597             | 106         |
| 2020         | Qtr 2   | April     | 536             | 53          |
| 2020         | Qtr 2   | May       | 504             | 104         |
| 2020         | Qtr 2   | June      | 524             | 156         |
| 2020         | Qtr 2   | July      | 550             | 55          |
| 2020         | Qtr 3   | August    | 624             | 117         |
| 2020         | Qtr 3   | September | 1015            | 218         |
| 2020         | Qtr 4   | October   | 605             | 60          |
| 2020         | Qtr 4   | November  | 1235            | 184         |
| 2020         | Qtr 4   | December  | 1158            | 299         |
| <b>Total</b> |         |           | <b>38654</b>    | <b>482</b>  |

**Table 4: Profit Data (Profit)**

| Year         | Quarter | Month     | Sum of Profit      | QTDprofit        |
|--------------|---------|-----------|--------------------|------------------|
| 2020         | Qtr 1   | January   | 2,539.39           | 2,539.39         |
| 2020         | Qtr 1   | February  | 862.31             | 3,401.70         |
| 2020         | Qtr 1   | March     | 693.45             | 4,095.15         |
| 2020         | Qtr 2   | April     | 3,488.84           | 3,488.84         |
| 2020         | Qtr 2   | May       | 3,196.39           | 6,685.23         |
| 2020         | Qtr 2   | June      | 4,999.76           | 11,684.99        |
| 2020         | Qtr 3   | July      | -841.48            | -841.48          |
| 2020         | Qtr 3   | August    | 5,765.23           | 4,923.74         |
| 2020         | Qtr 3   | September | 8,593.63           | 13,517.37        |
| 2020         | Qtr 4   | October   | 3,469.17           | 22,386.79        |
| 2020         | Qtr 4   | November  | 9,362.96           | 12,832.13        |
| 2020         | Qtr 4   | December  | 9,554.66           | 22,386.79        |
| 2021         | Qtr 1   | January   | -3,189.80          | -3,189.80        |
| 2021         | Qtr 1   | February  | 2,813.85           | -375.95          |
| 2021         | Qtr 1   | March     | 9,930.61           | 15,503.91        |
| <b>Total</b> |         |           | <b>2,92,296.81</b> | <b>29,018.46</b> |

Page 1



My Dell

Page 1 of 1

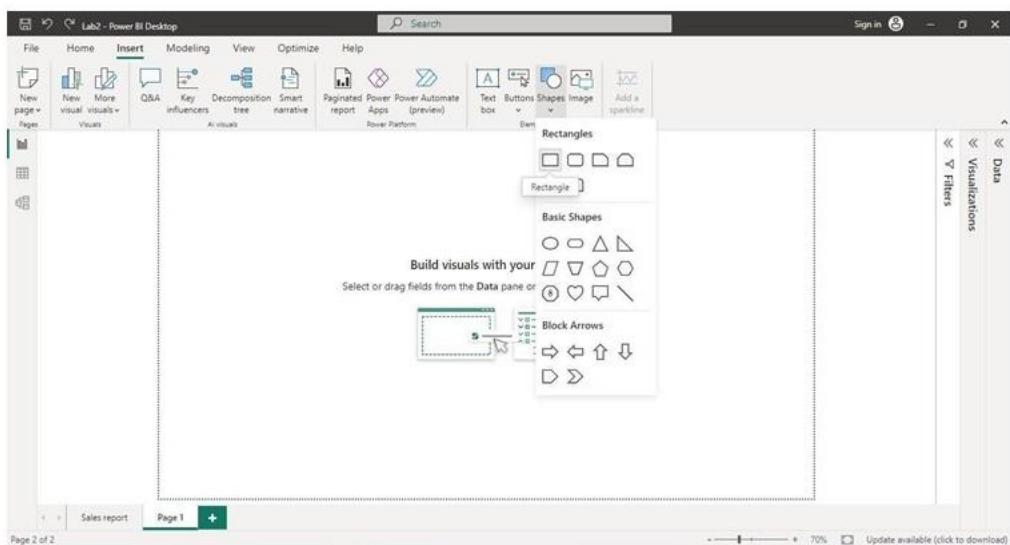
## Experiment Number: 09

### Aim: Create Reports using Filter Functions in DAX

#### 1.Importing the Dataset:

- Launch Power BI Desktop.
- Click on "Get Data" in the Home tab of the ribbon.
- Select the appropriate data source option "Excel" and follow the prompts to import yoursample dataset into Power BI.
- Select sample-super store data,xsl
- Select orders table from the check-boxws.

#### 2.Insert Rectangle Shape:



- Click on “Format tab” on right side and perform changes on visual.
- Shape > Style > #E66C37
- Shape > Text >Text = “Page1”, Font Size = 46, Horizontal Alignment = “Center”.

### 3.Create Table:

- Create table and place it in the report
- In the fields column drag and drop category

| Category        |
|-----------------|
| Furniture       |
| Office Supplies |
| Technology      |
| Total           |

### 4.Create Table for calculating profits:

- Home > Enter data > Create table by giving values to the columns
- Click on new measure>and enter the below dax formula:  
`Total Profit = SUM(Orders[profit])`
- Visualizations >Columns>Total profit

| Category        | Total Profit |
|-----------------|--------------|
| Furniture       | 19,730.00    |
| Office Supplies | 1,26,023.44  |
| Technology      | 1,46,543.38  |
| Total           | 2,92,296.81  |

### 5.Applying ALL-Filter:

**Syntax:** ALL(<table>|<column>].<column>[,...]]])

**Description:** returns all the rows in a table or all the values in the column, ignoring any filters that have been applied. This function is useful for clearing filters and creating calculations or all the rows in a table

- Home > Enter data > Create table by giving values to the columns
- Click on new measure>and enter the below dax formula:

`All profit filter = CALCULATE([Total Profit],ALL(orders))`

| Category        | Total Profit | All profit filter |
|-----------------|--------------|-------------------|
| Furniture       | 19,730.00    | 2,92,296.81       |
| Office Supplies | 1,26,023.44  | 2,92,296.81       |
| Technology      | 1,46,543.38  | 2,92,296.81       |
| Total           | 2,92,296.81  | 2,92,296.81       |

## 6.Applying ALLAccept:

**Syntax:** ALLACCEPT(<table>|<column>].<column>[,...]]])

**Description:** returns all the rows in a table or all the values in the column, ignoring any filters that have been applied except the given coulmn. This function is useful for clearing filters and creating calculations or all the rows in a table except given column.

- Home > Enter data > Create table by giving values to the columns
- Click on new measure>and enter the below dax formula:  

```
All profit Except Cat = CALCULATE([Total Profit], ALLEXCEPT(Orders, Orders[Category]))
```
- Visualizations >Columns>All profit Except cat

| Category        | Total Profit       | All profit filter  | All profit Except Cat |
|-----------------|--------------------|--------------------|-----------------------|
| Furniture       | 19,730.00          | 2,92,296.81        | 19,730.00             |
| Office Supplies | 1,26,023.44        | 2,92,296.81        | 1,26,023.44           |
| Technology      | 1,46,543.38        | 2,92,296.81        | 1,46,543.38           |
| <b>Total</b>    | <b>2,92,296.81</b> | <b>2,92,296.81</b> | <b>2,92,296.81</b>    |

## 7.calculating % of profit for each category:

- Home > Enter data > Create table by giving values to the columns
- Click on new measure>and enter the below dax formula:  

```
%profit Cat = DIVIDE([Total Profit], [All profit filter])
```
- Visualizations >Columns>%profit cat
- Change the mode to %

| Category        | Total Profit       | All profit filter  | All profit Except Cat | %profit Cat    |
|-----------------|--------------------|--------------------|-----------------------|----------------|
| Furniture       | 19,730.00          | 2,92,296.81        | 19,730.00             | 6.75%          |
| Office Supplies | 1,26,023.44        | 2,92,296.81        | 1,26,023.44           | 43.11%         |
| Technology      | 1,46,543.38        | 2,92,296.81        | 1,46,543.38           | 50.14%         |
| <b>Total</b>    | <b>2,92,296.81</b> | <b>2,92,296.81</b> | <b>2,92,296.81</b>    | <b>100.00%</b> |



## 8.Applying filter to a particular Column:

- Home > Enter data > Create table by giving values to the columns
- Click on new measure>and enter the below dax formula:  

```
technology profit = CALCULATE([total profit], Orders[category] = "Technology")
```
- Visualizations >Columns>technology profit

| Category        | Total Profit       | All profit filter  | All profit Except Cat | %profit Cat    | technology profit  | (KP)Technology profit |
|-----------------|--------------------|--------------------|-----------------------|----------------|--------------------|-----------------------|
| Furniture       | 19,730.00          | 2,92,296.81        | 19,730.00             | 6.75%          | 1,46,543.38        |                       |
| Office Supplies | 1,26,023.44        | 2,92,296.81        | 1,26,023.44           | 43.11%         | 1,46,543.38        |                       |
| Technology      | 1,46,543.38        | 2,92,296.81        | 1,46,543.38           | 50.14%         | 1,46,543.38        |                       |
| <b>Total</b>    | <b>2,92,296.81</b> | <b>2,92,296.81</b> | <b>2,92,296.81</b>    | <b>100.00%</b> | <b>1,46,543.38</b> | <b>1,46,543.38</b>    |

## 9. Applying Keep-Filter:

**Syntax:** KEEPFILTERS(<Expression>)

**Description:** Modifies how filters are applied for evaluating.

- Home > Enter data > Create table by giving values to the columns
- Click on new measure>and enter the below dax formula:

(KP)Technology profit = `calculate([Total Profit], keepfilters(orders[category] = "Technology"))`

- Visualizations >Columns>(KP)Technology Profit

| Category        | Total Profit       | All profit filter  | All profit Except Cat | %profit Cat    | technology profit  | (KP)Technology profit | All Profit RF filter |
|-----------------|--------------------|--------------------|-----------------------|----------------|--------------------|-----------------------|----------------------|
| Furniture       | 19,730.00          | 2,92,296.81        | 19,730.00             | 6.75%          | 1,46,543.38        |                       |                      |
| Office Supplies | 1,26,023.44        | 2,92,296.81        | 1,26,023.44           | 43.11%         | 1,46,543.38        |                       |                      |
| Technology      | 1,46,543.38        | 2,92,296.81        | 1,46,543.38           | 50.14%         | 1,46,543.38        | 1,46,543.38           | 1,46,543.38          |
| <b>Total</b>    | <b>2,92,296.81</b> | <b>2,92,296.81</b> | <b>2,92,296.81</b>    | <b>100.00%</b> | <b>1,46,543.38</b> | <b>1,46,543.38</b>    | <b>1,46,543.38</b>   |

## 10. Applying REMOVE-Filter:

**Syntax:** RemoveFilter(.<column>[,...]]])

**Description:** same as all filter but not returns all the rows in a table or all the values in the column, ignoring any filters that have been applied. Majorly used for reducing complexity and increasing performance. This function is useful for clearing filters and creating calculations or all the rows in a table

- Home > Enter data > Create table by giving values to the columns
- Click on new measure>and enter the below dax formula:

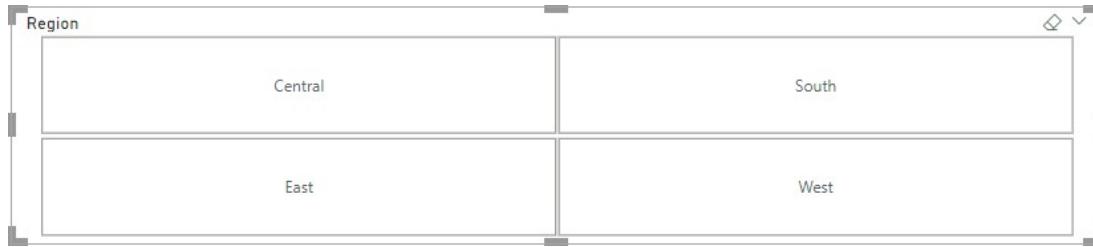
All Profit RF filter = `calculate([total profit], REMOVEFILTERS(Orders[category]))`

- Visualizations >Columns>All profit RF filter

| Category        | Total Profit       | All profit filter  | All profit Except Cat | %profit Cat    | technology profit  | (KP)Technology profit | All Profit RF filter |
|-----------------|--------------------|--------------------|-----------------------|----------------|--------------------|-----------------------|----------------------|
| Furniture       | 19,730.00          | 2,92,296.81        | 19,730.00             | 6.75%          | 1,46,543.38        |                       | 2,92,296.81          |
| Office Supplies | 1,26,023.44        | 2,92,296.81        | 1,26,023.44           | 43.11%         | 1,46,543.38        |                       | 2,92,296.81          |
| Technology      | 1,46,543.38        | 2,92,296.81        | 1,46,543.38           | 50.14%         | 1,46,543.38        | 1,46,543.38           | 2,92,296.81          |
| <b>Total</b>    | <b>2,92,296.81</b> | <b>2,92,296.81</b> | <b>2,92,296.81</b>    | <b>100.00%</b> | <b>1,46,543.38</b> | <b>1,46,543.38</b>    | <b>2,92,296.81</b>   |

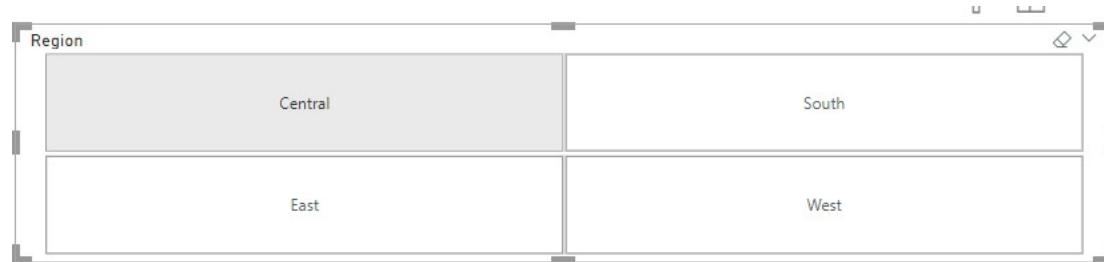
## 11. Creating a slicer for comparison:

- Home>visulazation>build visual>select slicer
- Chose religion in the fields
- From setting change the slicer settings>
- Choose style as tile



### comparison:

if region=central

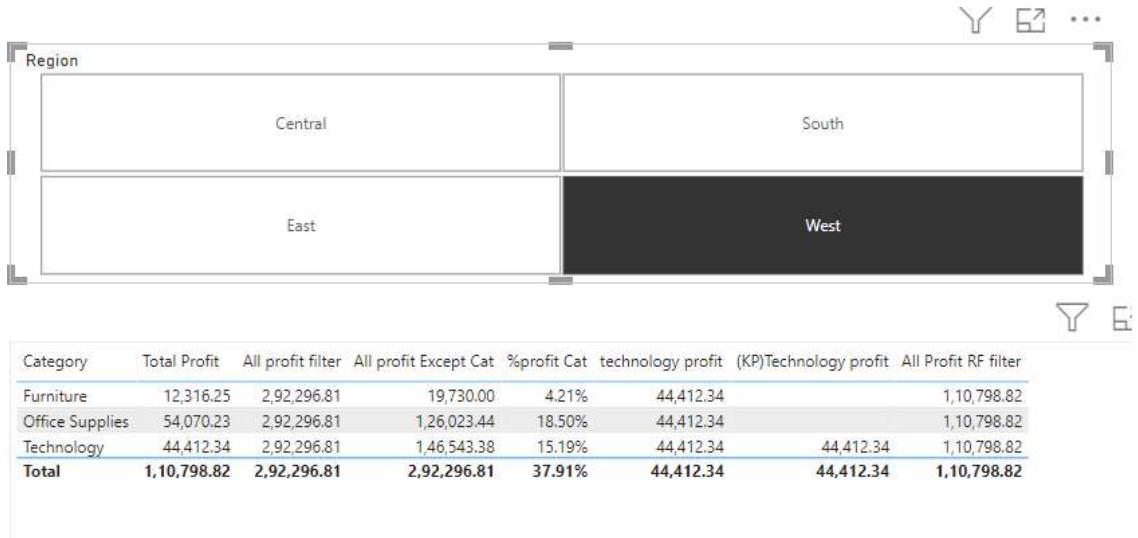


| Category        | Total Profit     | All profit filter  | All profit Except Cat | %profit Cat   | technology profit | (KP)Technology profit | All Profit RF filter |
|-----------------|------------------|--------------------|-----------------------|---------------|-------------------|-----------------------|----------------------|
| Furniture       | -2,802.21        | 2,92,296.81        | 19,730.00             | -0.96%        | 33,697.43         |                       | 39,865.31            |
| Office Supplies | 8,970.08         | 2,92,296.81        | 1,26,023.44           | 3.07%         | 33,697.43         |                       | 39,865.31            |
| Technology      | 33,697.43        | 2,92,296.81        | 1,46,543.38           | 11.53%        | 33,697.43         | 33,697.43             | 39,865.31            |
| <b>Total</b>    | <b>39,865.31</b> | <b>2,92,296.81</b> | <b>2,92,296.81</b>    | <b>13.64%</b> | <b>33,697.43</b>  | <b>33,697.43</b>      | <b>39,865.31</b>     |

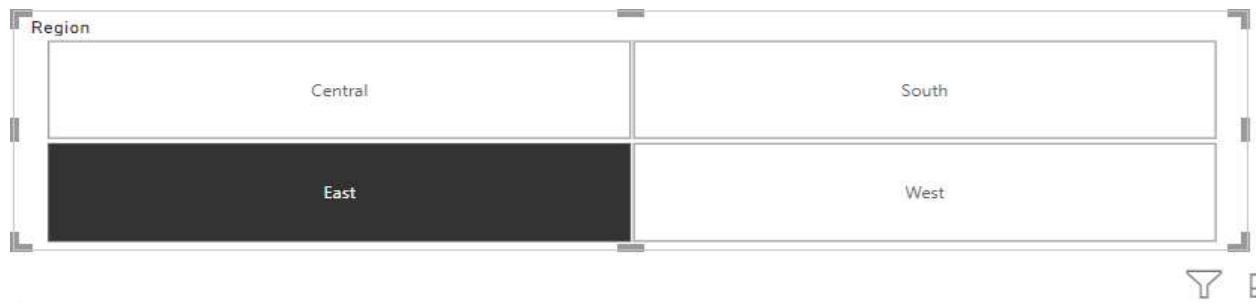
if region=south:



if region=East:



if region=West:



## 12. Create Table:

- Home > Enter data > Create table by giving values to the columns
- Click on new measure>and enter the below dax formula:
- Profit rank = `RANKX(ALL(Orders[region]),[total profit],,,desc)`
- Visualizations >Columns>religion>profit>profit rank

| Region       | Sum of Profit      | Profit rank |
|--------------|--------------------|-------------|
| West         | 1,10,798.82        | 1           |
| East         | 94,883.26          | 2           |
| South        | 46,749.43          | 3           |
| Central      | 39,865.31          | 4           |
| <b>Total</b> | <b>2,92,296.81</b> | <b>1</b>    |

### 13. Output:

The screenshot displays a dashboard interface with three main sections: a treemap chart, a profit summary table, and a regional profit table.

**Treemap Chart:** A treemap visualization titled "Region" showing four segments: Central (top-left), South (top-right), East (bottom-left), and West (bottom-right). The segments are represented by orange rectangles of varying sizes.

**Profit Summary Table:** A table showing profit data across different categories and filters. The columns include Category, Total Profit, All profit filter, All profit Except Cat, %profit Cat, technology profit, (KP)Technology profit, and All Profit RF filter.

| Category        | Total Profit | All profit filter | All profit Except Cat | %profit Cat | technology profit | (KP)Technology profit | All Profit RF filter |
|-----------------|--------------|-------------------|-----------------------|-------------|-------------------|-----------------------|----------------------|
| Furniture       | 19,730.00    | 2,92,296.81       | 19,730.00             | 6.75%       | 1,46,543.38       |                       | 2,92,296.81          |
| Office Supplies | 1,26,023.44  | 2,92,296.81       | 1,26,023.44           | 43.11%      | 1,46,543.38       |                       | 2,92,296.81          |
| Technology      | 1,46,543.38  | 2,92,296.81       | 1,46,543.38           | 50.14%      | 1,46,543.38       | 1,46,543.38           | 2,92,296.81          |
| Total           | 2,92,296.81  | 2,92,296.81       | 2,92,296.81           | 100.00%     | 1,46,543.38       | 1,46,543.38           | 2,92,296.81          |

**Regional Profit Table:** A table showing the sum of profit and profit rank for each region.

| Region  | Sum of Profit | Profit rank |
|---------|---------------|-------------|
| West    | 1,10,798.82   | 1           |
| East    | 94,883.26     | 2           |
| South   | 46,749.43     | 3           |
| Central | 39,865.31     | 4           |
| Total   | 2,92,296.81   | 1           |

At the bottom left, there are navigation icons for back, forward, and search, followed by the text "Page 1" and a green plus sign button.

**Experiment Number: 10**

**Aim:** To publish the Power-BI project report and create a dashboard

**Procedure:**

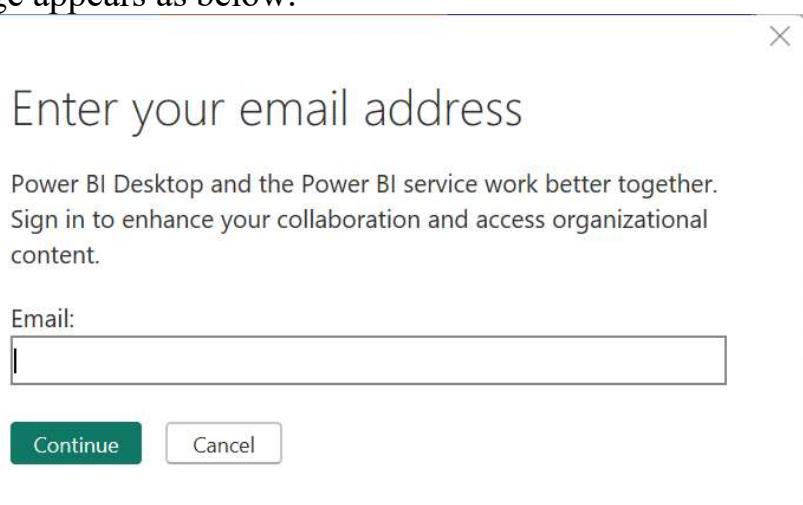
**2. Open the Report View:**

- Open the Power-bi file that is needed to be published
- Open the report view of the document



**3. Sign-in to your Microsoft Account:**

- On the right side of the page click on the sign in-button
- A page appears as below.



- Enter the Email or the select the email in the drop down list shown.
- A page appears as follows:

← 20bq1a0508@vvit.net

## Enter password

Password

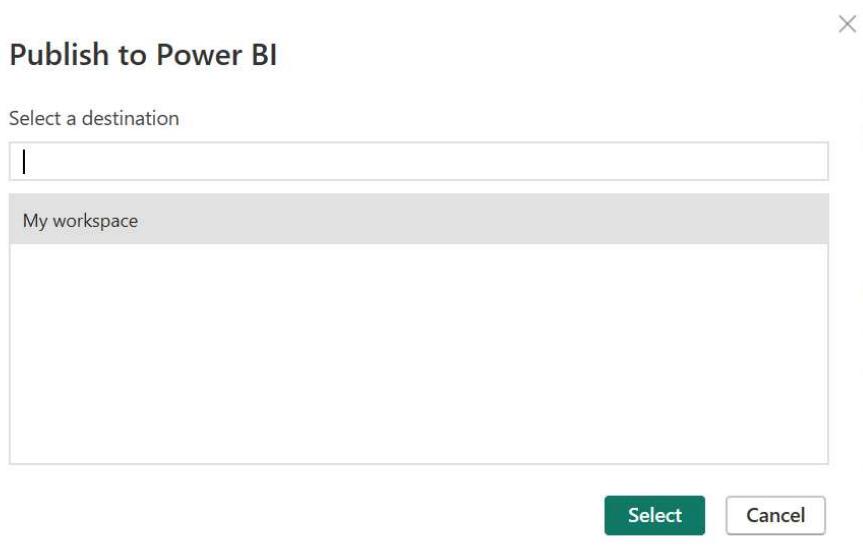
[Forgot my password](#)

**Sign in**

- Enter the password and click on the sign-in button
- Now,your signed-in to your Microsoft account.

#### 4. Publish your Report:

- Click on the publish icon on the right-side of the document.
- A page appears as follows:



- Click on the My workspace from the drop-down menu
- And follow by clicking on the select button.
- A page appears as follows.

## Publishing to Power BI

.. Publishing 'lab6.pbix' to Power BI



### Did you know?

You can create a portrait view of your report, tailored for mobile phones. On the **View** tab, select **Mobile Layout**. [Learn more](#)

[Cancel](#)

- After successfully publishing the report a dialog-box appears as below:

## Publishing to Power BI

✓ Success!

[Open 'Lab2.pbix' in Power BI](#)

[Get Quick Insights](#)



### Did you know?

You can create a portrait view of your report, tailored for mobile phones. On the **View** tab, select **Mobile Layout**. [Learn more](#)

[Got it](#)

## 5. View the Report:

- Open your browser
- Search for App.powerbi.com
- A page appears as below.

The screenshot shows the Power BI Home page. On the left, there's a sidebar with icons for Home, Create, Browse, Data Lake, Apps, Metrics, Workspaces, and My Workspace. The main area has a search bar at the top. Below it, a banner says "Introducing the Power BI app in Teams" with a "Learn more" link and an "Open in Teams" button. There's also a message about items saved to "My workspace". The "Recommended" section features four cards: "Getting started with Power BI" (Explore basic Power BI concepts), "Explore this data story" (Explore the 100 most useful productivity tips), "Explore this data story" (Cancer statistics in the USA), and "Getting started with" (Intro—What is Power BI?).

- Sign in to your Microsoft account.
- Click on the My Workspace icon that is viewed on the left-side of the page.

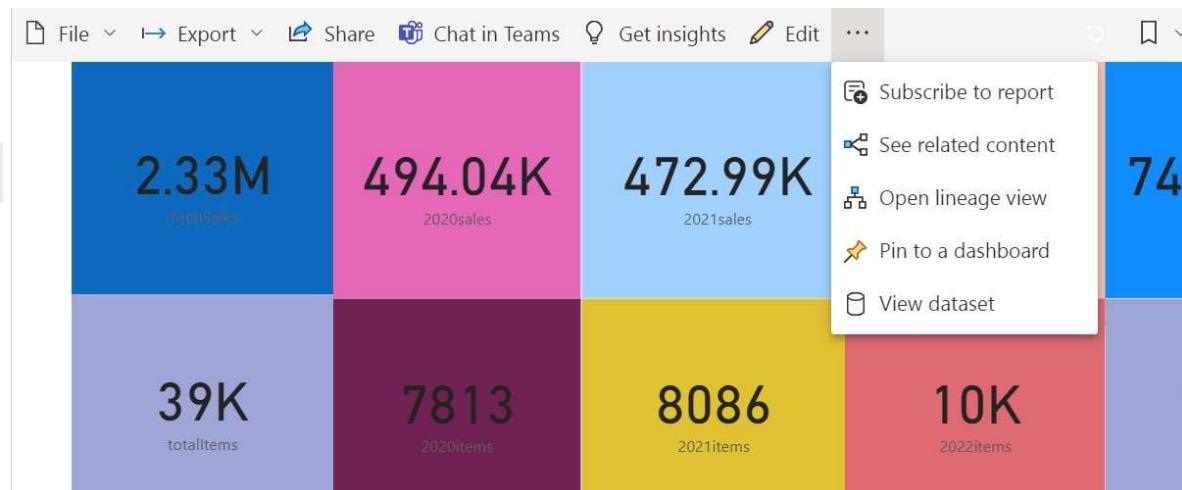
- The documents you have published can be viewed on this page

The screenshot shows the 'My workspace' section of the Power BI service. At the top, there are buttons for '+ New', 'Upload', 'Workspace settings', a search bar 'Filter by keyword', a 'Filter' dropdown, and a three-dot menu. Below this is a table with columns: Name, Type, Owner, Refreshed, and Next refresh. The table lists five items:

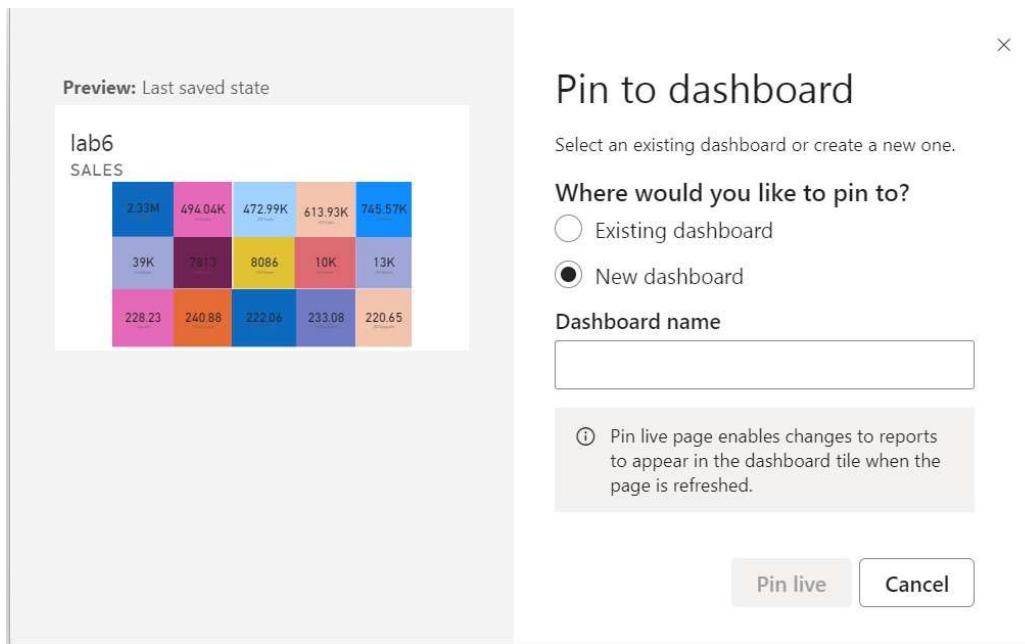
| Name                 | Type      | Owner               | Refreshed            | Next refresh |
|----------------------|-----------|---------------------|----------------------|--------------|
| lab6                 | Report    | 20BQ1A0508 - ANA... | 8/10/23, 11:00:34 am | —            |
| lab6                 | Dataset   | 20BQ1A0508 - ANA... | 8/10/23, 11:00:34 am | N/A          |
| lab8                 | Report    | 20BQ1A0508 - ANA... | 5/10/23, 10:19:04 am | —            |
| lab8                 | Dataset   | 20BQ1A0508 - ANA... | 5/10/23, 10:19:04 am | N/A          |
| MTD,QTD,YTD Formulas | Dashboard | 20BQ1A0508 - ANA... | —                    | —            |

## 6. Pin To Dashboard:

- We can also create dashboards for all the important data that is needed to view more oftenly.
- For Example there are 2 pages in the report we have published i.e. profit and sales.
- So if we need to view sales page often we can create a dashboard for it.
- Open the page and click on the three dots that are visible on the right side of the page
- The page appears as below.



- Click on the pin to a dashboard option.
- Two options are shown as below:



- We can pin it to new dashboard or an existing dashboard.
- Give a suitable dashboard name
- After clicking on pin-live the pinned page will be shown as follows.



- Similarly publish all the power-bi files that have been done.

## 7.Final Report:

- After publishing all the documents, open the browser.
- Sign in to your account
- Click on My Workspaces.
- Along with the published documents the pinned reports will be shown on your dashboard.

## 8.Final Output:

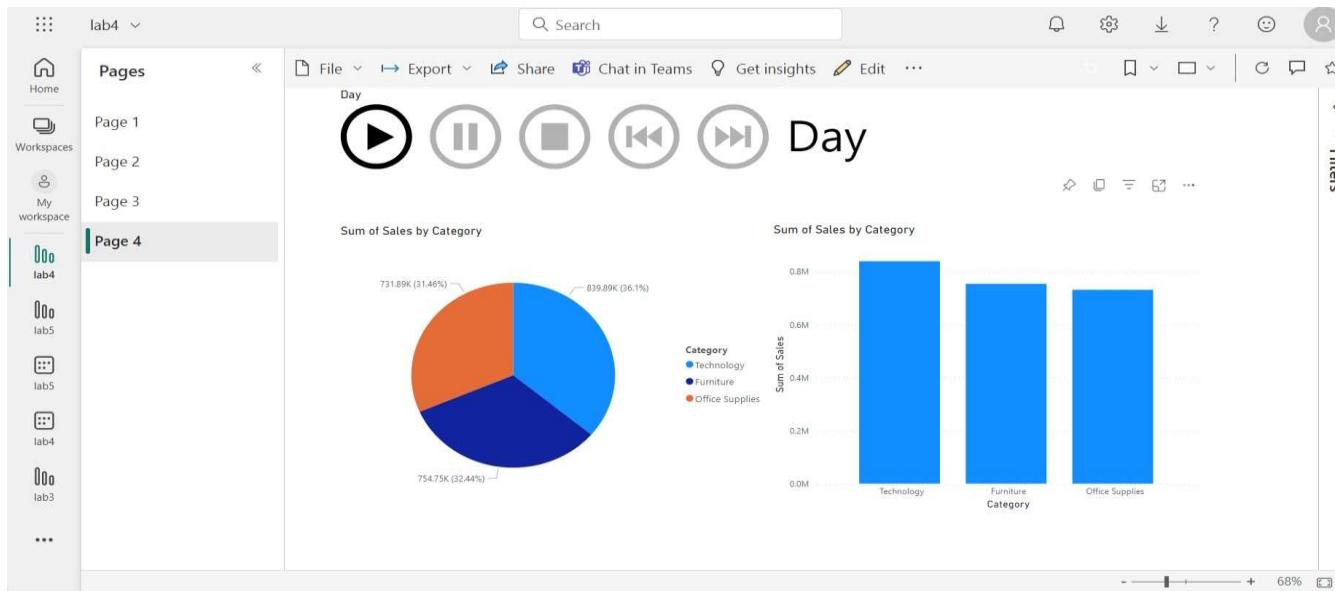
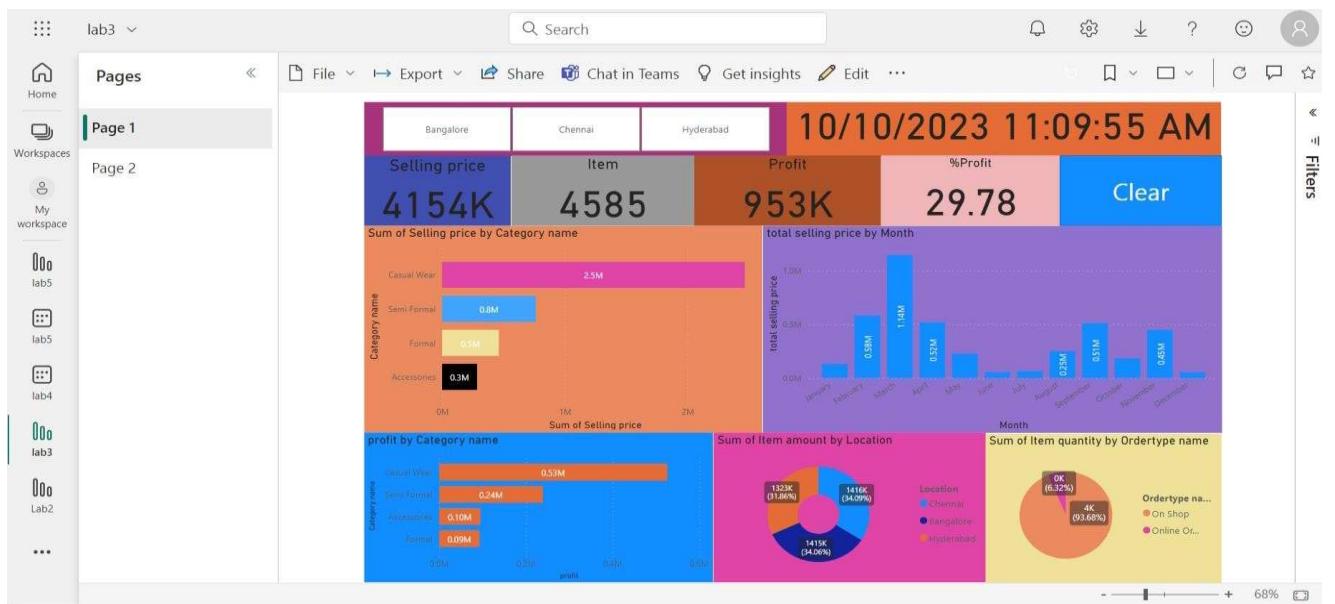
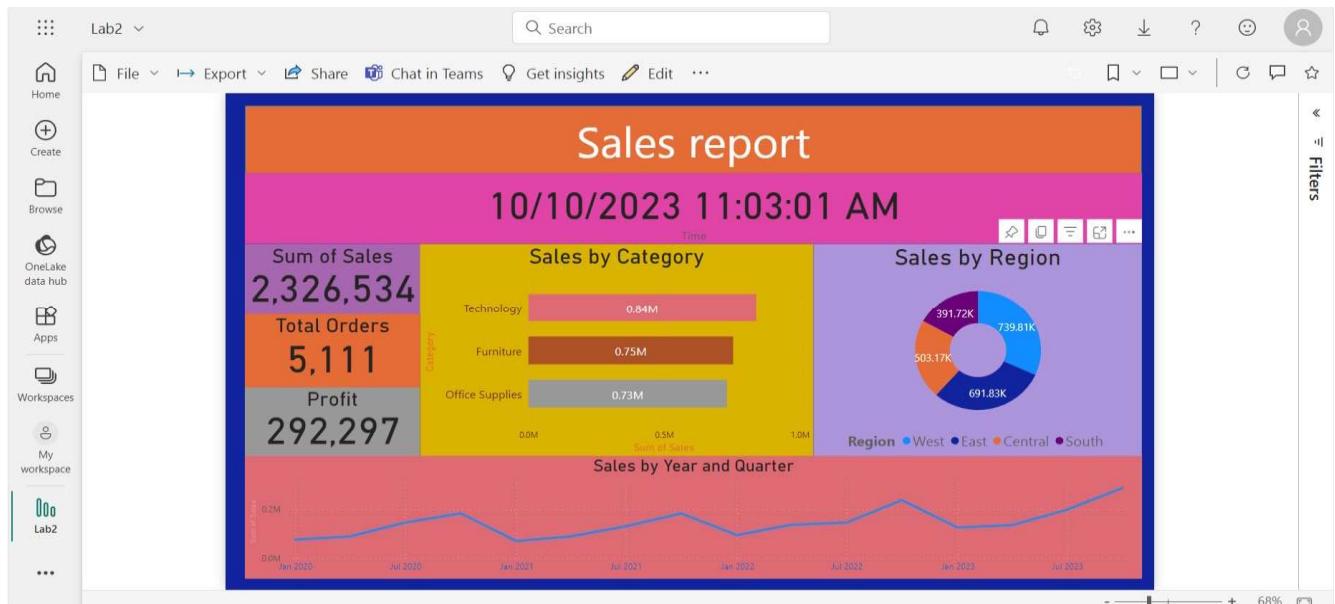
The pinned pages will be appeared as below in the dashboard

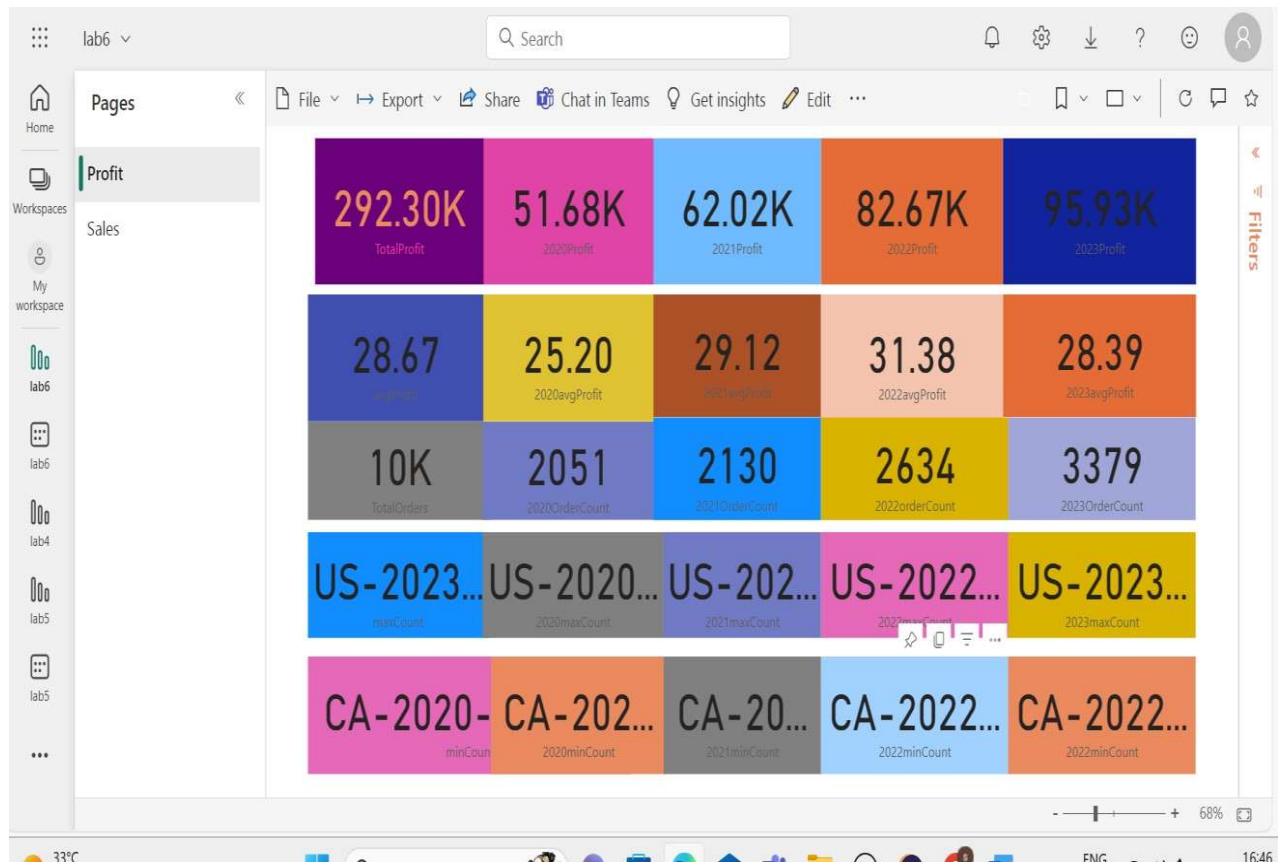
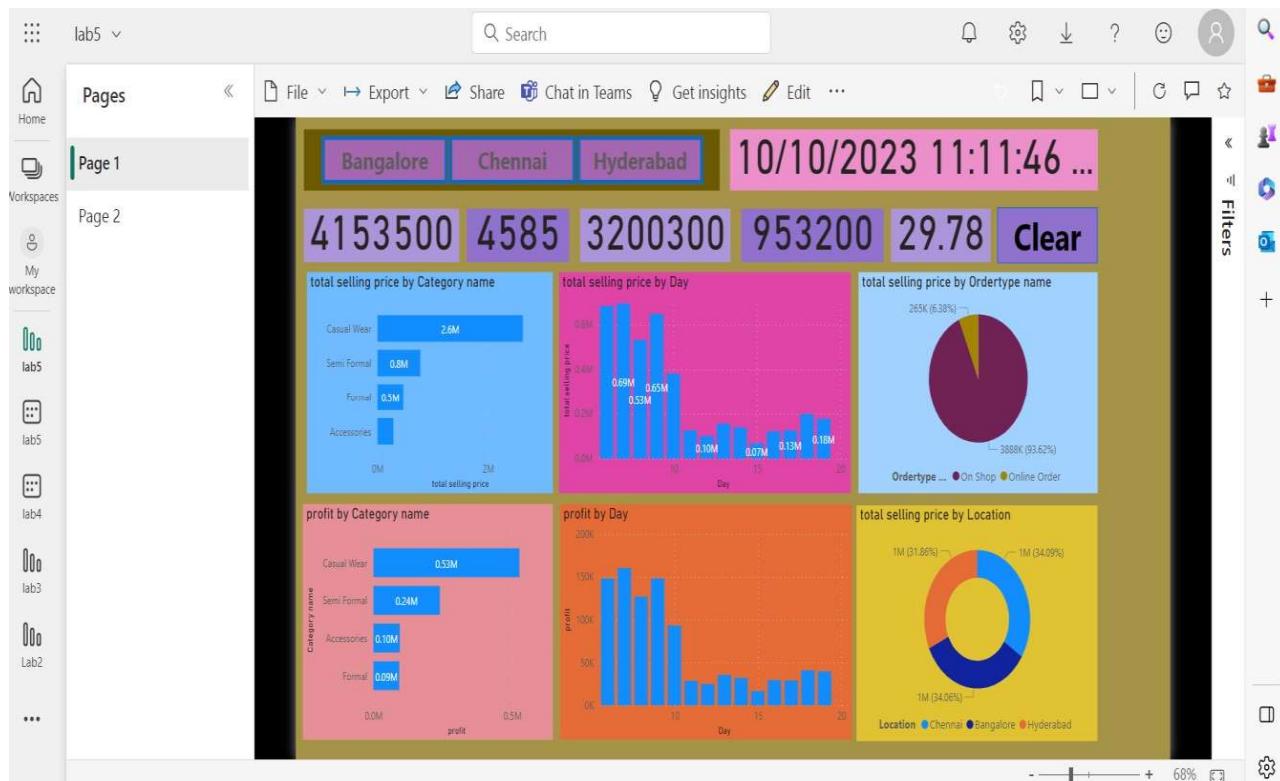
|   | Name                       | Type      | Opened         | Owner               | Enc |
|---|----------------------------|-----------|----------------|---------------------|-----|
| ⌚ | Advanced Visualizations    | Dashboard |                | 20BQ1A0508 - ANA... | —   |
| ⌚ | Extracting Transformations | Dashboard |                | 20BQ1A0508 - ANA... | —   |
| ⌚ | profit                     | Dashboard |                | 20BQ1A0508 - ANA... | —   |
| ⌚ | sales report               | Dashboard | a minute ago   | 20BQ1A0508 - ANA... | —   |
| ⌚ | Sameperiodlastyear         | Dashboard | 2 minutes ago  | 20BQ1A0508 - ANA... | —   |
| ⌚ | Sales                      | Dashboard | 19 minutes ago | 20BQ1A0508 - ANA... | —   |
| ⌚ | MTD,QTD,YTD Formulas       | Dashboard | 3 days ago     | 20BQ1A0508 - ANA... | —   |

All the reports you have published will be shown in workspace as shown below:

The screenshot shows the Power BI 'My workspace' interface. On the left, there's a sidebar with navigation icons for Home, Workspaces, My workspace, and recent reports. The main area is titled 'My workspace' and displays a list of published items. At the top of the list are two reports: 'Lab2' and 'Lab2'. Below them are two datasets: 'lab3' and 'lab3'. Following these are two more reports: 'lab4' and 'lab4'. The final item in the list is 'lab6'. Each item in the list includes a small preview icon, a name, a type (Report or Dataset), an owner (20BQ1A0508 - ANA...), a refresh timestamp (e.g., 8/10/23, 11:17:33 am), and a 'Next refresh' status (N/A or —). There are also filter and search tools at the top of the list.

|   | Name | Type    | Owner               | Refreshed            | Next refresh | Enc |
|---|------|---------|---------------------|----------------------|--------------|-----|
| ⌚ | Lab2 | Report  | 20BQ1A0508 - ANA... | 8/10/23, 11:17:33 am | —            | —   |
| ⌚ | Lab2 | Dataset | 20BQ1A0508 - ANA... | 8/10/23, 11:17:33 am | N/A          | —   |
| ⌚ | lab3 | Report  | 20BQ1A0508 - ANA... | 8/10/23, 11:16:41 am | —            | —   |
| ⌚ | lab3 | Dataset | 20BQ1A0508 - ANA... | 8/10/23, 11:16:41 am | N/A          | —   |
| ⌚ | lab4 | Report  | 20BQ1A0508 - ANA... | 8/10/23, 11:15:49 am | —            | —   |
| ⌚ | lab4 | Dataset | 20BQ1A0508 - ANA... | 8/10/23, 11:15:49 am | N/A          | —   |
| ⌚ | lab6 | Report  | 20BQ1A0508 - ANA... | 8/10/23, 11:00:34 am | —            | —   |





lab7

Pages

File Export Share Chat in Teams Get insights Edit ...

Sum of Profit by Day

Sum of Profit by Month

Sum of Profit by MonthName

Sum of Profit by Quarter

Sum of Profit by QuarterName

Sum of Profit by WeekNum

Sum of Profit by WeekDay

Sum of Profit by Day of weekName

Sum of Profit by year

Year Quarter Month Day Sum of Profit previousDayProfit

|                      |            |
|----------------------|------------|
| 2020 Qtr 1 January 3 | 5.55       |
| 2020 Qtr 1 January 4 | -65.99     |
| 2020 Qtr 1 January 5 | 4.88       |
| 2020 Qtr 1 January 6 | 1,358.05   |
| 2020 Qtr 1 January 7 | 4.88       |
| 2020 Qtr 1 January 8 | -71.96     |
| Total                | 292,296.81 |

Year Quarter Month Sum of Profit previousMonthProfit

|                     |            |
|---------------------|------------|
| 2020 Qtr 1 January  | 2,539.39   |
| 2020 Qtr 1 February | 862.31     |
| 2020 Qtr 1 March    | 693.45     |
| 2020 Qtr 2 April    | 3,488.84   |
| 2020 Qtr 2 May      | 3,196.39   |
| Total               | 292,296.81 |

68%

lab8

File Export Share Chat in Teams Get insights Edit ...

| Year  | Quarter | Month   | Day | Sum of Quantity | Mtd item qt |
|-------|---------|---------|-----|-----------------|-------------|
| 2020  | Qtr 1   | January | 3   | 2               | 2           |
| 2020  | Qtr 1   | January | 4   | 8               | 10          |
| 2020  | Qtr 1   | January | 5   | 3               | 13          |
| 2020  | Qtr 1   | January | 6   | 30              | 43          |
| 2020  | Qtr 1   | January | 7   | 10              | 53          |
| 2020  | Qtr 1   | January | 8   | 5               | 53          |
| 2020  | Qtr 1   | January | 9   | 5               | 58          |
| 2020  | Qtr 1   | January | 10  | 2               | 60          |
| 2020  | Qtr 1   | January | 11  | 2               | 62          |
| 2020  | Qtr 1   | January | 12  |                 | 62          |
| 2020  | Qtr 1   | January | 13  | 48              | 110         |
| 2020  | Qtr 1   | January | 14  | 4               | 114         |
| Total |         |         |     | 38654           | 1820        |

| Year  | Quarter | Month     | Day | Sum of Quantity | qtd item qt |
|-------|---------|-----------|-----|-----------------|-------------|
| 2020  | Qtr 1   | January   | 3   | 306             | 30          |
| 2020  | Qtr 1   | February  | 10  | 159             | 46          |
| 2020  | Qtr 1   | March     | 13  | 597             | 106         |
| 2020  | Qtr 2   | April     | 53  | 536             | 53          |
| 2020  | Qtr 2   | May       | 104 | 504             | 104         |
| 2020  | Qtr 2   | June      | 156 | 524             | 156         |
| 2020  | Qtr 3   | July      | 55  | 550             | 55          |
| 2020  | Qtr 3   | August    | 117 | 624             | 117         |
| 2020  | Qtr 3   | September | 218 | 1015            | 218         |
| 2020  | Qtr 4   | October   | 60  | 605             | 60          |
| 2020  | Qtr 4   | November  | 184 | 1235            | 184         |
| 2020  | Qtr 4   | December  | 299 | 1158            | 299         |
| Total |         |           |     | 38654           | 482         |

| Year  | Quarter | Month   | Day | Sum of Profit | Mtd profit |
|-------|---------|---------|-----|---------------|------------|
| 2020  | Qtr 1   | January | 3   | 5.55          | 5.55       |
| 2020  | Qtr 1   | January | 4   | -65.99        | -65.99     |
| 2020  | Qtr 1   | January | 5   | 4.88          | 4.88       |
| 2020  | Qtr 1   | January | 6   | 1,358.05      | 1,358.05   |
| 2020  | Qtr 1   | January | 7   | -71.96        | -71.96     |
| 2020  | Qtr 1   | January | 8   | 1,            | 1,         |
| 2020  | Qtr 1   | January | 9   | 10.92         | 10.92      |
| 2020  | Qtr 1   | January | 10  | 22.65         | 22.65      |
| 2020  | Qtr 1   | January | 11  | 3.08          | 3.08       |
| 2020  | Qtr 1   | January | 12  | 1,            | 1,         |
| 2020  | Qtr 1   | January | 13  | 673.64        | 673.64     |
| 2020  | Qtr 1   | January | 14  | -53.29        | -53.29     |
| 2020  | Qtr 1   | January | 15  | 65.98         | 65.98      |
| 2020  | Qtr 1   | January | 16  | -5.93         | -5.93      |
| Total |         |         |     | 292,296.81    | 8,1        |

| Year  | Quarter | Month     | Day | Sum of Profit | MTDprofit |
|-------|---------|-----------|-----|---------------|-----------|
| 2020  | Qtr 1   | January   | 3   | 2,539.39      | 2,539.39  |
| 2020  | Qtr 1   | February  | 10  | 862.31        | 3,401.70  |
| 2020  | Qtr 1   | March     | 13  | 693.45        | 4,095.15  |
| 2020  | Qtr 2   | April     | 53  | 135           | 4,095.15  |
| 2020  | Qtr 2   | May       | 104 | 132           | 267       |
| 2020  | Qtr 2   | June      | 156 | 136           | 403       |
| 2020  | Qtr 3   | July      | 55  | 143           | 143       |
| 2020  | Qtr 3   | August    | 117 | 158           | 301       |
| 2020  | Qtr 3   | September | 218 | 273           | 574       |
| 2020  | Qtr 4   | October   | 60  | 168           | 168       |
| 2020  | Qtr 4   | November  | 184 | 320           | 488       |
| 2020  | Qtr 4   | December  | 299 | 297           | 785       |
| Total |         |           |     | 482           | 1251      |

| Year  | Quarter | Month     | Day | Sum of Profit | QTDprofit |
|-------|---------|-----------|-----|---------------|-----------|
| 2020  | Qtr 1   | January   | 3   | 2,539.39      | 2,539.39  |
| 2020  | Qtr 1   | February  | 10  | 862.31        | 3,401.70  |
| 2020  | Qtr 1   | March     | 13  | 693.45        | 4,095.15  |
| 2020  | Qtr 2   | April     | 53  | 135           | 4,095.15  |
| 2020  | Qtr 2   | May       | 104 | 132           | 267       |
| 2020  | Qtr 2   | June      | 156 | 136           | 403       |
| 2020  | Qtr 3   | July      | 55  | 143           | 143       |
| 2020  | Qtr 3   | August    | 117 | 158           | 301       |
| 2020  | Qtr 3   | September | 218 | 273           | 574       |
| 2020  | Qtr 4   | October   | 60  | 168           | 168       |
| 2020  | Qtr 4   | November  | 184 | 320           | 488       |
| 2020  | Qtr 4   | December  | 299 | 297           | 785       |
| Total |         |           |     | 482           | 1251      |

| Year  | Quarter | Month     | Day | Sum of Profit | YTDprofit |
|-------|---------|-----------|-----|---------------|-----------|
| 2020  | Qtr 1   | January   | 3   | 2,539.39      | 2,539.39  |
| 2020  | Qtr 1   | February  | 10  | 862.31        | 3,401.70  |
| 2020  | Qtr 1   | March     | 13  | 693.45        | 4,095.15  |
| 2020  | Qtr 2   | April     | 53  | 135           | 4,095.15  |
| 2020  | Qtr 2   | May       | 104 | 132           | 267       |
| 2020  | Qtr 2   | June      | 156 | 136           | 403       |
| 2020  | Qtr 3   | July      | 55  | 143           | 143       |
| 2020  | Qtr 3   | August    | 117 | 158           | 301       |
| 2020  | Qtr 3   | September | 218 | 273           | 574       |
| 2020  | Qtr 4   | October   | 60  | 168           | 168       |
| 2020  | Qtr 4   | November  | 184 | 320           | 488       |
| 2020  | Qtr 4   | December  | 299 | 297           | 785       |
| Total |         |           |     | 482           | 1251      |

68%