
Excel Assignment 3

1. What do you mean by “Relative Cell Referencing” in MS Excel and “Absolute cell referencing”?

A Relative cell reference changes when copying or moving the formula or cell value to a different location in the worksheet. Relative references are very useful when you have a range of cells and you want the references to relatively change as and when you copy the formula down to other cells.

An absolute cell reference does not change while copying or moving the formula to a different location in the worksheet. The cell references are fixed. Now you would wonder how can you fix cell reference?

To fix the cell references, we need to add a Dollar sign (\$) before the column name and the row number by pressing the key F4. The F4 Key will allow you to add a dollar sign automatically before the cell references.

When a dollar sign is added before the column name and row number it fixes the references, as it stops the references from changing when copying the formula to the other cells.

2. How to secure an excel workbook, demonstrate it with an example.

To prevent other users from viewing hidden worksheets, adding, moving, deleting, or hiding worksheets, and renaming worksheets, you can protect the structure of your Excel workbook with a password.:

- To lock your file so that other users can't open it, see [Protect an Excel file](#).
- To protect certain areas of the data in your worksheet from other users, you have to protect your worksheet. For more information, see [Protect a worksheet](#).
- To know the difference between protecting your Excel file, workbook, or a worksheet, see [Protection and security in Excel](#).

Protect the workbook structure

To protect the structure of your workbook, follow these steps:

- 1 Click **Review > Protect Workbook**.
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Note: The **Windows** option is available only in Excel 2007, Excel 2010, Excel for Mac 2011, and Excel 2016 for Mac. Select the **Windows** option if you want to prevent users from moving, resizing, or closing the workbook window, or hide/unhide windows.

2 Enter a password in the **Password** box.

Important: The password is optional. If you do not supply a password, any user can unprotect and change the workbook. If you do enter a password, make sure that you choose a password that is easy to remember. Write your passwords down and store them someplace safe. If you lose them, Excel cannot recover them for you.

3 Select **OK**, re-enter the password to confirm it, and then select **OK** again.

3. Explain the pivot tables and their implementations.

A **pivot table** is a [table](#) of grouped values that aggregates the individual items of a more extensive table (such as from a [database](#), [spreadsheet](#), or [business intelligence program](#)) within one or more discrete categories. This summary might include sums, averages, or other statistics, which the pivot table groups together using a chosen aggregation function applied to the grouped values.

Implementation^[edit]

The software will find all distinct values for *Region*. In this case, they are: *North, South, East, West*. Furthermore, it will find all distinct values for *Ship Date*. Based on the aggregation type, *sum*, it will summarize the fact, the quantities of *Unit*, and display them in a multidimensional chart. In the example above, the first datum is 66. This number was obtained by finding all records where both *Region* was *East* and *Ship Date* was *1/31/2005*, and adding the *Units* of that collection of records (*i.e.*, cells E2 to E7) together to get a final result.

Pivot tables are not created automatically. For example, in Microsoft Excel one must first select the entire data in the original table and then go to the Insert tab and select "Pivot Table" (or "Pivot Chart"). The user then has the option of either inserting the pivot table into an existing sheet or creating a new sheet to house the pivot table. A pivot table field list is provided to the user which lists all the column headers present in the data. For instance, if a table represents sales data of a company, it might include Date of sale, Salesperson, Item sold, Color of the item, Units sold, Per unit price, and total price. This makes the data more readily accessible.

Date of sale	Sales person	Item sold	Color of item	Units sold	Per unit price	Total price
10/01/13	Jones	Notebook	Black	8	25000	200000
10/02/13	Prince	Laptop	Red	4	35000	140000
10/03/13	George	Mouse	Red	6	850	5100

Date of sale	Sales person	Item sold	Color of item	Units sold	Per unit price	Total price
10/04/13	Larry	Notebook	White	10	27000	270000
10/05/13	Jones	Mouse	Black	4	700	2800

4. Explain lookup in excel with suitable examples.

Use LOOKUP, one of the [lookup and reference functions](#), when you need to look in a single row or column and find a value from the same position in a second row or column.

For example, let's say you know the part number for an auto part, but you don't know the price. You can use the LOOKUP function to return the price in cell H2 when you enter the auto part number in cell H1.

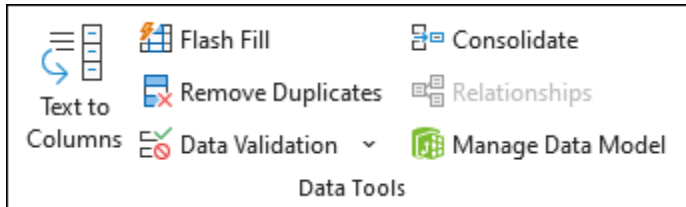
B	C	D	E	F	G	H
Part Number	Part Name	Part Price	Status		Part Number	
A001	water pump	\$68.39	In stock		Part Price	<enter the LOOKUP forumula here>
A002	alternator	\$380.73	In stock			
A003	air filter	\$15.49	In stock			
A004	wheel bearing	\$35.16	In stock			

5. What is Data validation, and how to implement it in Excel?

Data validation is a feature in Excel which is used to control what users can enter into a cell. It allows you to dictate specific rules. It also allows users to display a custom message if users try to enter invalid data.

Impement in excel

1. Select the cell(s) you want to create a rule for.
2. Select **Data >Data Validation**.



3. On the **Settings** tab, under **Allow**, select an option:
 - **Whole Number** - to restrict the cell to accept only whole numbers.
 - **Decimal** - to restrict the cell to accept only decimal numbers.
 - **List** - to pick data from the drop-down list.
 - **Date** - to restrict the cell to accept only date.
 - **Time** - to restrict the cell to accept only time.
 - **Text Length** - to restrict the length of the text.
 - **Custom** – for custom formula.
4. Under **Data**, select a condition.
5. Set the other required values based on what you chose for **Allow** and **Data**.
6. Select the **Input Message** tab and customize a message users will see when entering data.
7. Select the **Show input message when cell is selected** checkbox to display the message when the user selects or hovers over the selected cell(s).
8. Select the **Error Alert** tab to customize the error message and to choose a **Style**.
9. Select **OK**.

Now, if the user tries to enter a value that is not valid, an **Error Alert** appears with your customized message.