

Course: IDA Lab

Class: SY CSE

Roll NO: 18

DATE:

Name: Gaurav Hiwarale

PRACTICAL 2

Create flexible data aggregation using pivot table

Objectives:

1. To understand the purpose and use of pivot table.
2. To Understand the difference between normal table and flexible table .
3. To know, how to create Pivot table?

Theory:

Introduction to pivot table:

What is the pivot table?

- A Pivot Table is a powerful tool to calculate, summarize, and analyze data, that let you see comparisons, patterns, and trends in your data.
- A Pivot Table is used to summarize, sort, re organize, group, count, total or average data stored in the table.

Performance and result:

All the operation are performed on following workbook:

Pivot table demo Workbook

Following are the observations performed on sample workbook

- Opening the given sample workbook.

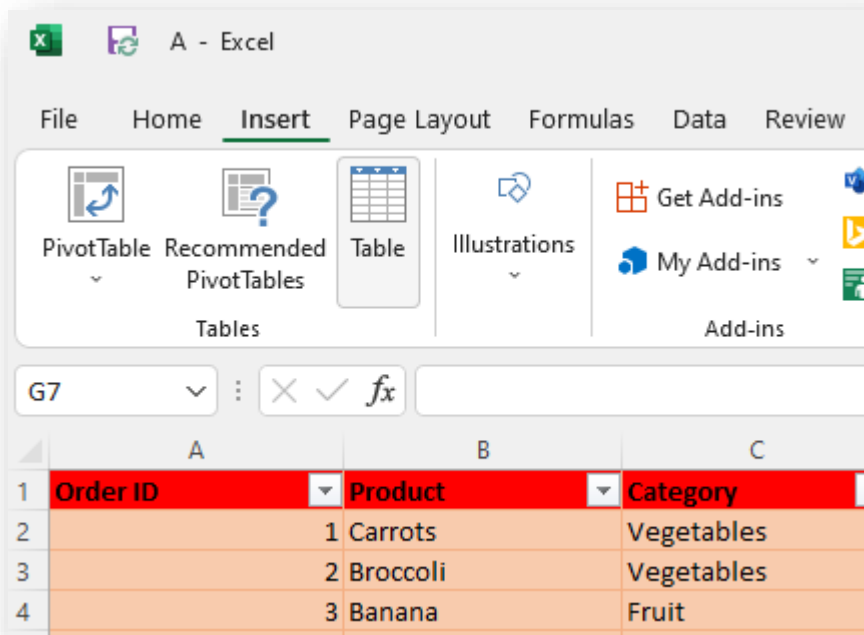
Order ID	Product	Category	Amount	Date	Country
1	Carrots	Vegetables	\$4,270	06-01-2021	United States
2	Broccoli	Vegetables	\$8,239	07-01-2021	United Kingdom
3	Banana	Fruit	\$617	08-01-2021	United States
4	Banana	Fruit	\$8,384	09-01-2021	Canada
5	Beans	Vegetables	\$1,345	10-01-2021	Germany
6	Orange	Fruit	\$2,357	11-01-2021	United States
7	Broccoli	Vegetables	\$4,567	12-01-2021	Australia
8	Banana	Fruit	\$6,789	13-01-2021	New Zealand
9	Apple	Fruit	\$3,098	14-01-2021	France
10	Apple	Fruit	\$3,678	15-01-2021	Canada
11	Banana	Fruit	\$632	16-01-2021	Germany
12	Broccoli	Vegetables	\$3,456	17-01-2021	United States
13	Carrots	Vegetables	\$7,000	18-01-2021	Germany
14	Broccoli	Vegetables	\$3,456	19-01-2021	Canada
15	Apple	Fruit	\$2,356	20-01-2021	France
16	Banana	Fruit	\$2,098	21-01-2021	United Kingdom
17	Banana	Fruit	\$1,345	22-01-2021	United States
18	Banana	Fruit	\$3,456	23-01-2021	United Kingdom
19	Broccoli	Vegetables	\$2,345	24-01-2021	United Kingdom
20	Apple	Fruit	\$5,065	25-01-2021	United States

- Now we have to create a table.

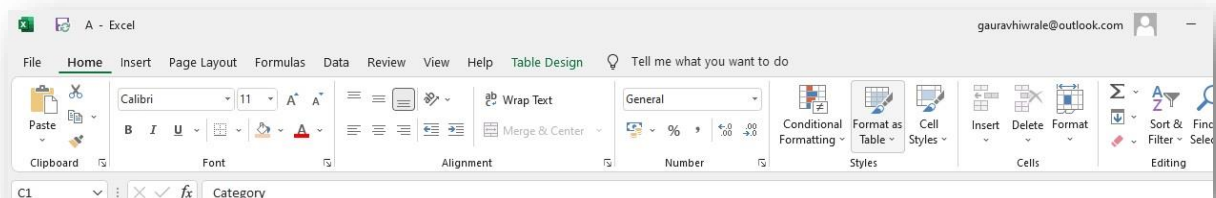
1. To create table we can simply press CTRL+T

Order ID	Product	Category	Amount	Date	Country
1	Carrots	Vegetables	\$4,270	06-01-2021	United States
2	Broccoli	Vegetables	\$8,239	07-01-2021	United Kingdom
3	Banana	Fruit	\$617	08-01-2021	United States
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20	Apple	Fruit	\$5,065	25-01-2021	United States

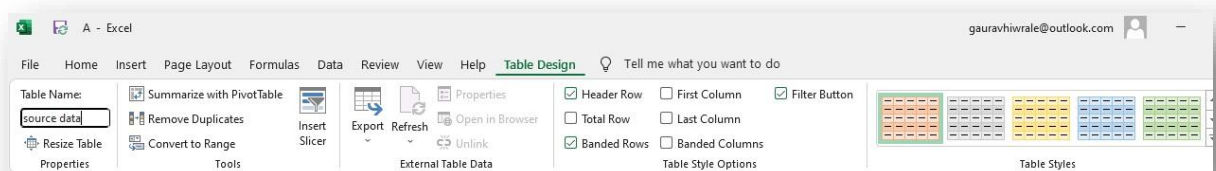
2. Can go insert tab on ribbon and select table.



3. Can go on in the home tab on ribbon and can select “Format as table option”.

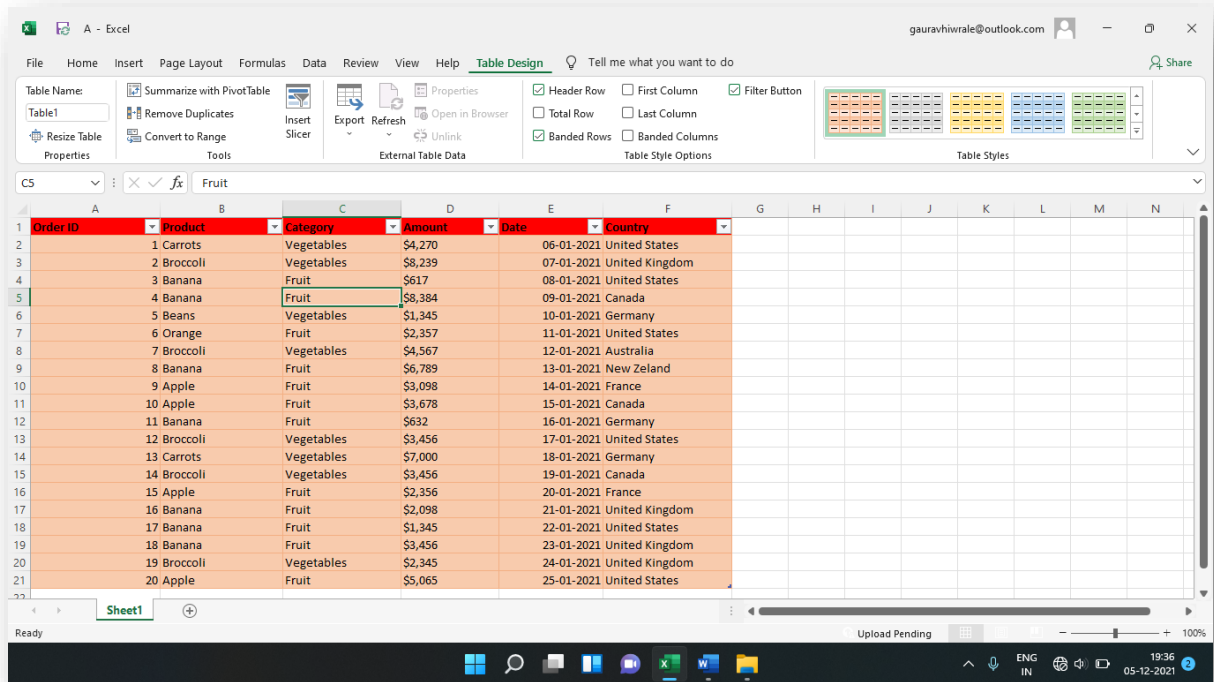


4. Then in the design tab on ribbon name your table as source data.

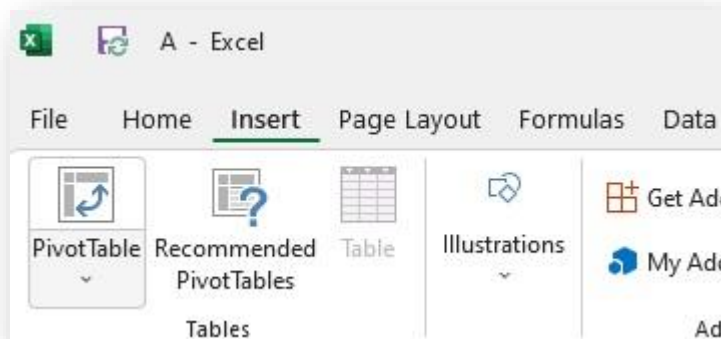


- **Next we have to create a pivot table.**

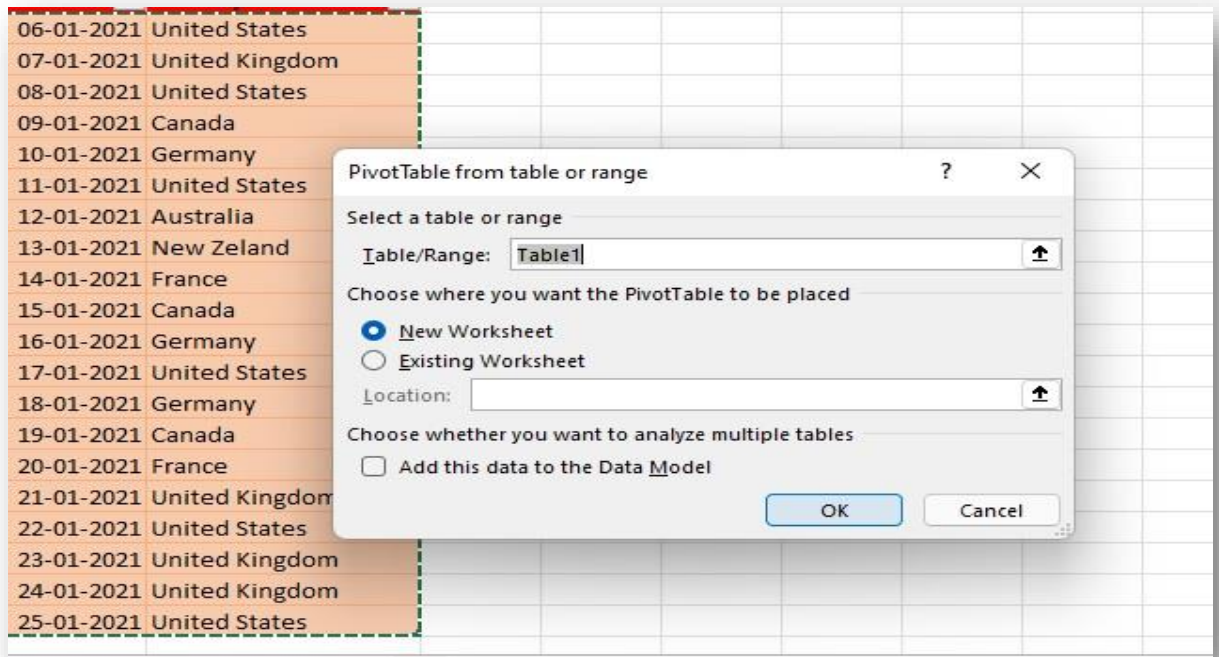
1. To create a pivot table, first select a cell



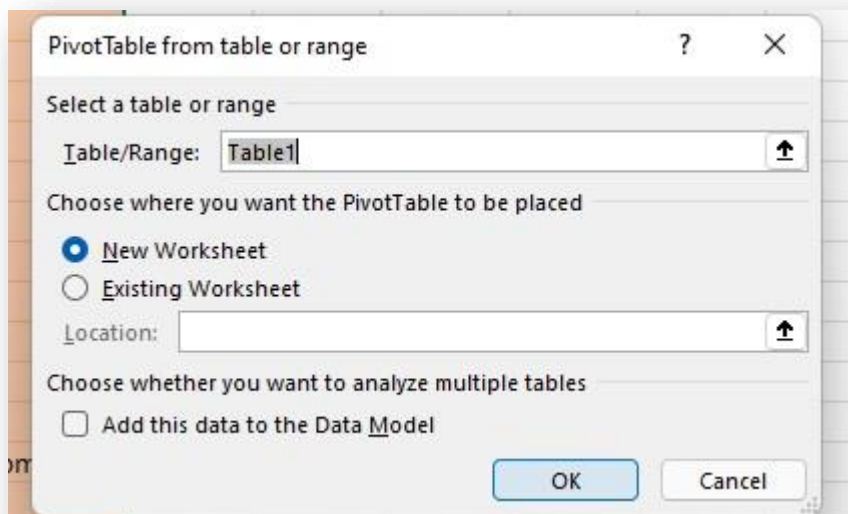
- Then go to insert tab on the ribbon and select pivot table option or simply press ALT+NV.



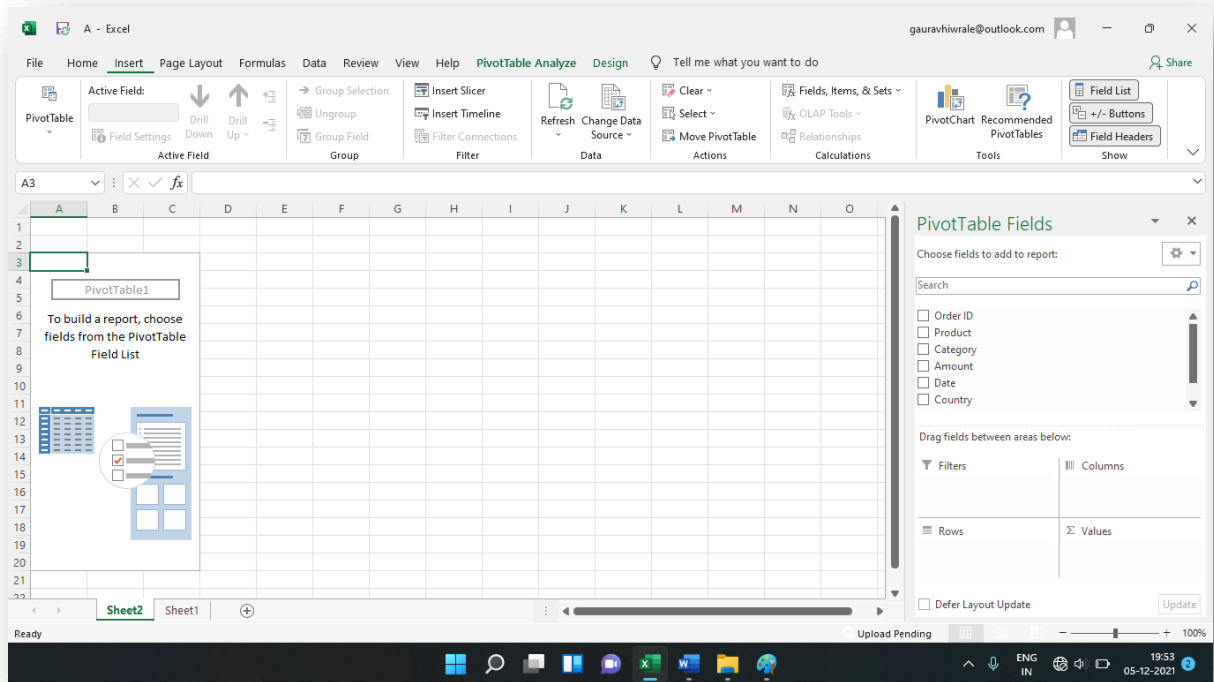
- A dialog box will appear.



4. In that select a destination where you have to create a pivot table.
Choose the new worksheet option in the create pivot table dialog box.

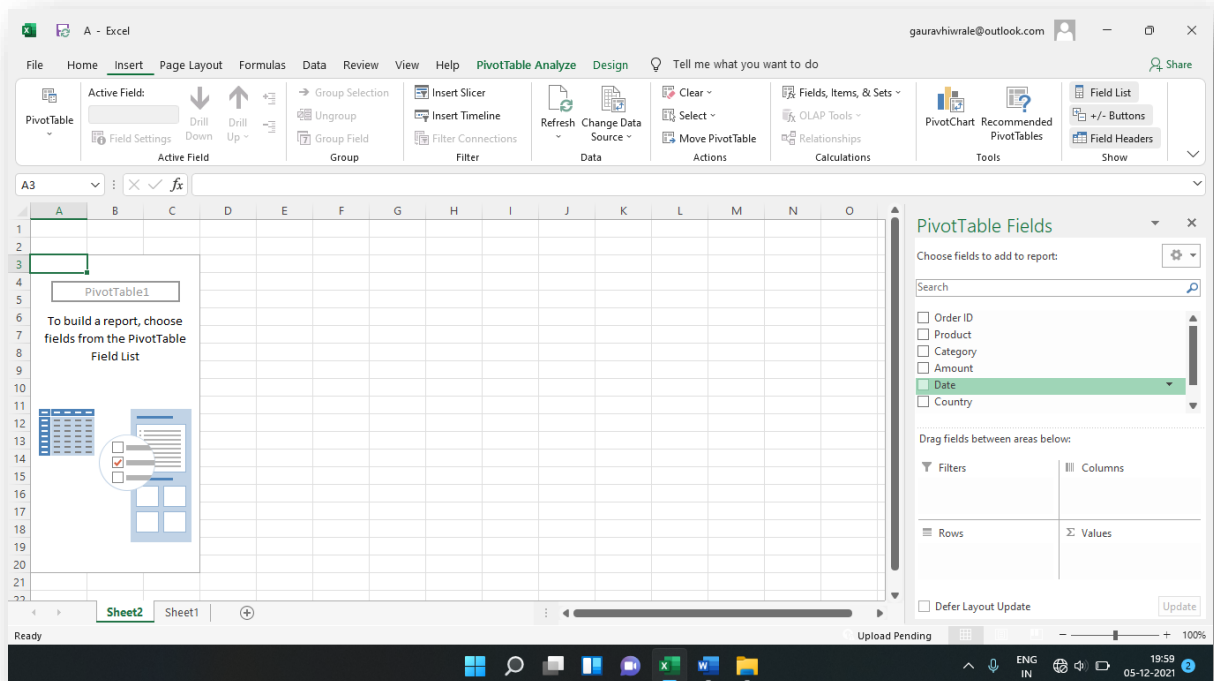


5. Then press ok to see the result.
6. After you hit OK you will see a pivot table placeholder on the left side, a pivot table field list on the right side and two contextual tabs to analyze and design pivot table will appear on ribbon.

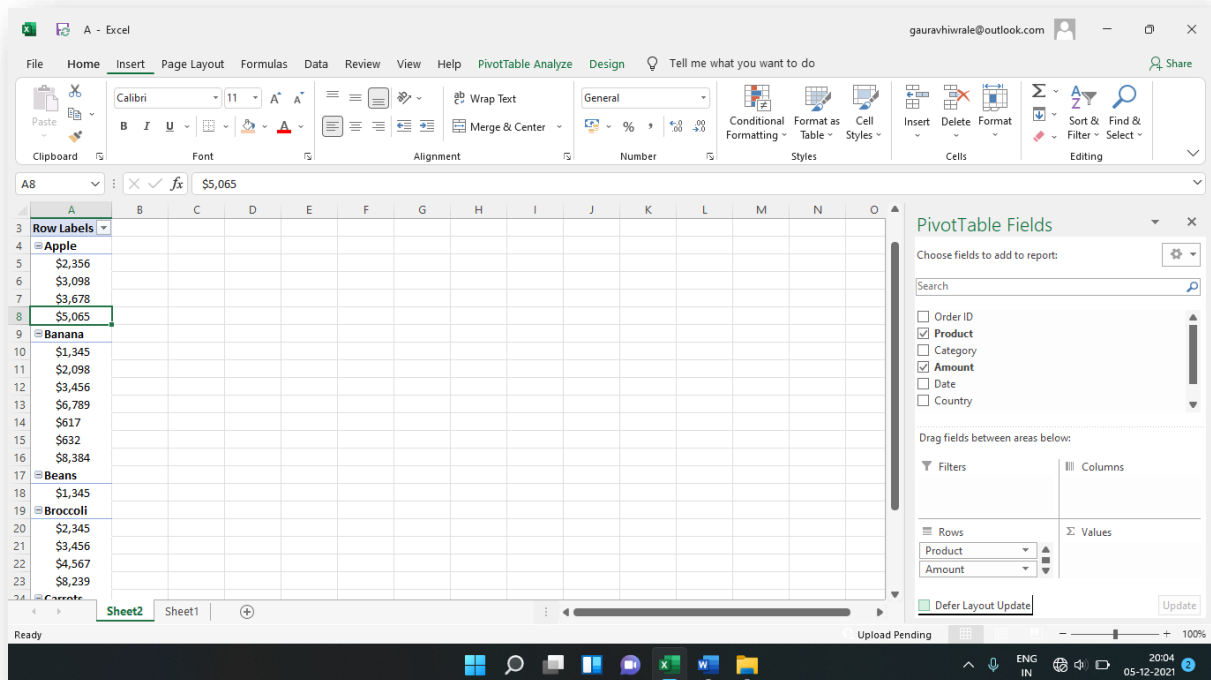


7. Now we have to create a pivot table by dragging the element. Drag fields:

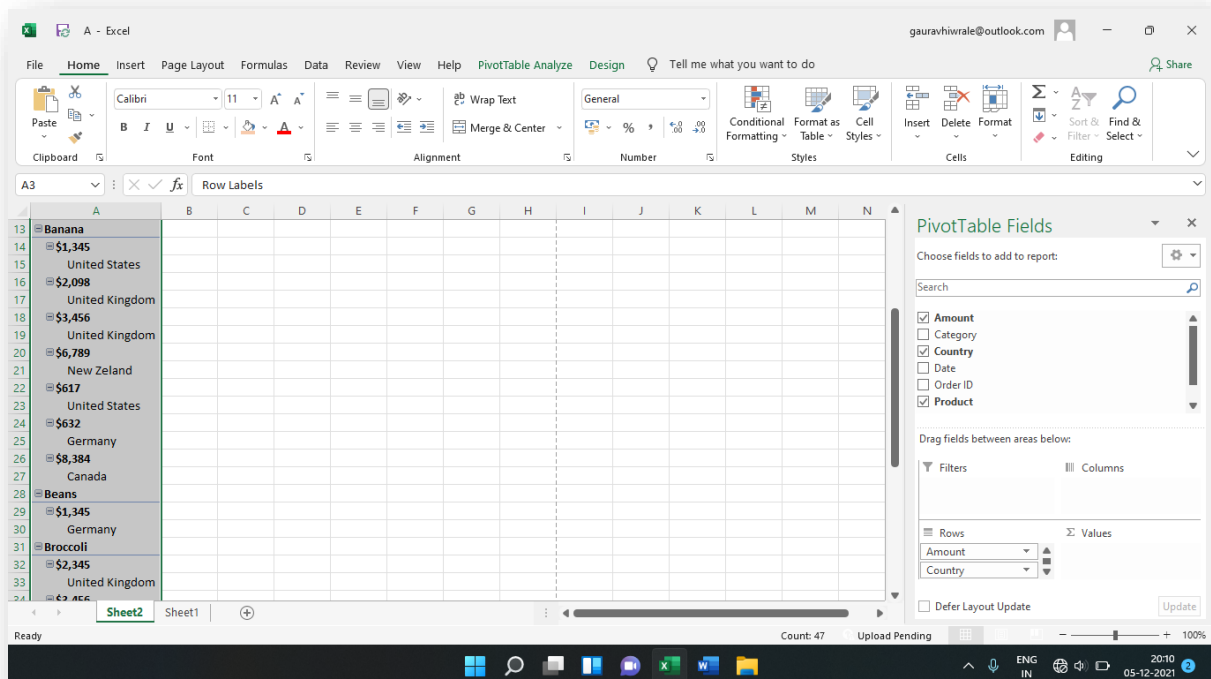
- The Pivot Table Fields pane appears. To get the total amount exported of each product, drag the following fields to the different areas.
 - 1) Product field to the Rows area.



2) Amount field to the values area.



3) Country field to the Filters area.



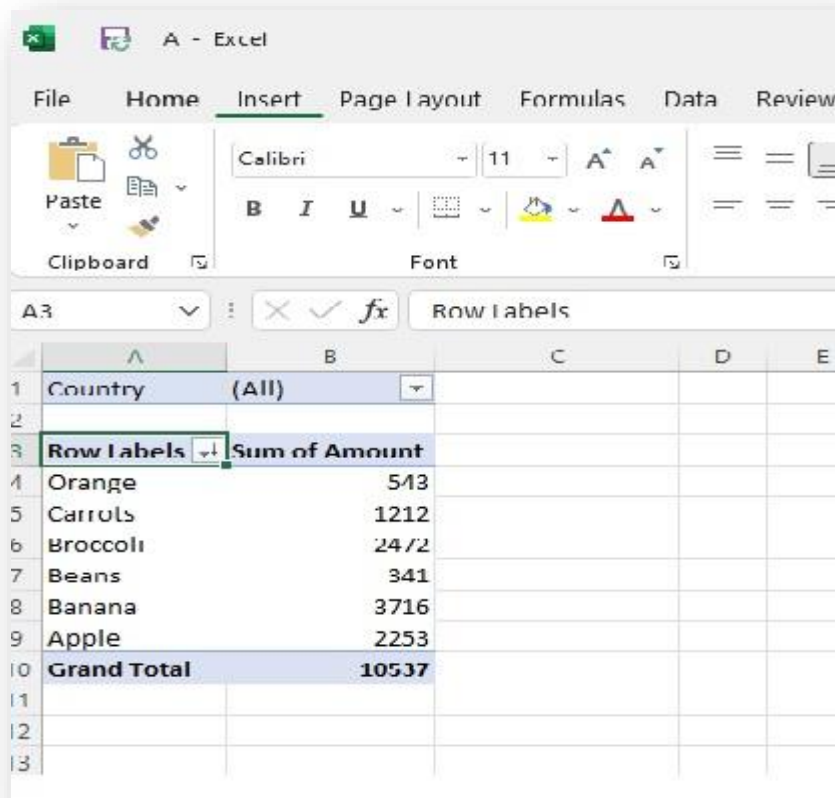
- Now we perform various operations on creating pivot table like sort and filter .

- **SORT:**

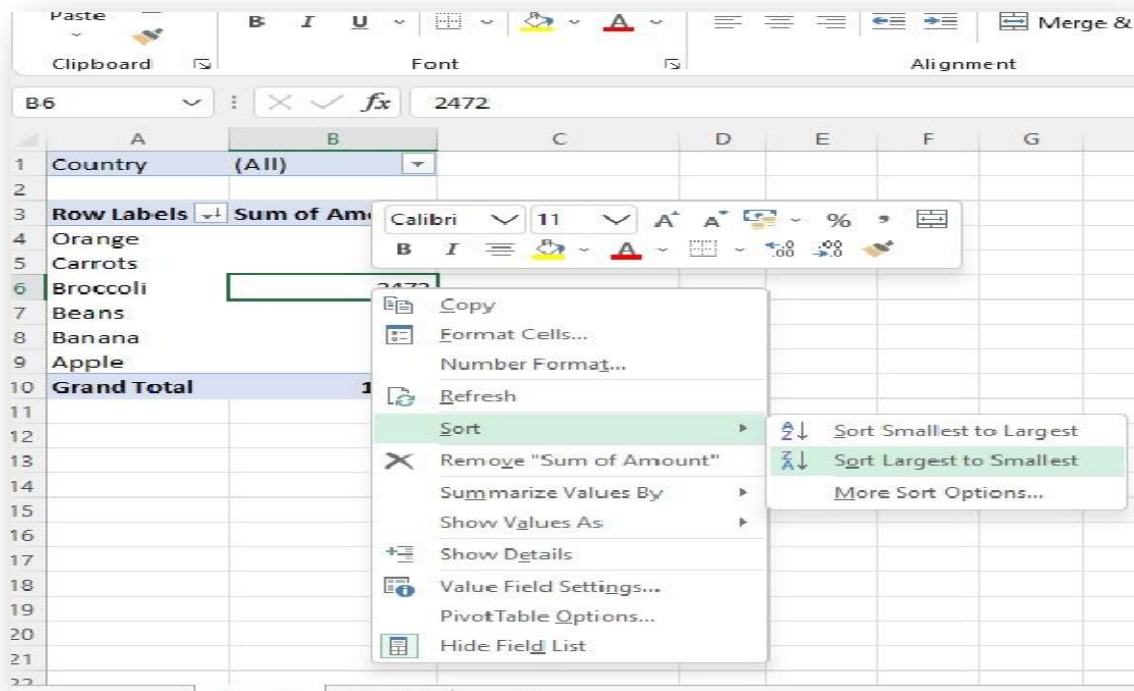
For example:

To get Banana at the top of the list, sort the pivot table.

1. Click any cell inside the Sum of Amount column.



2. Right click and click on sort, sort Largest to Smallest.



Result:

The screenshot shows the result of sorting the PivotTable by 'Sum of Amount' in descending order. The 'Banana' row is now at the top of the list. A red text annotation 'Banana is at the top of the list' with a blue arrow points to the 'Banana' row.

Country	Row Labels	Sum of Amount
(All)	Banana	3716
	Broccoli	2472
	Apple	2253
	Carrots	1212
	Orange	543
	Beans	341
	Grand Total	10537

FILTER:

- Because we added the Country field to the Filter area, we can filter this pivot table by country. For example, which products do we export the most to the France?
1. Click the filter drop-down.
 2. Select United States and press OK.



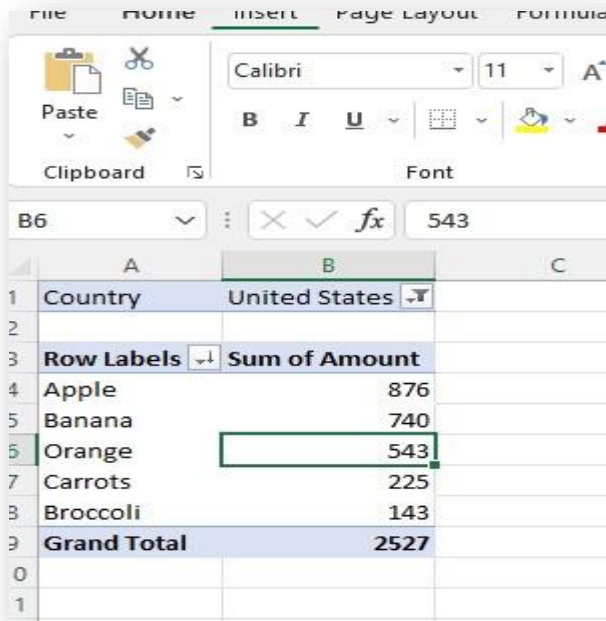
Result:

	A	B
1	Country	United States
2		
3	Row Labels	Sum of Amount
4	Apple	876
5	Banana	740
6	Orange	543
7	Carrots	225
8	Broccoli	143
9	Grand Total	2527
10		
11		

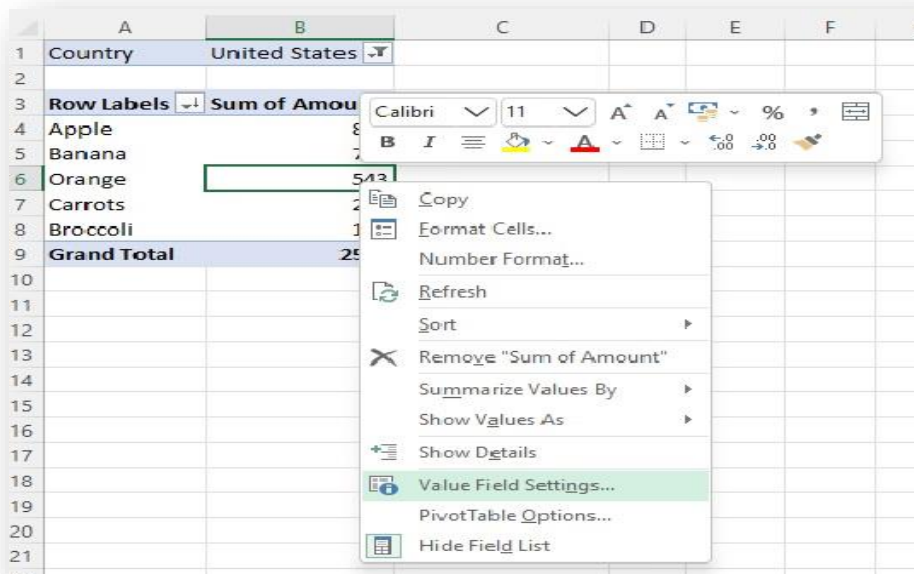
- **Change Summary calculations :**

By default, Excel summarizes data by either summing or counting the items. To change the type of calculations that you want to use, execute the following steps.

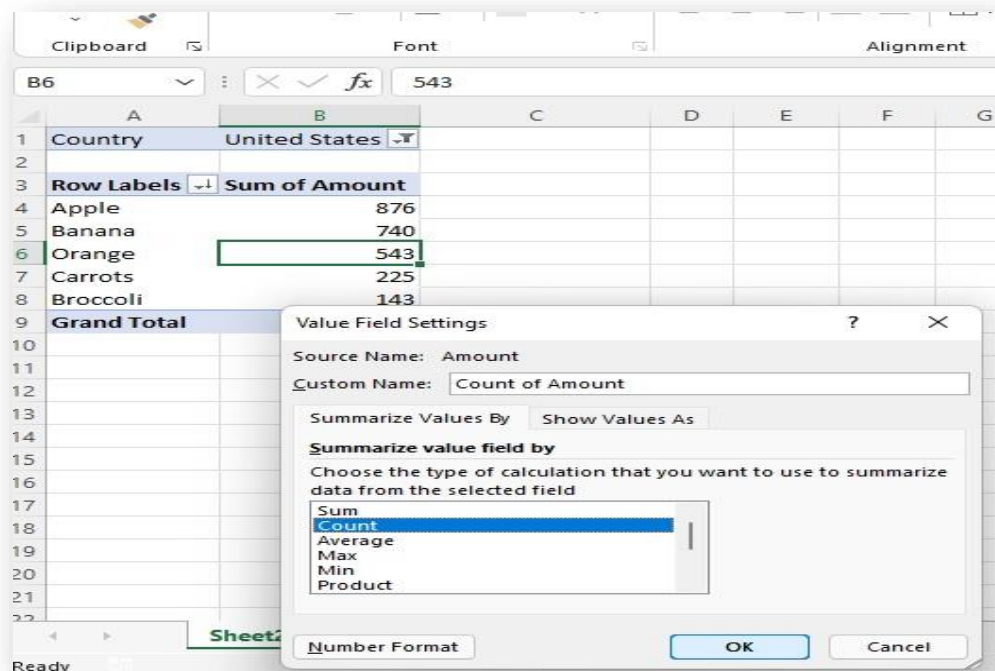
1. Click any cell inside the sum of Amount column.



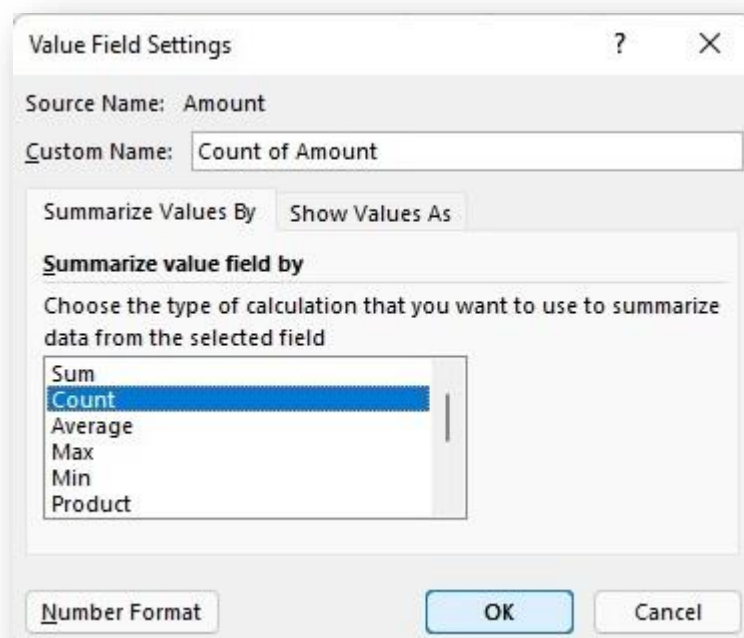
2. Right click and click on the value field settings.



3. Choose the type of the calculation you want to use. For example, click count.



4. Click OK.

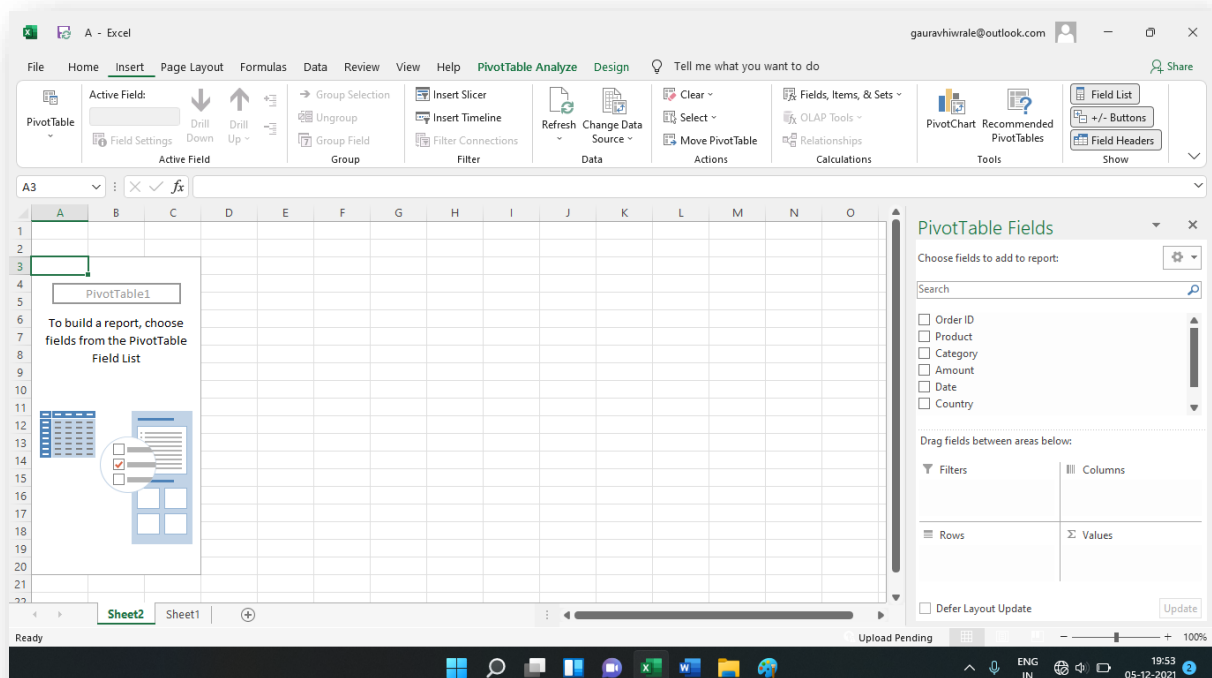


5. Result:

	A	B
1	Country	United States
2		
3	Row Labels	Count of Amount
4	Banana	2
5	Orange	1
6	Apple	1
7	Carrots	1
8	Broccoli	1
9	Grand Total	6
10		

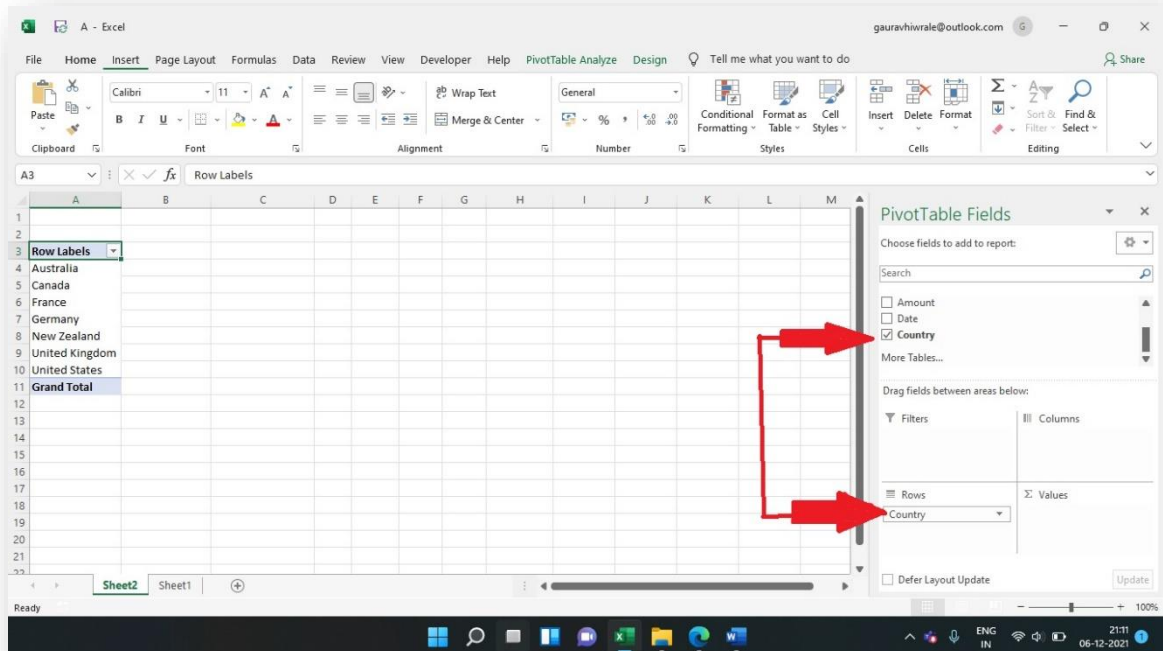
- **Two-dimensional Pivot Table:**

- If you drag a field to the Rows area and Columns area, you can create a two dimensional pivot table.
- First, insert a pivot table.

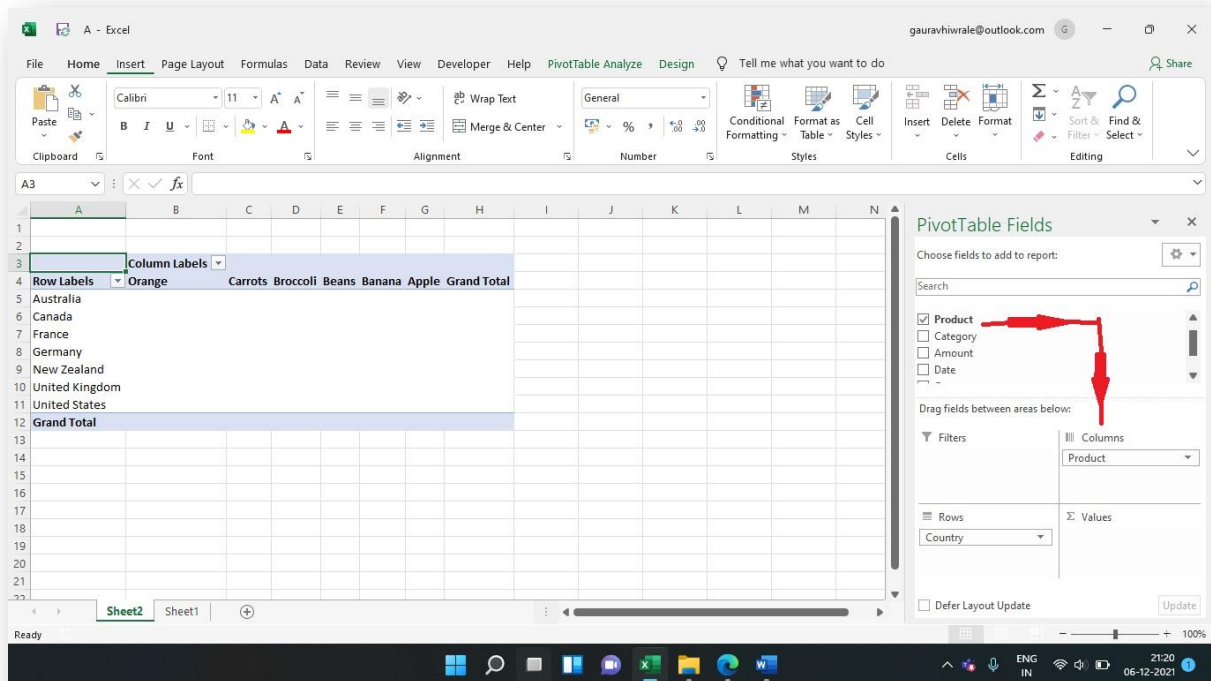


Next, to get the total amount exported to each country, of each product, drag the following fields to the different areas. 1. Country field to the Rows area.

1. Country field to the Rows area.



2. Product field to the Columns area.



3. Amount field to the Values area.

Excel screenshot showing a PivotTable and the PivotTable Fields task pane. The PivotTable is set to show the sum of amounts by country and product category. The PivotTable Fields task pane shows the following configuration:

- Choose fields to add to report: Amount, Date, Country
- Drag fields between areas below:
 - Filters: Country
 - Columns: Product
 - Rows: Country
 - Values: Sum of Amount

Red arrows indicate the configuration of the PivotTable Fields task pane.

Sum of Amount	Column Labels						
Row Labels	Orange	Carrots	Broccoli	Beans	Banana	Apple	Grand Total
Australia		890					890
Canada		543			884	156	1583
France					1221		1221
Germany		987		341	789		2117
New Zealand					657		657
United Kingdom			896		646		1542
United States	543	225	143		740	876	2527
Grand Total	543	1212	2472	341	3716	2253	10537

4. Category field to the Filters area.

Excel screenshot showing the same PivotTable and the PivotTable Fields task pane. The PivotTable is now set to show the sum of amounts by country and product category, with the Category field added to the Filters area. The PivotTable Fields task pane shows the following configuration:

- Choose fields to add to report: Order ID, Product, Category, Amount
- Drag fields between areas below:
 - Filters: Category
 - Columns: Product
 - Rows: Country
 - Values: Sum of Amount

Red arrows indicate the configuration of the PivotTable Fields task pane. A blue arrow indicates the addition of the Category field to the Filters area.

Category	(All)						
Sum of Amount	Column Labels						
Row Labels	Orange	Carrots	Broccoli	Beans	Banana	Apple	Grand Total
Australia		890					890
Canada		543			884	156	1583
France					1221		1221
Germany		987		341	789		2117
New Zealand					657		657
United Kingdom			896		646		1542
United States	543	225	143		740	876	2527
Grand Total	543	1212	2472	341	3716	2253	10537

Discussion and conclusion:

After studying this practical we can understand to insert table and pivot table. We get to know that how use of pivot table help us to differentiate and analyze data easily, conveniently and quickly.it also tells us about how to perform operation like sort and filterand also about change summary calculations. Studying this practical helps us in creatingtwo dimensional pivot table .

Assessment details:

Data of lab conducted	Data of Evaluation	Grade	Sign & Remark (if any)

