Create

Introduction to Pivot Tables

Use IT+

Contents

Introduction

When you have a lot of data, it can sometimes be difficult to analyze all of the information in your worksheet. **PivotTables** can help make your worksheets more manageable by **summarising** data and allowing you to **manipulate** it in different ways.

1 Using PivotTables to Answer Questions

Let's say we wanted to answer the question: **What is the amount sold by each salesperson?** for the sales data in the example below. Answering this question could be time consuming and difficult—each salesperson appears on multiple rows, and we would need to total all of their different orders individually. We could use the **Subtotal** command to help find the total for each salesperson, but we would still have a lot of data to work with.

	A	B	C	D	E
1	Salesperson	Region	Account	Order Amount	Month
2	Albertson, Kathy	East	29386	£ 925.00	January
3	Albertson, Kathy	East	74830	£ 875.00	February
4	Albertson, Kathy	East	90099	£ 500.00	February
5	Albertson, Kathy	East	74830	£ 350.00	March
6	Brennan, Michael	West	82853	£ 400.00	January
7	Brennan, Michael	West	72949	£ 850.00	January
8	Brennan, Michael	West	90044	£ 1,500.00	January
9	Brennan, Michael	West	82853	£ 550.00	February
10	Brennan, Michael	West	72949	£ 400.00	March

Fortunately, a **PivotTable** can instantly **calculate** and **summarise** the data in a way that's both easy to read and manipulate. When we're done, the PivotTable will look something like this:

Row Labels	Sum of Order Amount
Albertson, Kathy	2650
Brennan, Michael	3700
Davis, William	1935
Dumlao, Richard	1490
Flores, Tia	4565
Post, Melissa	1690
Thompson, Shannon	3160
Walters, Chris	4375
Grand Total	23565

Once you've created a PivotTable, you can use it to answer different questions by rearranging—or **pivoting**—the data. For example, if we wanted to answer the question: **What is the total amount sold in each month?** we could modify our PivotTable to look like this:

| Row Labels	Sum of Order Amount
January	£ 9,090.00
February	£ 9,160.00
March	£ 5,315.00
Grand Total	£ 23,565.00

2 Create a PivotTable:

1. Select the **table** or **cells** (including column headers) containing the data you want to use. (A1:E40)

2. From the **Insert** tab, click the **PivotTable** command.
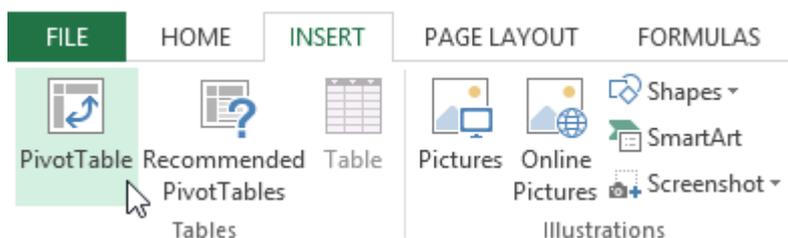
3. The **Create PivotTable** dialog box will appear. Choose your settings, then click **OK**. In our example, we'll use **Table1** as our source data and place the PivotTable on a **new worksheet**.
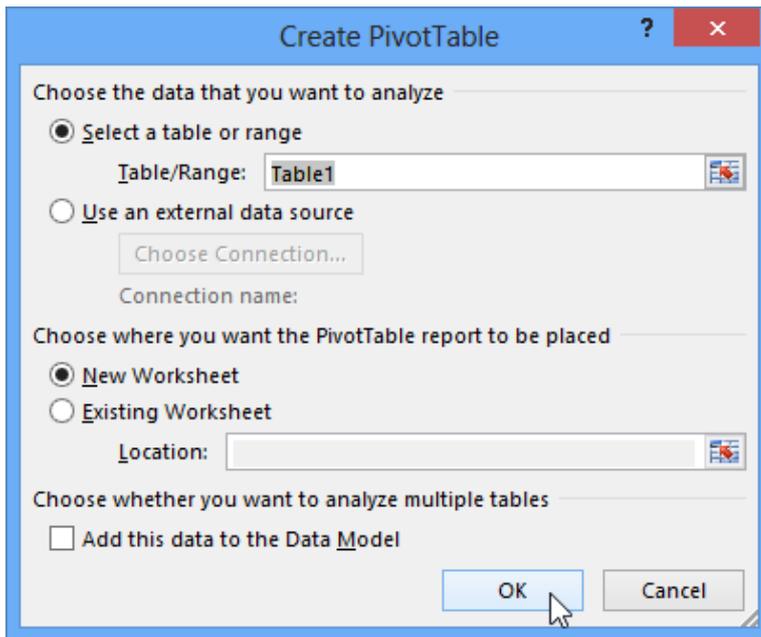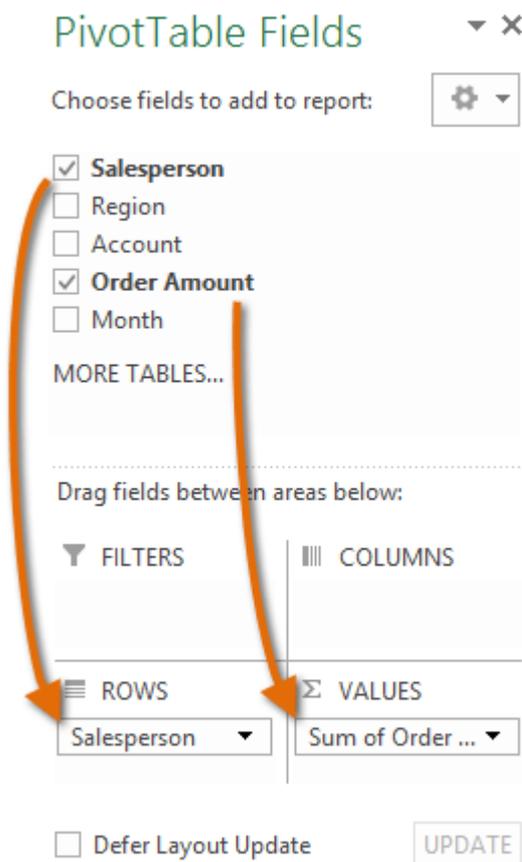
4. A blank **PivotTable** and **Field List** will appear on a new worksheet.
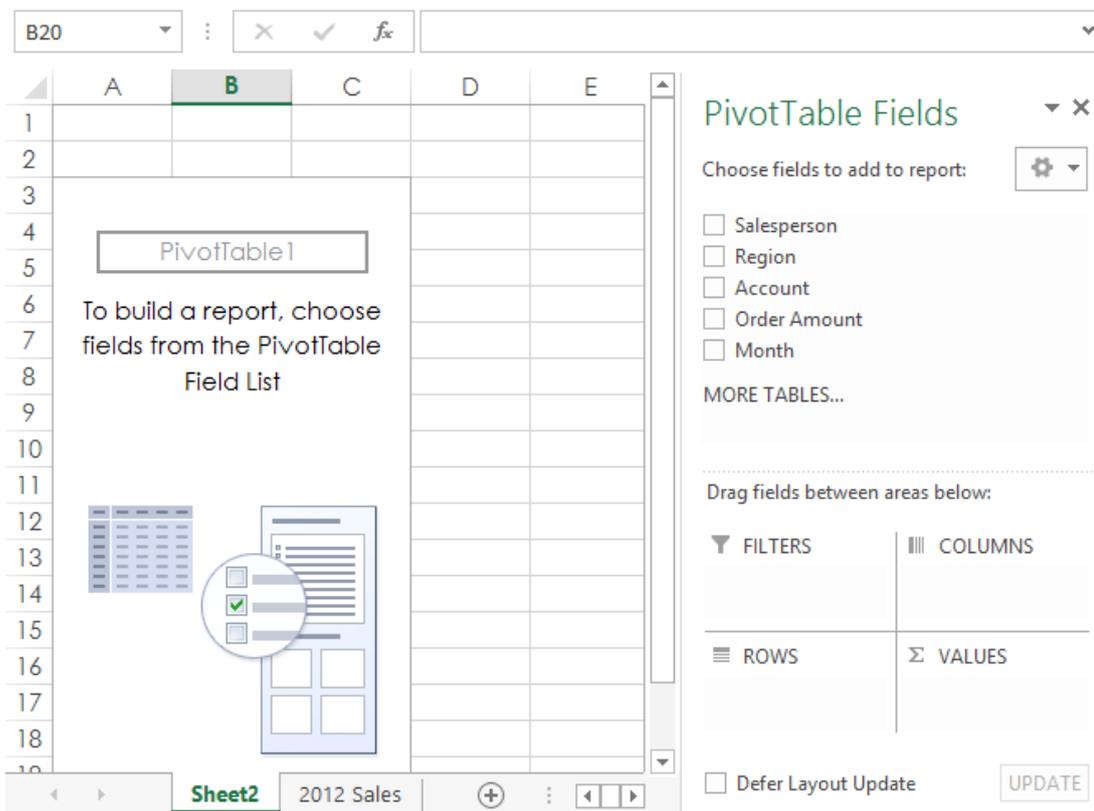
5. Once you create a PivotTable, you'll need to decide which **fields** to add. Each field is simply a **column header** from the source data. In the **PivotTable Field List**, check the box for each field you want to add. In our example, we want to know the total **amount** sold by each **salesperson**, so we'll check the **Salesperson** and **Order Amount** fields.

6. The selected fields will be added to one of the four areas below the Field List. In our example, the **Salesperson** field has been added to the **Rows** area, while the **Order Amount** has been added to the **Values** area. Alternatively, you can click, hold, and drag a field to the desired area.

7. The PivotTable will calculate and summarize the selected fields. In our example, the PivotTable shows the amount sold by each salesperson.

Just like with normal spreadsheet data, you can sort the data in a PivotTable using the **Sort & Filter** command in the Home tab. You can also apply any type of **number formatting** you want. For example, you may want to change the **Number Format** to **Currency**. However, be aware that some types of formatting may disappear when you modify the PivotTable.

If you change any of the data in your source worksheet, the PivotTable **will not update automatically**. To manually update it, select the PivotTable and then go to **Analyze → Refresh**.

3 Pivoting data

One of the best things about PivotTables is that they can quickly **pivot**—or reorganize—data, allowing you to look at your worksheet data in different ways. Pivoting data can help you answer **different questions** and even **experiment** with the data to discover new trends and patterns.

In our example, we used the PivotTable to answer the question: **What is the total amount sold by each salesperson**? But now we'd like to answer a new question: **What is the total amount sold in each month**? We can do this by simply changing the field in the **Rows** area.

3.1 To change the row:

1. Click, hold, and drag any existing **fields** out of the **Rows** area. The field will disappear.
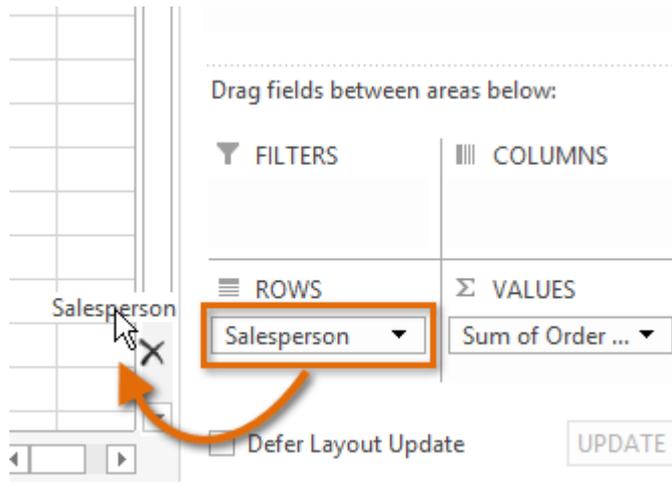
2. Drag a new field from the **Field List** into the **Rows** area. In our example, we'll use the **Month** field.
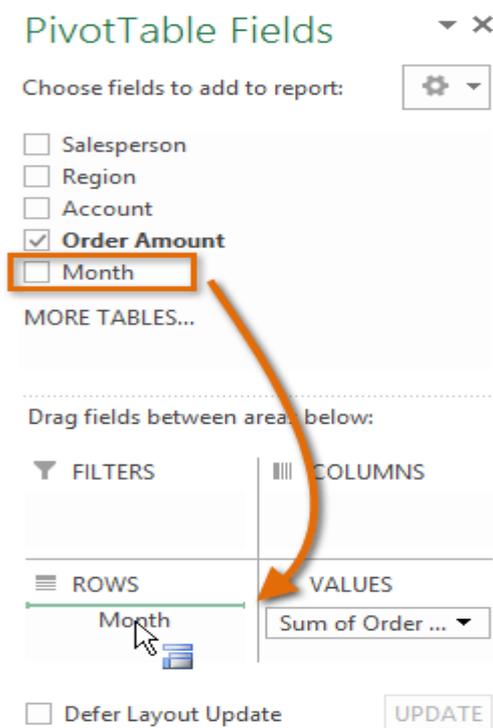
3. The PivotTable will adjust—or pivot—to show the new data. In our example, it now shows the total order amount for each month.

3.2 To add columns:

So far, our PivotTable has only shown **one column** of data at a time. In order to show **multiple columns**, you'll need to add a field to the **Columns** area.

1. Drag a field from the **Field List** into the **Columns** area. In our example, we'll use the **Region** field.
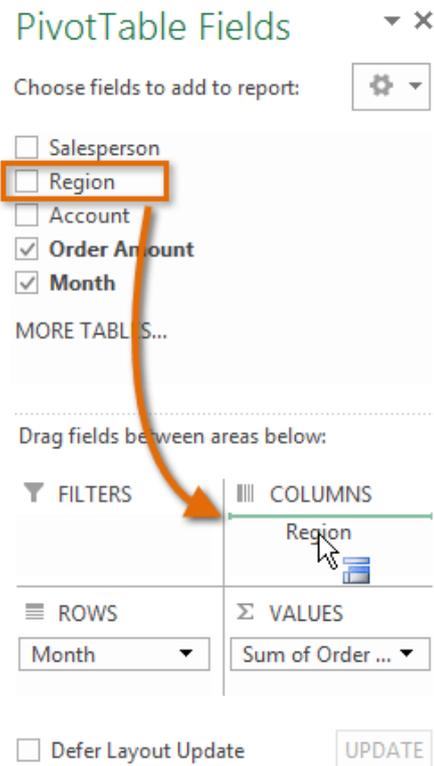
2. The PivotTable will include multiple columns. In our example, there is now a column for each region.

| Sum of Order Amount	Column Labels				
Row Labels	East	North	South	West	Grand Total
January	1690	1140	3110	3150	9090
February	1950	1720	3975	1515	9160
March	700	300	3790	525	5315
Grand Total	4340	3160	10875	5190	23565

4 Filters

Sometimes you may want focus on just a certain section of your data. **Filters** can be used to **narrow down** the data in your PivotTable, allowing you to view only the information you need.
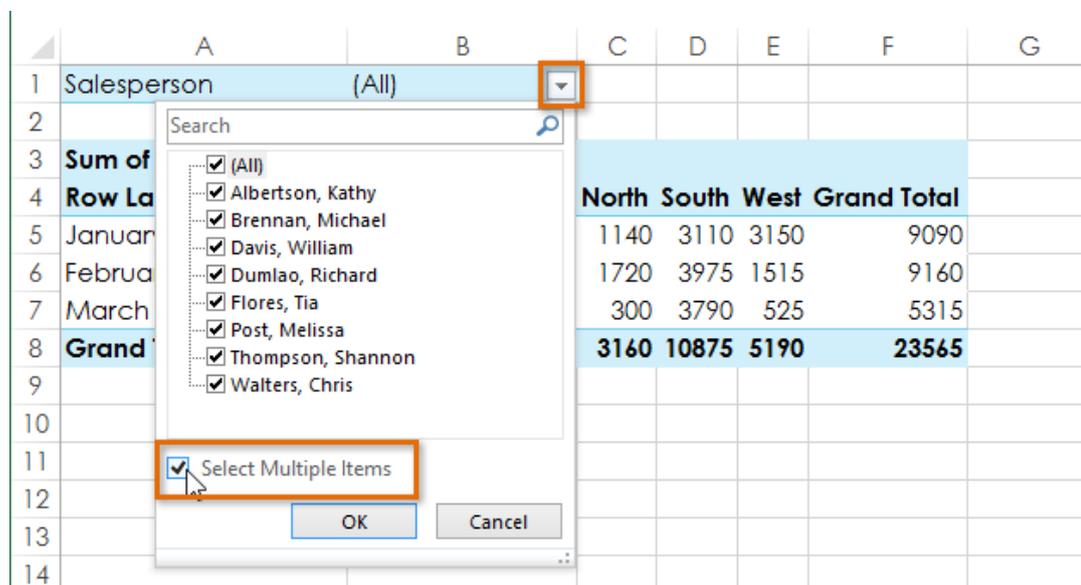
4.1 To add a filter:

In our example, we'll filter out certain salespeople to determine how they affect the total sales.

1. Drag a field from the **Field List** to the **Filters** area. In this example, we'll use the **Salesperson** field.
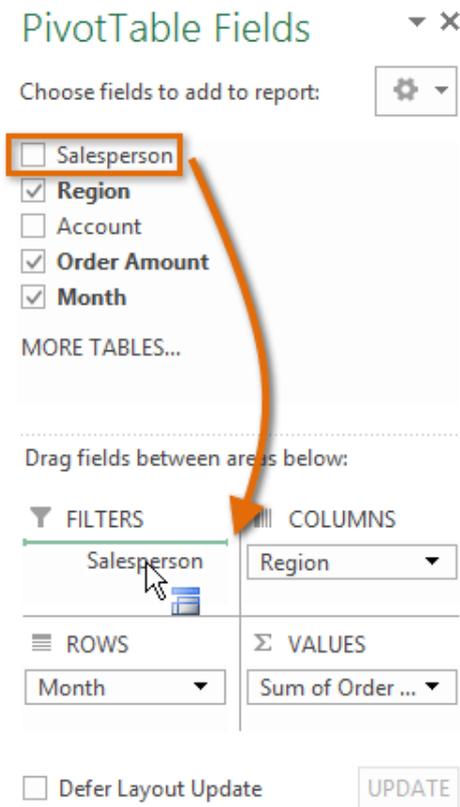
2. The **filter** will appear above the PivotTable. Click the **drop-down arrow**, then check the box next to **Select Multiple Items**.

3. **Uncheck** the box for any items you don't want to include in the PivotTable. In our example, we'll uncheck the boxes for a few different salespeople, then click **OK**.

4. The PivotTable will adjust to reflect the changes.

5 Slicers

To **Slicers** make filtering data in PivotTables even easier. Slicers are basically just **filters**, but they're easier and faster to use, allowing you to instantly pivot your data. If you frequently filter your PivotTables, you may want to consider using slicers instead of filters.

5.1 To add a slicer:

1. Select any cell in the PivotTable.

2. From the **Analyze** tab, click the **Insert Slicer** command.
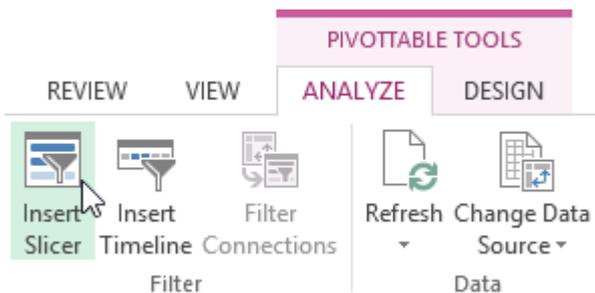
3. A dialog box will appear. Select the desired **field**. In our example, we'll select **Salesperson**, then click **OK**.
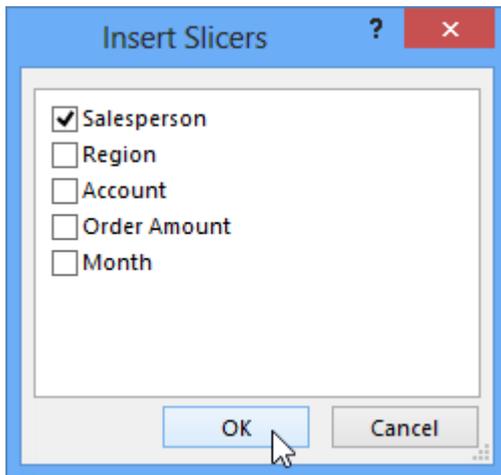
4. The slicer will appear next to the PivotTable. Each selected item will be highlighted in **blue**. In the example below, the slicer contains a list of all salespeople, and **six** of them are currently selected.

5. Just like **filters**, only **selected** items are used in the PivotTable. When you **select** or **deselect** items, the PivotTable will instantly reflect the changes. Try selecting

different items to see how they affect the PivotTable. Press and hold the **Ctrl** key on your keyboard to select multiple items from a slicer.
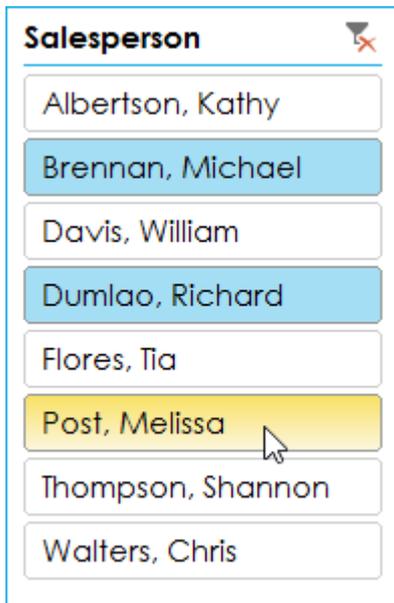
You can also click the **Filter icon** in the top-right corner to select all items from the slicer at once.

6 PivotCharts

PivotCharts are like regular charts, except they display data from a **PivotTable**. Just like regular charts, you'll be able to select a **chart type**, **layout**, and **style** that will best represent the data.

6.1 To create a PivotChart:

In this example, our PivotTable is showing each person's total sales per month. We'll use a PivotChart so we can see the information more clearly.

1. Select any cell in your PivotTable.

Sum of Order Amount	Column Labels			
Row Labels	January	February	March	Grand Total
Albertson, Kathy	£925.00	£1,375.00	£350.00	£2,650.00
Brennan, Michael	£2,750.00	£550.00	£400.00	£3,700.00
Davis, William	£1,100.00	£235.00	£600.00	£1,935.00
Dumlao, Richard	£400.00	£965.00	£125.00	£1,490.00
Flores, Tia	£1,655.00	£985.00	£1,925.00	£4,565.00
Post, Melissa	£765.00	£575.00	£350.00	£1,690.00
Thompson, Shannon	£1,140.00	£1,720.00	£300.00	£3,160.00
Walters, Chris	£355.00	£2,755.00	£1,265.00	£4,375.00
Grand Total	£9,090.00	£9,160.00	£5,315.00	£23,565.00

2. From the **Insert** tab, click the **PivotChart** command.
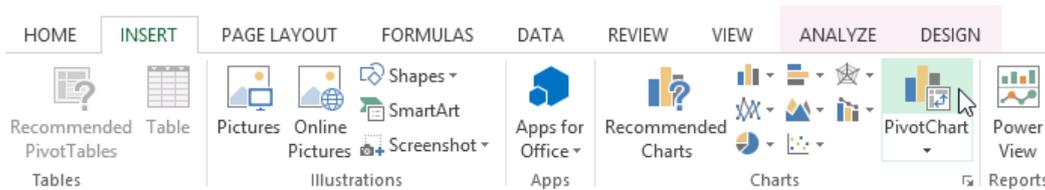
3. The **Insert Chart** dialog box will appear. Select the desired **chart type** and **layout**, then click **OK**.
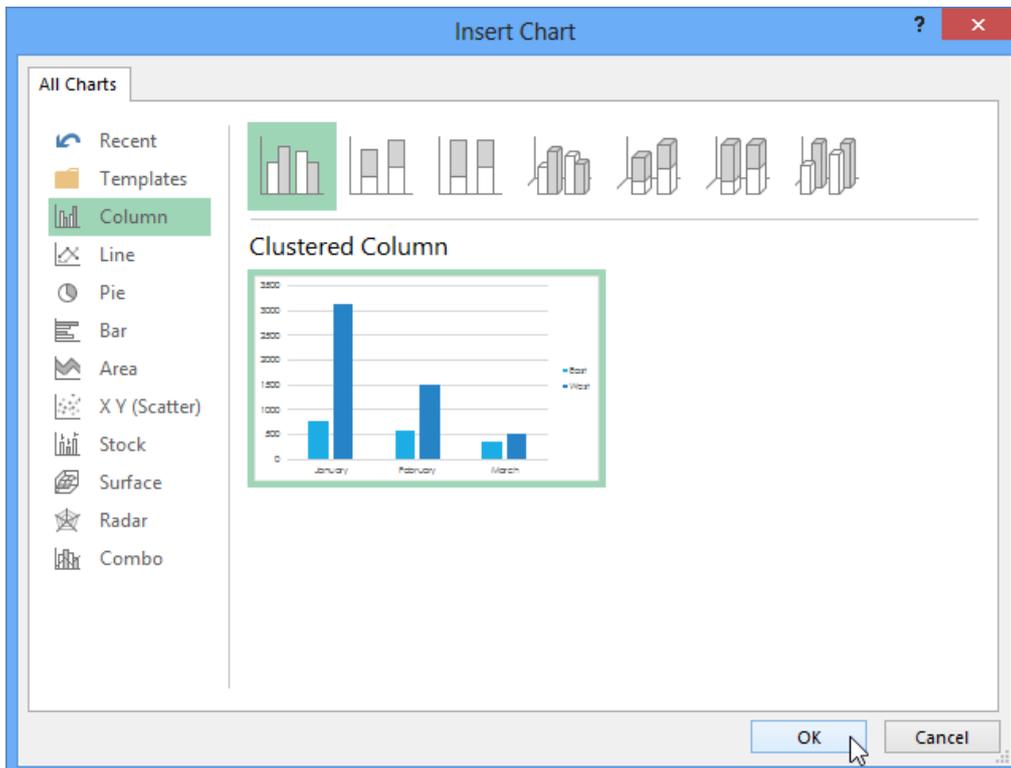
4. The PivotChart will appear.
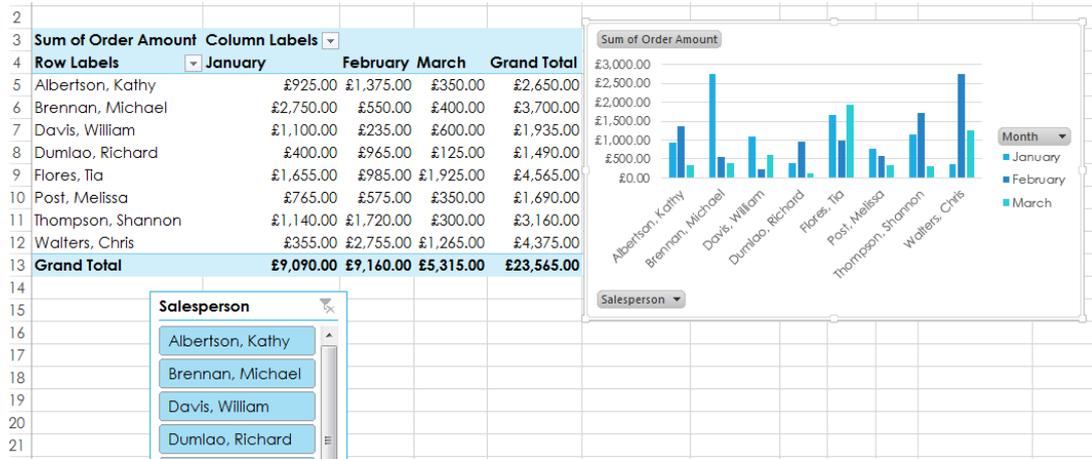
2					
3	Sum of Order Amount	Column Labels			
4	Row Labels	January	February	March	Grand Total
5	Albertson, Kathy	£925.00	£1,375.00	£350.00	£2,650.00
6	Brennan, Michael	£2,750.00	£550.00	£400.00	£3,700.00
7	Davis, William	£1,100.00	£235.00	£600.00	£1,935.00
8	Dumlao, Richard	£400.00	£965.00	£125.00	£1,490.00
9	Flores, Tia	£1,655.00	£985.00	£1,925.00	£4,565.00
10	Post, Melissa	£765.00	£575.00	£350.00	£1,690.00
11	Thompson, Shannon	£1,140.00	£1,720.00	£300.00	£3,160.00
12	Walters, Chris	£355.00	£2,755.00	£1,265.00	£4,375.00
13	Grand Total	£9,090.00	£9,160.00	£5,315.00	£23,565.00

Salesperson
- Albertson, Kathy
- Brennan, Michael
- Davis, William
- Dumlao, Richard

Try using **slicers** or **filters** to change the data that is displayed. The PivotChart will automatically adjust to show the new data.