Excel assignment 3

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

A.In Excel, a cell reference (example A1) is a combination of column name (i..e., A) followed by a row number (i.e., 1). By default settings, each cell in Excel is denoted with a column letter and a row number. While writing formulas, the user can refer to cells/ range of cells which is the ultimate power of cell references in MS Excel. For example, suppose we have the following data in cell A1 = 10 and cell A2 = 5. Let’s say you type formula as =A1+A2. Then Excel shall calculate the sum of values present in those cells which are 10+5 = 15.

Types of Cell References in MS Excel:

There are three types of cell references in MS Excel:

1.Relative Reference

2.Absolute Reference

2. Absolute Cell Referencing in Excel:

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.

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

A.To prevent other users from accidentally or deliberately changing, moving, or deleting data in a worksheet, you can lock the cells on your Excel worksheet and then protect the sheet with a password. Say you own the team status report worksheet, where you want team members to add data in specific cells only and not be able to modify anything else. With worksheet protection, you can make only certain parts of the sheet editable and users will not be able to modify data in any other region in the sheet.

Important: Worksheet level protection is **not** intended as a security feature. It simply prevents users from modifying locked cells within the worksheet. Protecting a worksheet is not the same as protecting an Excel file or a workbook with a password. See below for more information:

- To lock your file so that other users can't open it, see Protect an Excel file.
- To prevent users from adding, modifying, moving, copying, or hiding/unhiding sheets within a workbook, see Protect a workbook.
- To know the difference between protecting your Excel file, workbook, or a worksheet see Protection and security in Excel.

3.Explain the pivot tables and their implementations.

A.You can use a PivotTable to summarize, analyze, explore, and present summary data. PivotCharts complement PivotTables by adding visualizations to the summary data in a PivotTable, and allow you to easily see comparisons, patterns, and trends. Both PivotTables and PivotCharts enable you to make informed decisions about critical data in your enterprise. You can also connect to external data sources such as SQL Server tables, SQL Server Analysis Services cubes, Azure Marketplace, Office Data Connection (.odc) files, XML files, Access databases, and text files to create PivotTables, or use existing PivotTables to create new tables.

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.

4.Explain lookup in excel with suitable examples.

A.The Excel LOOKUP function performs an approximate match lookup in a one-column or one-row range, and returns the corresponding value from another one-column or one-row range. LOOKUP's default behavior makes it useful for solving certain problems in Excel.

Use the LOOKUP function to look up a value in a one-column or one-row range, and retrieve a value from the same position in

another one-column or one-row range. The lookup function has two forms, vector and array. The majority of this article describes the *vector* form, but the last example below illustrates the *array* form.

The LOOKUP function accepts three arguments: *lookup_value, lookup_vector,* and *result_vector*. The first argument, *lookup_value,* is the value to look for. The second argument, *lookup_vector*, is a one-row, or one-column range to search. LOOKUP assumes that *lookup_vector* is sorted in ascending order. The third argument, *result_vector*, is a one-row, or one-column range of results. *Result_vector* is optional. When *result_vector* is provided, LOOKUP locates a match in the *lookup_vector*, and returns the corresponding value from *result_vector*. If *result_vector* is *not* provided, LOOKUP returns the *value* of the match found in *lookup_vector*.

LOOKUP has default behaviors that make it useful when solving certain problems. For example, LOOKUP can be used to retrieve an approximate-matched value instead of a position and to find the last value in a row or column. LOOKUP assumes that values in *lookup_vector* are sorted in ascending order and *always* performs an approximate match. When LOOKUP can't find a match, it will match the next smallest value.

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

A.Select Data >Data Validation.

1. 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.