**Advance Excel Assignment 2**

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

In Excel, a dollar sign can denote a currency format, but it has another common use: indicating absolute cell references in formulas.

$ symbol locks a specific cell or rows or columns in a worksheet. This feature is used while working on formulas when we do not want the reference to be changed when copying or dragging the formula to other cell references

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

By using $ (dollar) symbol in the formula.

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

In general, Excel's order of operation follows the acronym **PEMDAS** *(Parentheses, Exponents, Multiplication, Division, Addition, Subtraction)* but with some customization to handle the formula syntax in a spreadsheet.

In summary, Excel solves formulas in the following order:

Parentheses > Reference operators > Exponents > Negation > Percent > Multiplication and Division > Addition and Subtraction > Concatenation > Logical operators

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

1. SUM
2. COUNT
3. LEN
4. AVERAGE
5. CONCATENATE

=SUM (number1, number2, etc.)

=CONCATENATE (text1, [text2…textn])

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

The SUBTOTAL Function in Excel allows users to create groups and then perform various other Excel functions such as SUM, COUNT, AVERAGE, PRODUCT, MAX, etc. Thus, the SUBTOTAL function in Excel helps in analysing the data provided.

***Formula***

**SUBTOTAL(function\_num, ref1, [ref2],…)**

Where:

* Function\_num - a number that specifies which function to use for the subtotal.
* Ref1, Ref2, … - one or more cells or ranges to subtotal. The first ref argument is required, others (up to 254) are optional.

The function\_num argument can belong to one of the following sets:

* 1 - 11 ignore filtered-out cells, but include manually hidden rows.
* 101 - 111 ignore all hidden cells - filtered out and hidden manually.

***Why do we need to use SUBTOTALS?***

Sometimes, we need data based on different categories. SUBTOTALS help us to get the totals of several columns of data broken down into various categories.

***Top 3 reasons to use SUBTOTAL in Excel***

**1. Calculate values in filtered rows**

Because the Excel SUBTOTAL function ignores values in filtered-out rows, you can use it to create a dynamic data summary where subtotal values are re-calculated automatically according to the filter.

For example, if we filter the table to show sales only for the East region, the Subtotal formula will automatically adjust so that all other regions are removed from the total:

**2. Calculate only visible cells**

As you remember, Subtotal formulas with function\_num 101 to 111 ignore all hidden cells - filtered out and hidden manually. So, when you use Excel's Hide feature to remove irrelevant data from view, use function number 101-111 to exclude values in hidden rows from subtotals.

**3. Ignore values in nested Subtotal formulas**

If the range supplied to your Excel Subtotal formula contains any other Subtotal formulas, those nested subtotals will be ignored, so the same numbers won't be calculated twice.

(https://www.ablebits.com/office-addins-blog/excel-subtotal-function/)

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

There are four pieces of information that you will need in order to build the VLOOKUP syntax:

1. The value you want to look up, also called the lookup value.
2. The range where the lookup value is located. Remember that the lookup value should always be in the first column in the range for VLOOKUP to work correctly. For example, if your lookup value is in cell C2 then your range should start with C.
3. The column number in the range that contains the return value. For example, if you specify B2:D11 as the range, you should count B as the first column, C as the second, and so on.
4. Optionally, you can specify TRUE if you want an approximate match or FALSE if you want an exact match of the return value. If you don't specify anything, the default value will always be TRUE or approximate match.

=VLOOKUP(lookup value, range containing the lookup value, the column number in the range containing the return value, Approximate match (TRUE) or Exact match (FALSE)).