**Advance Excel Assignment 2**

**1. What does the dollar ($) sign do?**

Ans- In Microsoft Excel, the dollar sign ($) has a specific function when used in cell references. It is used to create an absolute reference, which means that the reference to a cell will not change when We copy or fill the formula to other cells.

There are three types of cell references in Excel:

**Relative reference**: A cell reference without any dollar signs is a relative reference. When We copy or fill a formula that contains a relative reference, the reference will adjust based on its new location relative to the original cell.

**Absolute reference**: An absolute reference is denoted by placing a dollar sign before both the column letter and the row number, like $A$1. When We copy or fill a formula that contains an absolute reference, the reference will not change, and it will always point to the same cell.

**Mixed reference**: A mixed reference is a combination of relative and absolute references. We can use a dollar sign before either the column letter or the row number to make it absolute while keeping the other part relative. For example, $A1 or A$1.

**2. How to Change the Reference from Relative to Absolute (or Mixed)?**

Ans- In Microsoft Excel, we can easily change the reference from relative to absolute or mixed by using the dollar sign ($) appropriately. Here's how to do it:

Converting to Absolute Reference: To change a cell reference to an absolute reference, we need to add a dollar sign ($) before both the column letter and the row number of the cell reference.

For example, if We have the formula in a cell as =A1+B1, and We want to make both references absolute (e.g., $A$1 and $B$1)

**3. Explain the order of operations in excel?**

Ans- In Microsoft Excel, the order of operations (also known as precedence) determines the sequence in which mathematical and logical operations are performed in a formula. Following the correct order of operations is crucial to ensure accurate results when evaluating complex formulas.

The order of operations in Excel is as follows:

**Parentheses:** Excel evaluates expressions inside parentheses first. If a formula contains nested parentheses, it starts with the innermost set and works outward.

**Exponents:** After resolving parentheses, Excel calculates any exponentiation (raising to a power) operations. The exponentiation operator in Excel is the caret symbol (^). For example, 2^3 would result in 8.

**Multiplication and Division**: After handling parentheses and exponents, Excel performs multiplication (\*) and division (/) operations from left to right. If multiple multiplication or division operations are present in a formula, Excel evaluates them in the order they appear.

**Addition and Subtraction**: Lastly, Excel performs addition (+) and subtraction (-) operations from left to right. As with multiplication and division, if multiple addition or subtraction operations are present, Excel evaluates them in the order they appear.

**In short, the order of operations in Excel follows the acronym "BEDMAS":**

B - Brackets (Parentheses) E - Exponents DM - Division and Multiplication (from left to right) AS - Addition and Subtraction (from left to right)

Excel evaluates formulas following this sequence to ensure accurate results when performing mathematical and logical operations. If needed, we can use parentheses to prioritize certain calculations within the formula.

**4. What, according to We, are the top 5 functions in excel and write a basic syntax for any of two?**

Ans- As of my knowledge there are the top 5 functions in Excel, which are commonly used and versatile, are**: If function, V look up, H look up, Match & Index function**.

**If Function**- Evaluates a condition and returns one value if the condition is true and another value if it is false.

**Syntax: =IF (logical\_test, value\_if\_true, value\_if\_false)**

**V-Look up**- Suppose We have a table of student names and their corresponding scores in cells B1:C5, and We want to find the score for a specific student name in cell F1.

**Syntax: =V LOOK UP (F1, B1:C5, 2, FALSE)**

**5. When would We use the subtotal function?**

Ans- We would use the SUBTOTAL function in Excel when We want to calculate aggregate functions (e.g., SUM, AVERAGE, COUNT, etc.) for a range of data, excluding any other SUBTOTAL results within that range. It is especially useful when working with filtered data since it considers only the visible cells after filtering.

In short, the SUBTOTAL function is used to perform calculations on a subset of data while ignoring other SUBTOTAL results and hidden rows due to filtering.

**6. What is the syntax of the vlookup function? Explain the terms in it**

Ans- The syntax of the VLOOKUP function in Excel is as follows:

**V LOOK UP (lookup\_value, table\_array, col\_index\_num, [range\_lookup])**

Now, let's break down each term in the function:

**lookup\_value**: This is the value We want to search for in the leftmost column of the table\_array. It can be a specific value, a cell reference, or a formula that produces the value We are looking for.

**table\_array**: This is the range of cells that contains the data We want to search through. The VLOOKUP function looks for the lookup\_value in the first column of this range. It is essential that the lookup\_value exists within this column.

**col\_index\_num**: This is the column number within the table\_array from which We want to retrieve the result. If the table\_array has multiple columns, col\_index\_num specifies which column's value should be returned as the result. The first column in the table array is 1, the second column is 2, and so on.

**range\_lookup**: This is an optional argument that determines the type of match the function should perform. It can take two values:

**TRUE (or 1):** This is the default if the range\_lookup argument is omitted or if it is set to TRUE**.** It implies an approximate match. If an exact match is not found, the function returns the closest match that is less than the lookup\_value. The table\_array should be sorted in ascending order for this to work correctly.

**FALSE (or 0):** This specifies an exact match. If the range\_lookup is set to FALSE, the function will only return a result if the lookup\_value exactly matches a value in the first column of the table\_array.

It's important to note that when using VLOOKUP, the first column of the table\_array should contain the lookup values in ascending order for approximate matching, and it should be sorted in the order We want for exact matching.

The VLOOKUP function is very useful for looking up values in tables, especially when dealing with large datasets or when We need to retrieve specific information based on some certain criteria.

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