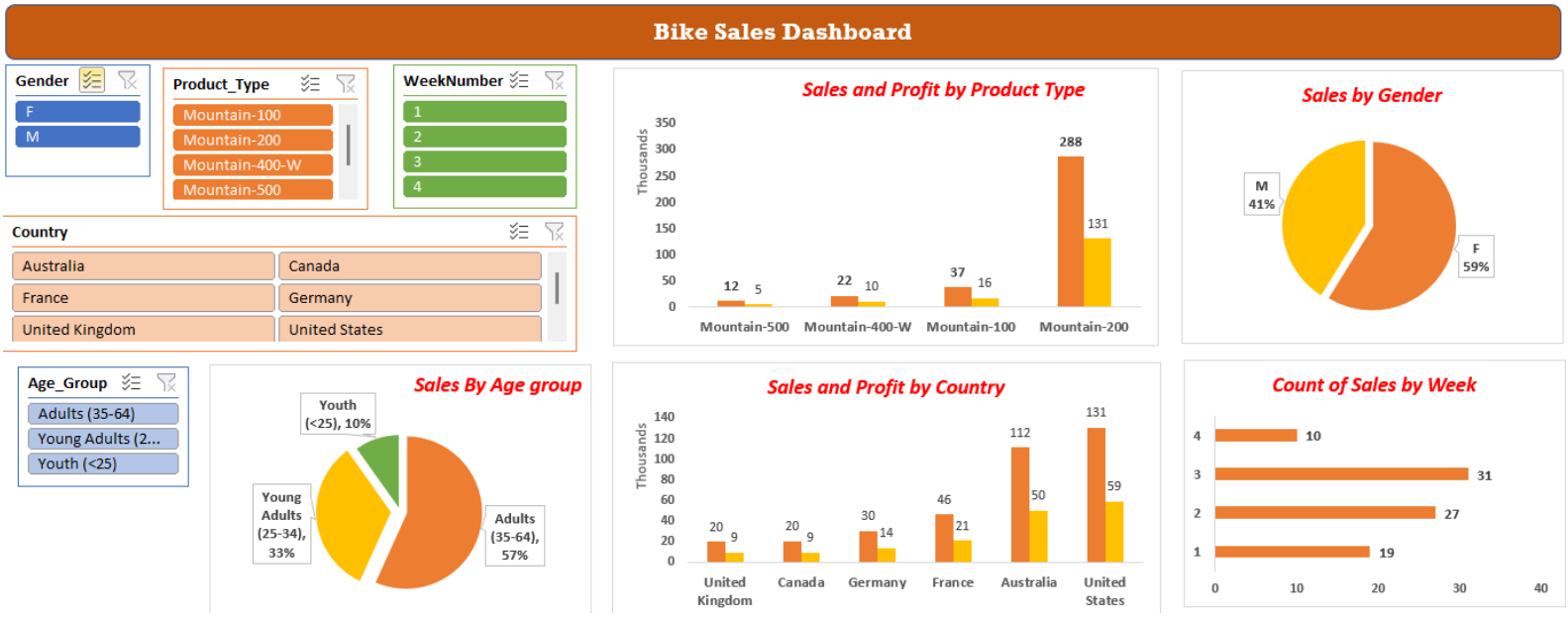
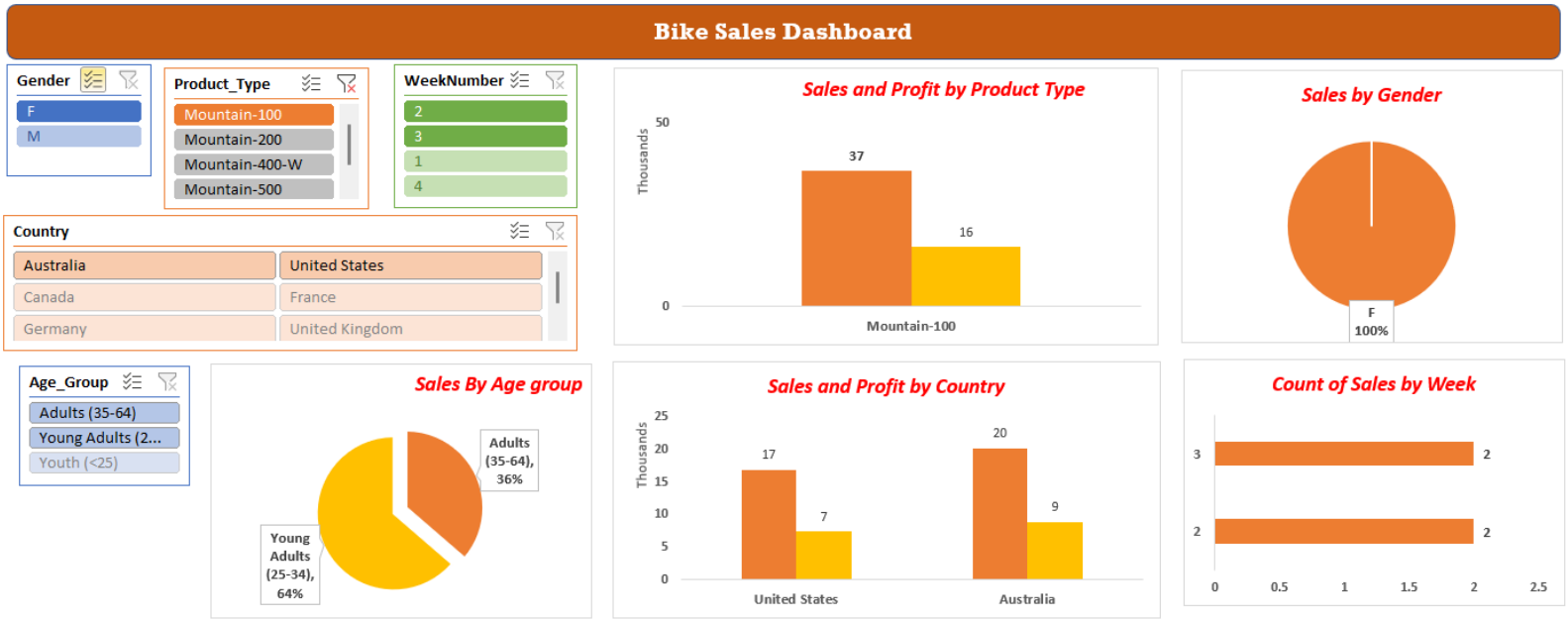
Bike Sales Data Analysis With Excel



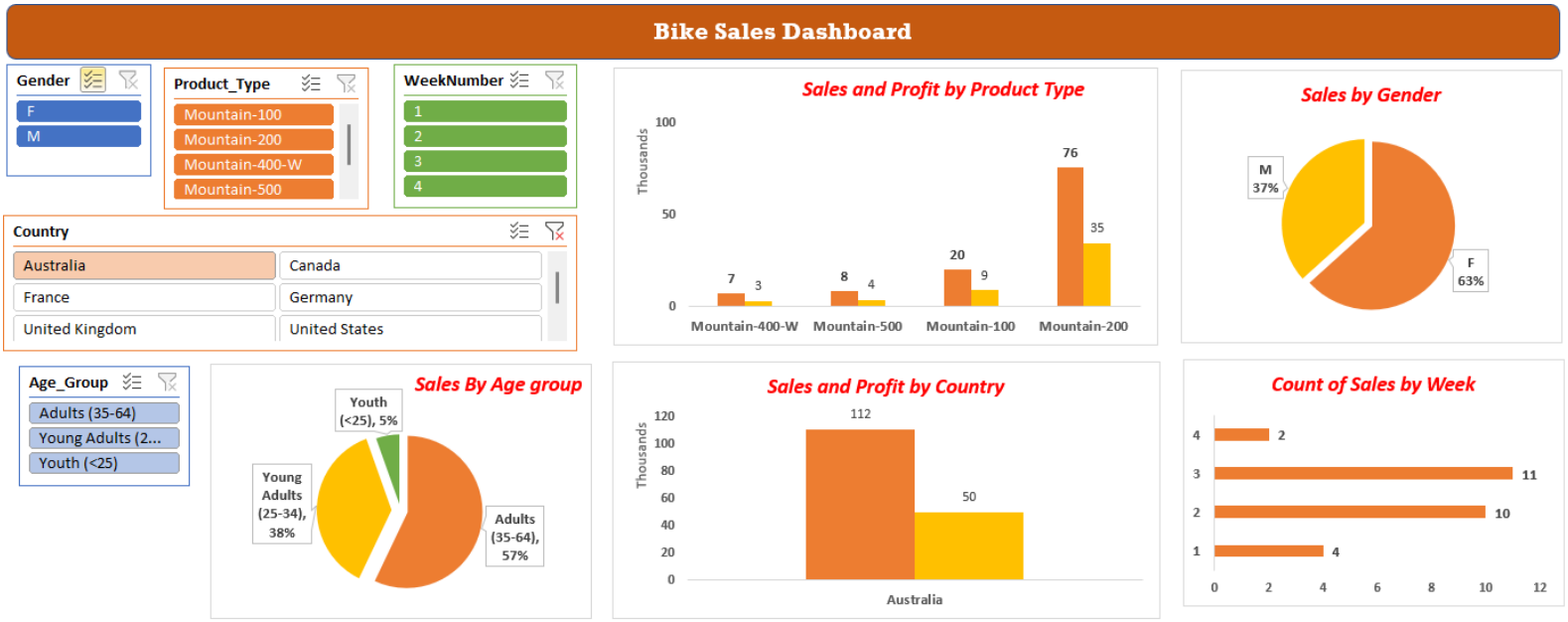
Insights gained from this Dashboard where all slicer's values are selected

1. Product Type Mountain-200 had the most sales. It is the best-selling model
2. More Females bought Bikes than Males across all countries, in all age groups and for all product types
3. More Adults in the age group of 35-64 purchased bikes for all Product Types than other age groups.
4. Australia and United States produce the highest sales and profit



Insights from above Dashboard where the product type is Mountain-100

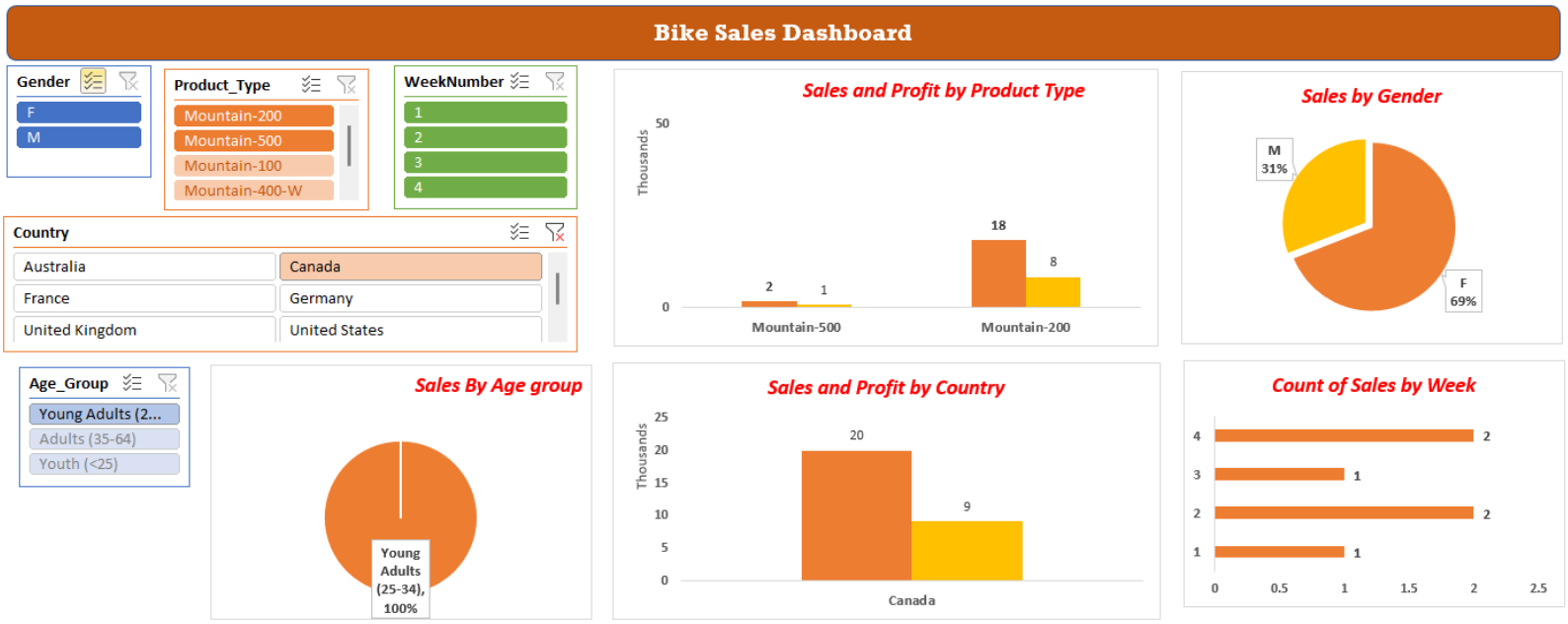
1. Product Type Mountain-100 was purchased by females only
2. In the age group of Young Adults and Adults.
3. Mountain-100 was sold in United States and Australia only. And it is more popular in Australia. So, this model should be targeted more for females in Australia.
4. Mountain-100 was sold only in the 2nd and 3rd weeks of December



Insights gained from the above dashboard where country is Australia

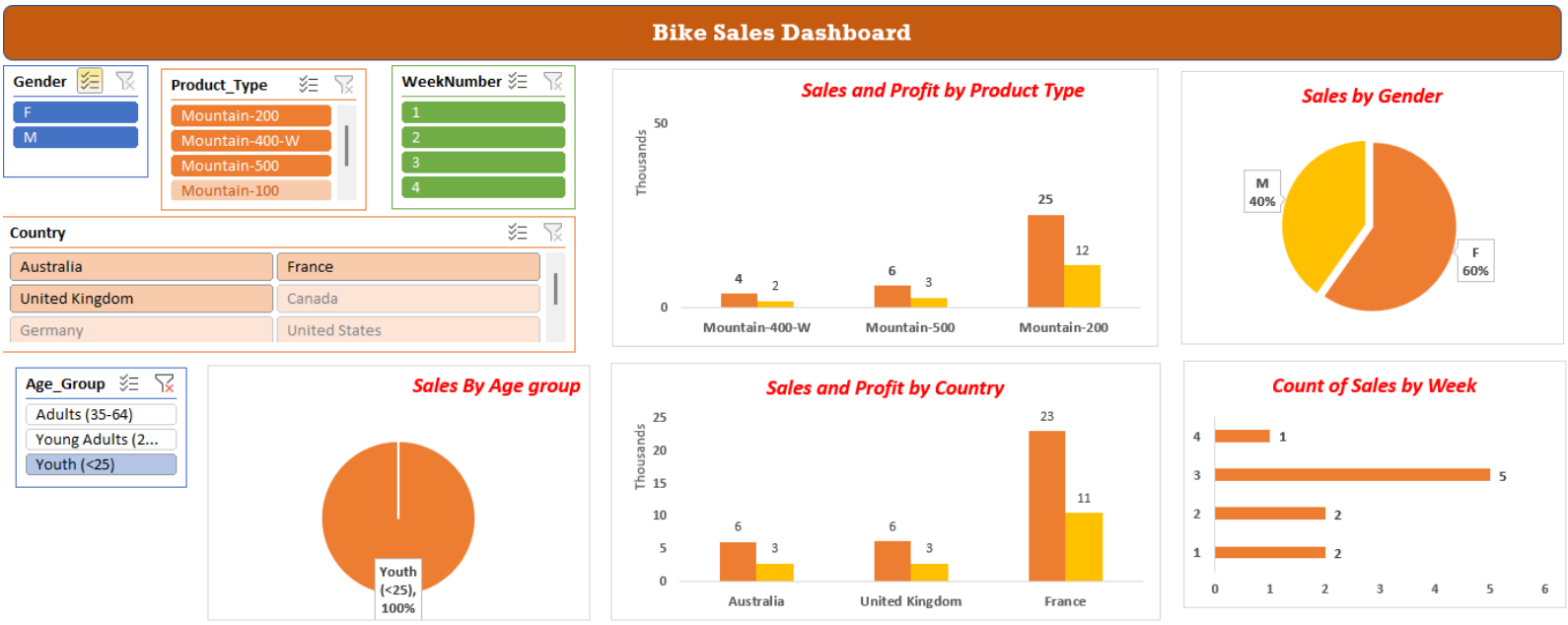
1. Mountain-200 is the most popular bike in Australia
2. More female customers bought bikes in Australia

3. Most customers are in the Adults, Young Adults age group
4. Profit in Australia is about 45% of sales
5. More bikes were sold in 3rd week of December



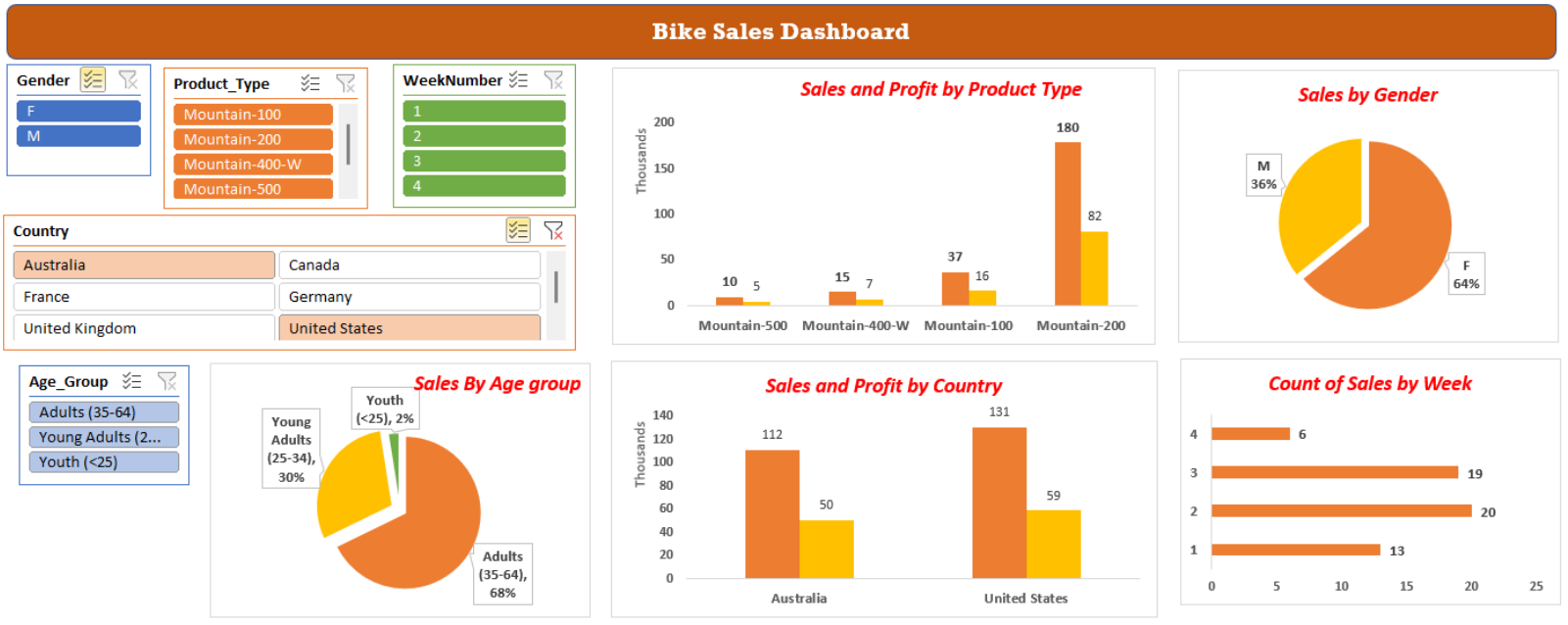
Insights gained from above dashboard where the country is Canada

1. Canadians like Mountain-500 and Mountain-200 bikes
2. Again, more females bought these bikes
3. Only one age group of Young Adults (25-34) bought these two bikes



Insights gained from above dashboard where age group is Youth

1. In this age group, Mountain-100 bike is not popular. They like the Mountain-200 bike most
2. It's bought by Customers in Australia, France and United Kingdom only. Most popular in France
3. The Profit to sales margin is about 50% for this age group
4. Most bikes were sold in 3rd week



Insights gained from above dashboard where Sale countries are Australia and United States

1. All types of bikes are sold in these 2 countries

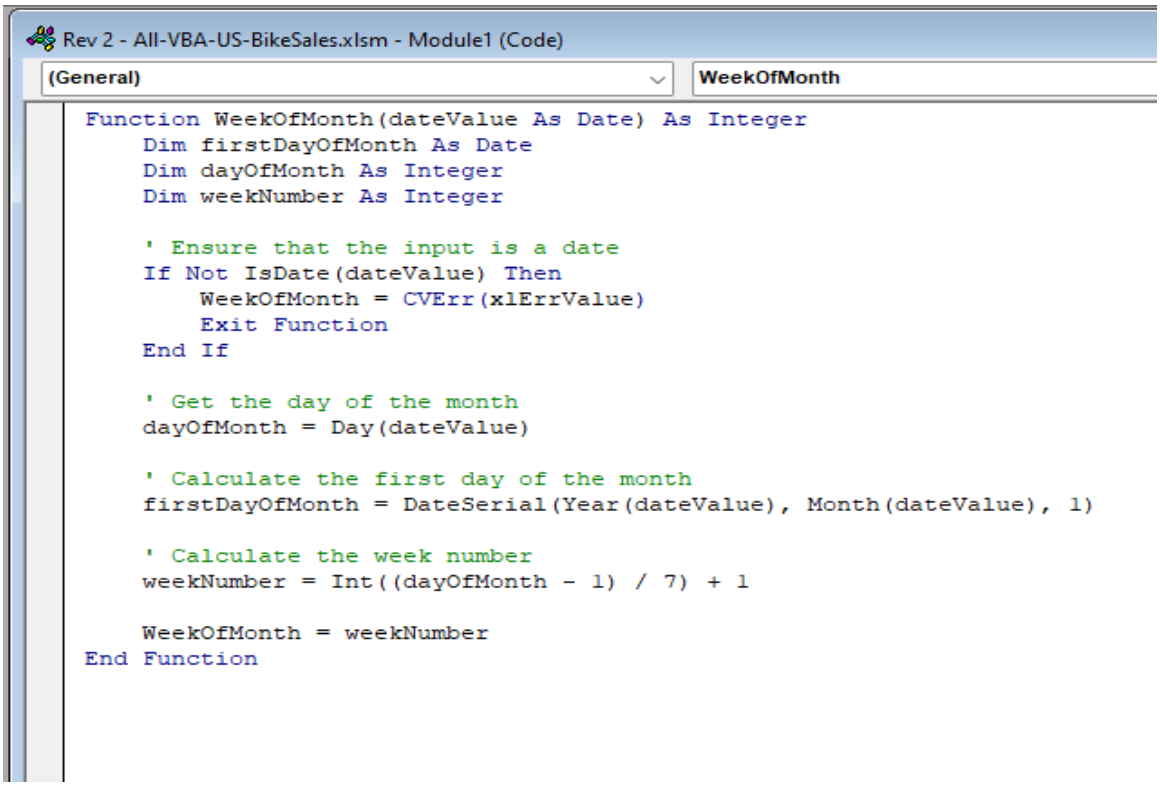
2. All age groups bought bikes in these countries with the most sales among Females and in the age group of Adults
3. Profits are about 45% of sales
4. With most sales happening in 2nd and 3rd week

Steps for ETL

1. Data Source – Bike Sales -This data source shows the sales of different types of Mountain Bikes to different countries in different age groups in the month of December

   https://www.kaggle.com/code/stolltho/eda-hypothesis-testing-bike-sales/input?select=Sales.csv

2. Created a backup of the original sheet and named it Working then applied the following transformations.
3. Deleted calculated columns (Cost, Revenue) from Working sheet.
4. Normalization - Created another sheet called Products with unique Products and Unit_Cost and Unit_Price. This was done to reduce the redundancy in the data.
5. Then using XLOOKUP, the Product details were populated into the Working sheet and later the Product ID column was deleted.
6. From Working sheet, I removed blank record, duplicate record and separated Product_Description into Product_Type, Product_Color, Product_Size columns.
7. Converted Sales Numbers which was in text to Numbers format.
8. Data Cleaning – Removed rows that did not have Product Id, Order_Quantity, Day values.
9. Added a VBA script to calculate the week of month.



10. Created all Pivot tables in PVSheet.
11. Created a Dashboard sheet that displays the graphs related to all the pivot tables in the PVSheet.
12. These interactive charts display the sales per Gender, per Product_Type, WeekNumber, Country, Age_Group. Using the slicers, different combination of data can be analyzed.
13. Below are the pivot tables that were used to generate the charts in the Dashboard.

Gender	Sum of Sales
F	210,919
M	147,478
Grand Total	**358,397**

Product_Type	Sum of Sales	Sum of Profit
Mountain-500	11,590	5,265
Mountain-400-W	21,532	9,772
Mountain-100	37,150	16,258
Mountain-200	288,125	130,925
Grand Total	**358,397**	**162,220**

Age_Group	Sum of Sales
Adults (35-64)	203,421
Young Adults (25	119,646
Youth (<25)	35,330
Grand Total	**358,397**

Week_Numbe	Count of Sales
1	19
2	27
3	31
4	10
Grand Total	**87**

Country	Sum of Sales	Sum of Profit
United Kingdom	19,972	9,072
Canada	20,080	9,123
Germany	30,010	13,636
France	46,175	20,981
Australia	111,506	50,326
United States	130,654	59,082
Grand Total	**358,397**	**162,220**