**Excel Assignment 3**

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

Ans.

**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 in stops the references from changing when copying the formula to the other cells.

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

Ans.

Protect the workbook structure

* Click Review > Protect Workbook.
* Enter a password in the Password box.
* Select OK, re-enter the password to confirm it, and then select OK again.

1. Explain the pivot tables and their implementations.

Ans.

A PivotTable is an interactive way to quickly summarize large amounts of data. You can use a PivotTable to analyze numerical data in detail, and answer unanticipated questions about your data. A PivotTable is especially designed for:

* Querying large amounts of data in many user-friendly ways.
* Subtotaling and aggregating numeric data, summarizing data by categories and subcategories, and creating custom calculations and formulas.
* Expanding and collapsing levels of data to focus your results, and drilling down to details from the summary data for areas of interest to you.
* Moving rows to columns or columns to rows (or "pivoting") to see different summaries of the source data.
* Filtering, sorting, grouping, and conditionally formatting the most useful and interesting subset of data enabling you to focus on just the information you want.
* Presenting concise, attractive, and annotated online or printed reports.

1. Explain lookup in excel with suitable examples.

Ans.

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.

### **Syntax**

LOOKUP(lookup\_value, array)

The LOOKUP function array form syntax has these arguments:

* lookup\_value    Required. A value that LOOKUP searches for in an array. The lookup\_value argument can be a number, text, a logical value, or a name or reference that refers to a value.
  + If LOOKUP can't find the value of lookup\_value, it uses the largest value in the array that is less than or equal to lookup\_value.
  + If the value of lookup\_value is smaller than the smallest value in the first row or column (depending on the array dimensions), LOOKUP returns the #N/A error value.

array

* Required. A range of cells that contains text, numbers, or logical values that you want to compare with lookup\_value.

The array form of LOOKUP is very similar to the HLOOKUP and VLOOKUP functions. The difference is that HLOOKUP searches for the value of lookup\_value in the first row, VLOOKUP searches in the first column, and LOOKUP searches according to the dimensions of array.

* + If array covers an area that is wider than it is tall (more columns than rows), LOOKUP searches for the value of *lookup\_value* in the first row.
  + If an array is square or is taller than it is wide (more rows than columns), LOOKUP searches in the first column.
  + With the HLOOKUP and VLOOKUP functions, you can index down or across, but LOOKUP always selects the last value in the row or column.

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

**Ans.**

Excel Data Validation is a feature that restricts (validates) user input to a worksheet. Technically, you create a validation rule that controls what kind of data can be entered into a certain cell.

Steps:

1. Open the Data Validation dialog box
2. Create an Excel validation rule

* Values - type numbers in the criteria boxes
* Cell references - make a rule based on a value or formula
* Formulas - allow to express more complex conditions

1. Add an input message (optional)
2. . Display an error alert (optional)