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

The dollar sign ($) is a symbol used to represent the currency of the United States of America and some other countries. In the US, it is used to denote the US dollar, which is the official currency of the country.

In addition to representing currency, the dollar sign is also used in various programming languages and software applications as a prefix for variables, functions, and objects. In this context, the dollar sign is used to indicate that the following text is a variable or object that has been defined elsewhere in the code.

Outside of finance and programming, the dollar sign can also be used as a shorthand for the word "dollars" in informal writing and communication. For example, "I paid $10 for my lunch" means "I paid ten dollars for my lunch".

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

Changing the reference from relative to absolute (or mixed) is a common task when working with spreadsheets or formulas in Excel, Google Sheets, or other similar programs. Here's how to do it:

Relative reference: A relative reference refers to a cell or range of cells relative to the current cell that contains the formula. For example, if you have a formula in cell B2 that refers to cell A1, and you copy that formula to cell B3, the formula will automatically adjust to refer to cell A2 (one row down).

Absolute reference: An absolute reference refers to a specific cell or range of cells, regardless of where the formula is copied or moved. To create an absolute reference in Excel, you can use the "$" symbol to "lock" a cell reference. For example, if you want to refer to cell A1 in a formula and keep that reference constant, you would write it as "$A$1".

Mixed reference: A mixed reference refers to a cell or range of cells that has either an absolute row or an absolute column reference. For example, if you want to refer to cell A1 and keep the column reference constant, but allow the row reference to change relative to the current cell, you would write it as "$A1" (dollar sign before column letter).

To change the reference type from relative to absolute or mixed, you can manually edit the formula in the formula bar or use a keyboard shortcut.

In Excel, to make a reference absolute, you can press the F4 key on your keyboard when the cursor is on the cell reference. This will add dollar signs before the column and row letters of the cell reference. Pressing F4 again will toggle between different types of absolute references, such as "$A1" (mixed) or "A$1" (also mixed, but with absolute column and relative row).

In Google Sheets, you can achieve the same effect by manually adding dollar signs before the column and/or row references in the formula.

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

In Excel, the order of operations determines the sequence in which mathematical operators and functions are applied in a formula. The order of operations in Excel follows the acronym PEMDAS, which stands for Parentheses, Exponents, Multiplication and Division, and Addition and Subtraction.

Parentheses: Excel evaluates expressions inside parentheses first. If there are nested parentheses, Excel evaluates the innermost expression first.

Exponents: Excel calculates exponentiation (raising a number to a power) next. For example, if a formula contains 2^3, Excel will calculate 2 raised to the power of 3, which equals 8.

Multiplication and Division: Excel performs multiplication and division operations next, from left to right. If there are multiple multiplication or division operations in a formula, Excel evaluates them in the order they appear from left to right.

Addition and Subtraction: Excel performs addition and subtraction operations last, from left to right. If there are multiple addition or subtraction operations in a formula, Excel evaluates them in the order they appear from left to right.

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

According to me here are top 5 functions that I use frequently used excel:

SUM: Adds a range of values together and returns the total.

Syntax: =SUM(number1,[number2],...)

AVERAGE: Calculates the average (arithmetic mean) of a range of values.

Syntax: =AVERAGE(number1,[number2],...)

IF: Tests a condition and returns one value if the condition is true, and another value if the condition is false.

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

VLOOKUP: Searches for a value in the first column of a table array and returns a value in the same row from a specified column.

Syntax: =VLOOKUP(lookup\_value,table\_array,col\_index\_num,[range\_lookup])

COUNT: Counts the number of cells in a range that contain numeric values.

Syntax: =COUNT(value1,[value2],...)

Here are two examples of basic syntax for excel functions:

SUM: Suppose you want to add up the values in cells A1 through A5. The formula would be: =SUM(A1:A5)

AVERAGE: Suppose you want to find the average of the values in cells A1 through A5. The formula would be: =AVERAGE(A1:A5)

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

The subtotal function is a powerful tool in Excel that can be used to perform calculations on filtered data. It is useful when you want to calculate a subtotal of a specific range or table, while excluding the hidden or filtered rows. Here are some situations where you might use the subtotal function:

Analyzing large datasets: When working with large datasets, it can be helpful to filter the data to see specific subsets of information. However, if you use standard formulas to calculate totals, they will include the hidden or filtered rows, which can skew the results. Using the SUBTOTAL function instead ensures that the calculations are based only on the visible cells.

Organizing financial data: The subtotal function can be used to perform a variety of financial calculations, such as calculating the average or sum of a range of expenses or incomes. By using the subtotal function, you can easily adjust the calculations as you filter or sort the data.

Creating summary reports: If you need to create summary reports that display totals or subtotals for different categories of data, the subtotal function can be a useful tool. You can use it to calculate subtotals for each group or category of data, and then use other functions to summarize the subtotals.

In summary, the subtotal function is a useful tool for working with filtered data, analyzing large datasets, organizing financial data, and creating summary reports. It allows you to calculate subtotals and totals for a range of cells, while excluding hidden or filtered rows.

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

The VLOOKUP function is a powerful tool in Excel that allows you to search for a specific value in the first column of a table or range, and return a corresponding value from a specified column in the same row. The syntax of the VLOOKUP function is as follows:

=VLOOKUP(lookup\_value, table\_array, col\_index\_num, [range\_lookup])

Here is an explanation of the terms used in the VLOOKUP function:

lookup\_value: This is the value that you want to search for in the first column of the table. It can be a value, reference, or formula.

table\_array: This is the range of cells that contains the table or data range in which you want to search. The first column of the table should contain the lookup values, and the remaining columns should contain the values you want to retrieve.

col\_index\_num: This is the column number in the table from which you want to retrieve the corresponding value. The column number is counted from left to right, with the first column in the table being numbered 1.

range\_lookup: This is an optional argument that specifies whether you want an exact match or an approximate match for the lookup value. If you set this argument to TRUE or omit it, Excel will perform an approximate match, which means it will return the closest match that is less than or equal to the lookup value. If you set this argument to FALSE, Excel will perform an exact match, which means it will return only the exact match or #N/A if no match is found.

In summary, the VLOOKUP function is a powerful tool in Excel that allows you to search for a specific value in a table or range, and retrieve a corresponding value from a specified column. The syntax of the function includes four arguments: lookup\_value, table\_array, col\_index\_num, and range\_lookup, each of which plays an important role in the function's behavior.