Designing a Sales dashboard in Excel

Description:

Use Excel to analyze the sales based on various product categories.

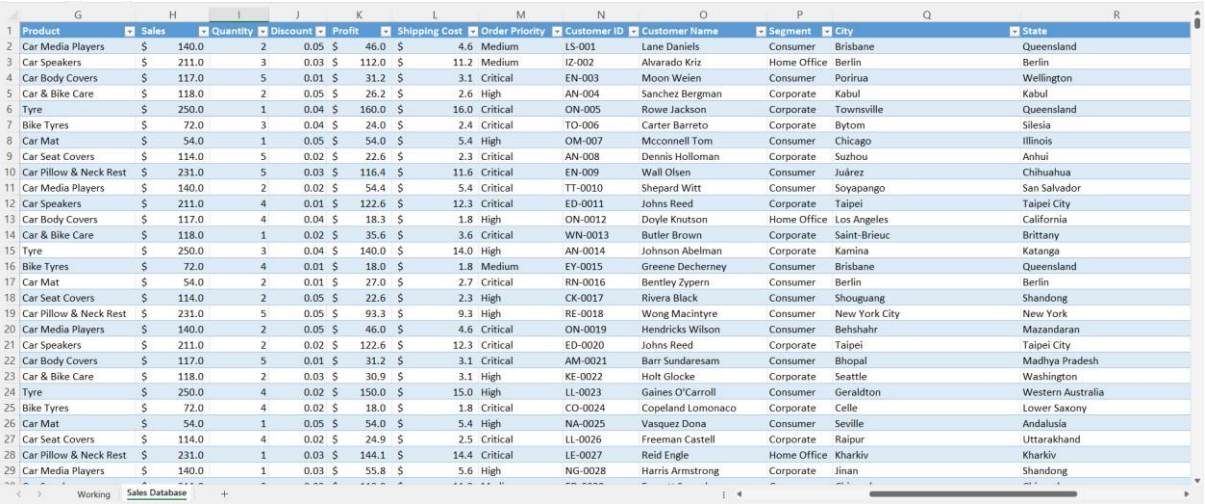
The dataset in file **E-Commerce Dashboard dataset.xlsx** contains sales data for different product categories.

The following are the features in the dataset:

Order ID	Unique Order ID of a product
Order Date	Order Placement Date
Ship Date	Shipment Date of the placed order
Aging	Used to Create Histogram Bin
Ship Mode	Shipment mode of placed order
Product Category	Product Category
Product	Name of the Product
Sales	Sales Amount
Quantity	The amount or number of a material
Discount	A deduction from the usual cost of something
Profit	A financial advantage or benefit
Shipping Cost	The amount required to ship the placed order
Order Priority	Precedence of placed order
Customer ID	Unique Customer ID
Customer Name	Name of the Customer
City	Unique City Name
State	Unique State Name
Country	Unique Country Name
Region	Especially the part of a country
Months	The month of placing the order

The following project tasks were performed in Excel:

- **Use the saved Sample E-Commerce database**



	G	H	I	J	K	L	M	N	O	P	Q	R
1	Product	Sales	Quantity	Discount	Profit	Shipping Cost	Order Priority	Customer ID	Customer Name	Segment	City	State
2	Car Media Players	$ 140.0	2	0.05	$ 46.0	$ 4.6	Medium	LS-001	Lane Daniels	Consumer	Brisbane	Queensland
3	Car Speakers	$ 211.0	3	0.03	$ 112.0	$ 11.2	Medium	IZ-002	Alvarado Kriz	Home Office	Berlin	Berlin
4	Car Body Covers	$ 117.0	5	0.01	$ 31.2	$ 3.1	Critical	EN-003	Moon Weien	Consumer	Porirua	Wellington
5	Car & Bike Care	$ 118.0	2	0.05	$ 26.2	$ 2.6	High	AN-004	Sanchez Bergman	Corporate	Kabul	Kabul
6	Tyre	$ 250.0	1	0.04	$ 160.0	$ 16.0	Critical	ON-005	Rowe Jackson	Corporate	Townsville	Queensland
7	Bike Tyres	$ 72.0	3	0.04	$ 24.0	$ 2.4	Critical	TO-006	Carter Barreto	Corporate	Bytom	Silesia
8	Car Mat	$ 54.0	1	0.05	$ 54.0	$ 5.4	High	OM-007	Mcconnell Tom	Consumer	Chicago	Illinois
9	Car Seat Covers	$ 114.0	5	0.02	$ 22.6	$ 2.3	Critical	AN-008	Dennis Holloman	Corporate	Suzhou	Anhui
10	Car Pillow & Neck Rest	$ 231.0	5	0.03	$ 116.4	$ 11.6	Critical	EN-009	Wall Olsen	Consumer	Juárez	Chihuahua
11	Car Media Players	$ 140.0	2	0.02	$ 54.4	$ 5.4	Critical	TT-0010	Shepard Witt	Consumer	Soyapango	San Salvador
12	Car Speakers	$ 211.0	4	0.01	$ 122.6	$ 12.3	Critical	ED-0011	Johns Reed	Corporate	Taipei	Taipei City
13	Car Body Covers	$ 117.0	4	0.04	$ 18.3	$ 1.8	High	ON-0012	Doyle Knutson	Home Office	Los Angeles	California
14	Car & Bike Care	$ 118.0	1	0.02	$ 35.6	$ 3.6	Critical	WN-0013	Butler Brown	Corporate	Saint-Brieuc	Brittany
15	Tyre	$ 250.0	3	0.04	$ 140.0	$ 14.0	High	AN-0014	Johnson Abelman	Corporate	Kamina	Katanga
16	Bike Tyres	$ 72.0	4	0.01	$ 18.0	$ 1.8	Medium	EY-0015	Greene Decherney	Consumer	Brisbane	Queensland
17	Car Mat	$ 54.0	2	0.01	$ 27.0	$ 2.7	Critical	RN-0016	Bentley Zypern	Consumer	Berlin	Berlin
18	Car Seat Covers	$ 114.0	2	0.05	$ 22.6	$ 2.3	High	CK-0017	Rivera Black	Consumer	Shouguang	Shandong
19	Car Pillow & Neck Rest	$ 231.0	5	0.05	$ 93.3	$ 9.3	High	RE-0018	Wong Macintyre	Consumer	New York City	New York
20	Car Media Players	$ 140.0	2	0.05	$ 46.0	$ 4.6	Critical	ON-0019	Hendricks Wilson	Consumer	Behshahr	Mazandaran
21	Car Speakers	$ 211.0	2	0.02	$ 122.6	$ 12.3	Critical	ED-0020	Johns Reed	Corporate	Taipei	Taipei City
22	Car Body Covers	$ 117.0	5	0.01	$ 31.2	$ 3.1	Critical	AM-0021	Barr Sundaresam	Consumer	Bhopal	Madhya Pradesh
23	Car & Bike Care	$ 118.0	2	0.03	$ 30.9	$ 3.1	High	KE-0022	Holt Glocke	Corporate	Seattle	Washington
24	Tyre	$ 250.0	4	0.02	$ 150.0	$ 15.0	High	LL-0023	Gaines O'Carroll	Consumer	Geraldton	Western Australia
25	Bike Tyres	$ 72.0	4	0.02	$ 18.0	$ 1.8	Critical	CO-0024	Copeland Lomonaco	Corporate	Celle	Lower Saxony
26	Car Mat	$ 54.0	1	0.05	$ 54.0	$ 5.4	High	NA-0025	Vasquez Dona	Consumer	Seville	Andalusia
27	Car Seat Covers	$ 114.0	4	0.02	$ 24.9	$ 2.5	Critical	LL-0026	Freeman Castell	Corporate	Raipur	Uttarakhand
28	Car Pillow & Neck Rest	$ 231.0	1	0.03	$ 144.1	$ 14.4	Critical	LE-0027	Reid Engle	Home Office	Kharkiv	Kharkiv
29	Car Media Players	$ 140.0	1	0.03	$ 55.8	$ 5.6	High	NG-0028	Harris Armstrong	Corporate	Jinan	Shandong

Working | Sales Database

- **Prepare a table of Sales and Profit month-wise in a working sheet**

Total Month Wise		
Months	***Sales***	***Profits***
Jan	$6,76,313.00	$ 3,13,566.35
Feb	$6,10,240.00	$ 2,86,102.62
Mar	$6,86,681.00	$ 3,17,186.01
Apr	$6,59,404.00	$ 3,08,364.51
May	$6,72,547.00	$ 3,13,751.25
Jun	$6,64,560.00	$ 3,07,585.02
Jul	$6,85,152.00	$ 3,18,703.20
Aug	$6,70,788.00	$ 3,10,442.84
Sep	$6,58,844.00	$ 3,05,334.46
Oct	$6,89,116.00	$ 3,20,748.67
Nov	$6,56,663.00	$ 3,04,716.10
Dec	$6,93,073.00	$ 3,23,401.92

To create a table of Sales and Profits month-wise here are the steps I followed:

- Type Jan and Feb in the first two cells and drag them to auto-fill till Dec.
- Code for Sales column: **=SUMIFS(SalesData[Sales],SalesData[Months],C50)** • Code for Profits column: **=SUMIFS(SalesData[Profit],SalesData[Months],C50)** • Drag the first cell of both columns to auto-fill the rest of the values till Dec.

- **Prepare the sales table region-wise in the working sheet**

Total Region Wise	
Region	*Sales*
Africa	$ 7,13,074.00
Canada	$ 60,003.00
Caribbean	$ 2,60,495.00
Central	$ 17,35,900.00
Central Asia	$ 3,21,005.00
East	$ 4,46,468.00
EMEA	$ 7,88,072.00
North	$ 7,50,482.00
North Asia	$ 3,69,816.00
Oceania	$ 5,44,827.00
South	$ 10,34,884.00
Southeast Asia	$ 5,00,923.00
West	$ 4,97,432.00

For the region-wise table we have to identify the unique values of all the regions in SalesData. Here is the code I used to get the information: **=UNIQUE(SalesData[Region])**

Once we have the unique values of regions, I copy-pasted them into a separate column and sorted them in A-Z format for better presentation.

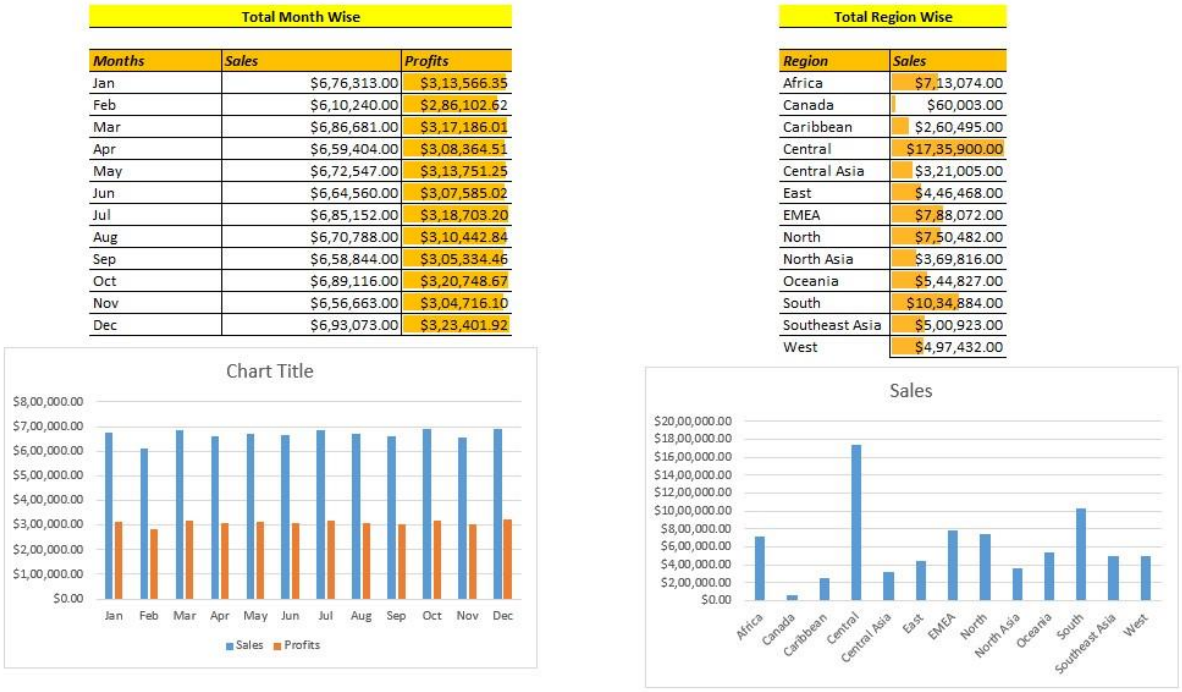
After organizing and naming the columns of the region wise table here is the code I used to get the total sales based on individual region:
=SUMIFS(SalesData[Sales],SalesData[Region],H50)

- **Create User Control Combo box for Product Category**

Here are the steps I used for creating a combo box for Product Category:

- Identify the unique values of Product Categories. Code: **=UNIQUE(SalesData[Product Category])**
- Copy/paste the values to create a column for input values of the combo box.
- Go to **Developer tab > Insert > ActiveX Controls>Combo Box**
- Drag to create an empty combo box and go to **Developer>Design Mode>Properties>ListFillRange** and enter the cell range for the unique values of Product Categories (A8:A11 in my project)

- **Create a Column Chart of the month-wise table and region-wise table**



Total Month Wise

Months	Sales	Profits
Jan	$6,76,313.00	$3,13,566.35
Feb	$6,10,240.00	$2,86,102.62
Mar	$6,86,681.00	$3,17,186.01
Apr	$6,59,404.00	$3,08,364.51
May	$6,72,547.00	$3,13,751.25
Jun	$6,64,560.00	$3,07,585.02
Jul	$6,85,152.00	$3,18,703.20
Aug	$6,70,788.00	$3,10,442.84
Sep	$6,58,844.00	$3,05,334.46
Oct	$6,89,116.00	$3,20,748.67
Nov	$6,56,663.00	$3,04,716.10
Dec	$6,93,073.00	$3,23,401.92

Total Region Wise

Region	Sales
Africa	$7,13,074.00
Canada	$60,003.00
Caribbean	$2,60,495.00
Central	$17,35,900.00
Central Asia	$3,21,005.00
East	$4,46,468.00
EMEA	$7,88,072.00
North	$7,50,482.00
North Asia	$3,69,816.00
Oceania	$5,44,827.00
South	$10,34,884.00
Southeast Asia	$5,00,923.00
West	$4,97,432.00

Here are the steps I followed to create a column chart of the month-wise and region-wise tables.

- Select any cell in the table and press **Ctrl+A** to select the entire range of the table.
- Go to **Insert tab > Charts section > Column chart option** and select the first chart type.

- Repeat the same process for both, Month Wise and Region Wise tables.

• Link the table with a combo boxes

Box Linked Cell (C4) Auto & Accessories User Control Combo Box Auto & Accessories

Column for User Control
Auto & Accessories
Electronic
Home & Furniture
Fashion

Month Wise

Months	Sales	Profits
Jan	$87,526.00	$38,447.32
Feb	$85,683.00	$38,753.10
Mar	$95,249.00	$41,165.32
Apr	$95,962.00	$42,365.80
May	$91,445.00	$40,871.83
Jun	$96,597.00	$42,010.25
Jul	$91,690.00	$40,958.90
Aug	$88,153.00	$38,237.91
Sep	$89,216.00	$39,655.96
Oct	$97,347.00	$43,305.21
Nov	$88,575.00	$39,016.39
Dec	$89,696.00	$39,489.64

Region Wise

Region	Sales
Africa	$1,02,156.00
Canada	$10,382.00
Caribbean	$32,493.00
Central	$2,27,929.00
Central Asia	$35,956.00
East	$72,321.00
EMEA	$1,02,947.00
North	$1,00,025.00
North Asia	$56,978.00
Oceania	$66,631.00
South	$1,39,614.00
Southeast Asia	$74,598.00
West	$75,109.00

To link the tables to the combo box I first linked the combo box with a cell C4 in the working sheet.

• Link a cell to the combo box by entering the cell addresss in the **LinkedCell property** (**C4** in my project)

Once the cell is linked, we must edit the codes of all the tables and link them to the combobox linked cell.

Linking code for Month-wise table:

Sales column:

- **=SUMIFS(SalesData[Sales],SalesData[Months],C8,SalesData[Product Category],C4)**

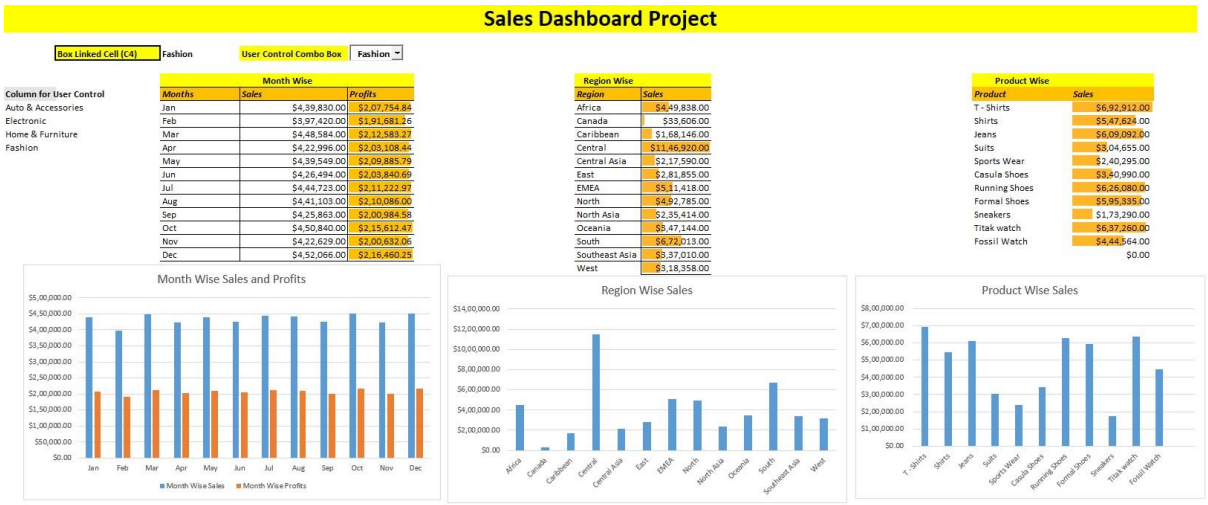
Profits column:

- **=SUMIFS(SalesData[Profit],SalesData[Months],C8,SalesData[Product Category],C4)**

Linking code for Region-wise table:

- **=SUMIFS(SalesData[Sales],SalesData[Region],H8, SalesData[Product Category],C4)**

• Create a dashboard



To create a dashboard here are the steps I followed:

- Merge and centre the top two rows to give the heading “Sales Dashboard Project”
- Remove gridlines from View tab.
- Add inside borders to the table cells and other formatting (bold and font size) to differentiate headings from normal text.

- Linking code for Product-wise sales table:

For the product-wise sales table I created a separate table called ProductSales which contains all the unique value for the Products column with their product category.

Product column:

- **=FILTER(ProductSales[Product],ProductSales[Product Category]=C4)**

Sales column:

- **=SUMIFS(SalesData[Sales],SalesData[Product],O8)**

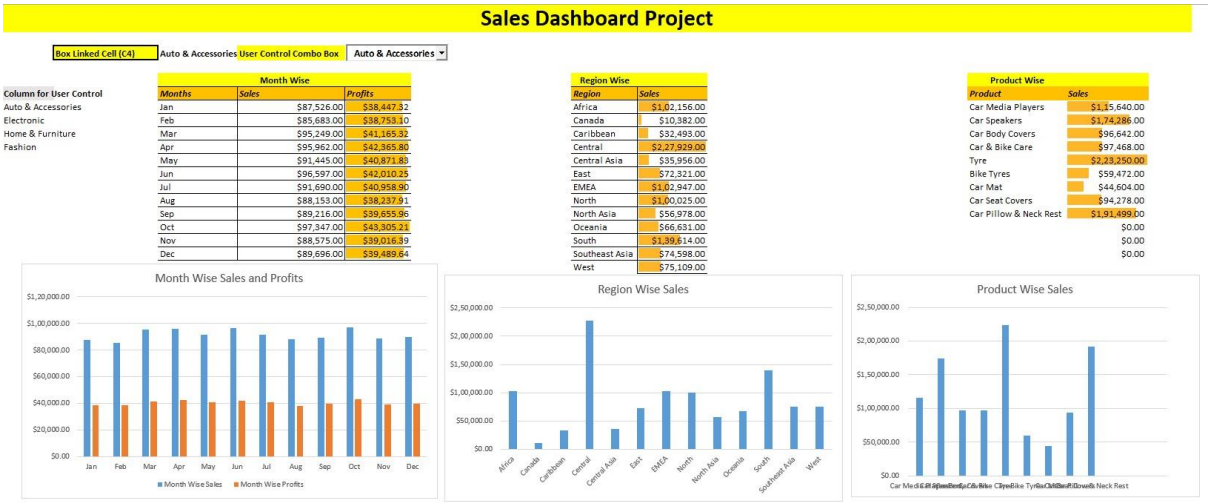
Expected Deliverables:

Design a sales dashboard that analyzes the sales based on various product categories. The company wants to add user control for product category so that users can select a category and can see the trend month-wise and product-wise accordingly.

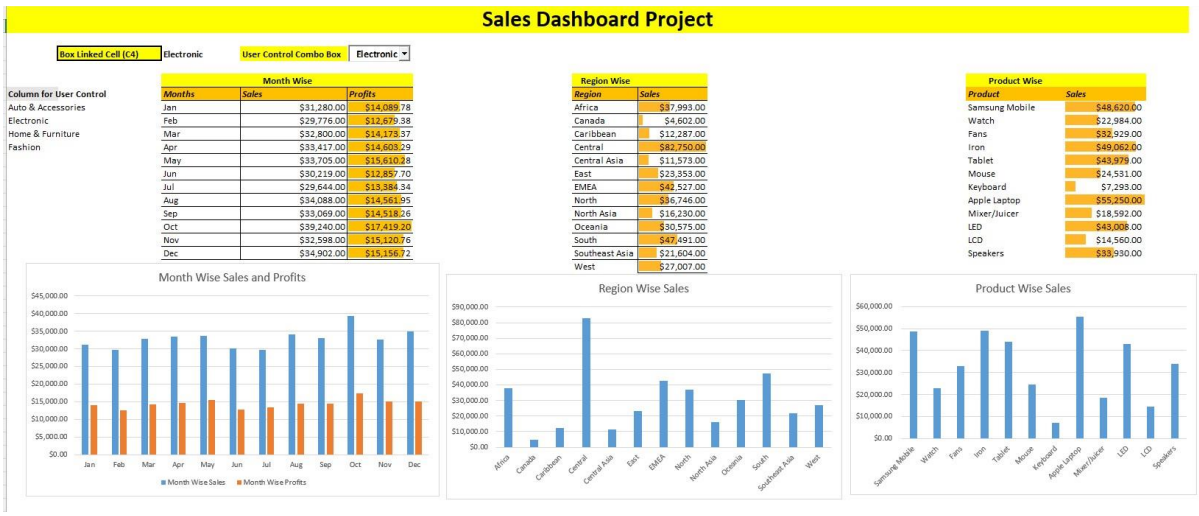
Results:

Here are the screenshots from my sales dashboard for your reference.

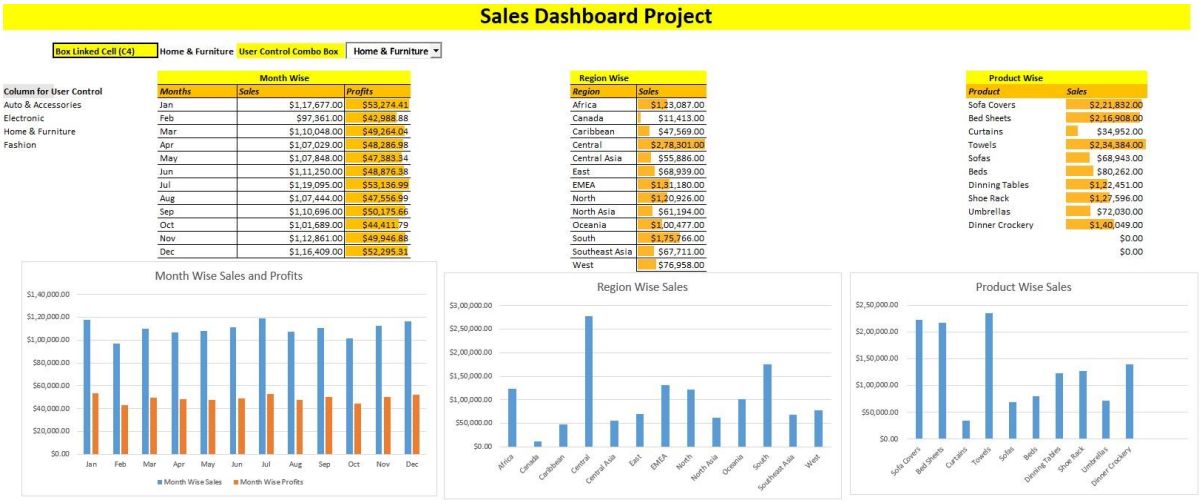
Month-wise, region-wise, and product-wise trends for the product category: **Auto & Accessories**



Month-wise, region-wise, and product-wise trends for the product category: **Electronics**



Month-wise, region-wise, and product-wise trends for the product category: **Home & Furniture**



Month-wise, region-wise, and product-wise trends for the product category: **Fashion**