**Advance Excel Assignment 2**

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

The dollar sign "$" is used as a symbol for various currencies, including the United States dollar. It is used to indicate the amount of a monetary value, for example, "$10" means ten dollars. The dollar sign can also be used in mathematics to indicate the amount of money represented by a variable, such as "let x = $50". In programming, the dollar sign is used in many scripting languages to indicate a variable, for example, "$x" might be a variable that represents an amount of money.

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

In Microsoft Excel, you can change the reference type of a cell reference from relative to absolute or mixed.

Here's how to change a relative reference to an absolute reference in Excel:

* Select the cell or cells that contain the formula you want to modify.
* Edit the formula by placing the cursor within it.
* To make a single cell reference absolute, add a dollar sign ($), before both the column letter and the row number in the reference. For example, if the relative reference is "A1", change it to "$A$1".
* To make a single cell reference mixed, add a dollar sign before either the column letter or the row number, but not both.For example, if the relative reference is "A1", you can change it to "A$1" or "$A1".
* To change multiple cell references to absolute or mixed, repeat the steps above for each reference in the formula.
* Press Enter to apply the changes to the formula.

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

The order of operations in Excel, also known as the "order of precedence," determines the sequence in which operations are performed in a formula. The order of operations ensures that formulas are calculated in a consistent and predictable way.

The order of operations in Excel is as follows:

* Parentheses: Expressions within parentheses are calculated first. If there are multiple sets of parentheses, Excel will evaluate the innermost set first.
* Exponents: Exponents (represented by the caret symbol, "^") are calculated next.
* Multiplication and Division: Multiplication and division are performed from left to right in the formula.
* Addition and Subtraction: Finally, addition and subtraction are performed from left to right in the formula.

It's important to remember the order of operations when building formulas in Excel, as incorrect results can be obtained if the order is not followed. If you're unsure about the calculation of a formula, you can use parentheses to control the order in which operations are performed.

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

Here are what I consider to be the top 5 functions in Excel, in no particular order:

* SUM: calculates the sum of a range of values.
* Syntax: SUM(range)
* Example: SUM(A1:A10) returns the sum of values in cells A1 through A10
* IF: evaluates a logical test and returns a specified value if the test is true and another specified value if the test is false.
* Syntax: IF(logical\_test, value\_if\_true, value\_if\_false)
* Example: IF(A1>100, "Greater", "Lesser") returns "Greater" if the value in cell A1 is greater than 100, and "Lesser" otherwise.
* AVERAGE: calculates the average of a range of values.
* Syntax: AVERAGE(range)
* Example: AVERAGE(A1:A10) returns the average of values in cells A1 through A10.
* VLOOKUP: searches for a value in the first column of a table and returns a value in the same row from a specified column.
* Syntax: VLOOKUP(lookup\_value, table\_array, col\_index\_num, [range\_lookup])
* Example: VLOOKUP(A1, A2:B10, 2, FALSE) searches for the value in cell A1 in the first column of the table in the range A2:B10 and returns the value in the same row from column 2.
* COUNTIF: counts the number of cells in a range that meet a specified criterion.
* Syntax: COUNTIF(range, criterion)
* Example: COUNTIF(A1:A10, ">100") returns the number of cells in the range A1 through A10 that are greater than 100.

These are just a few of the many functions available in Excel, and there are many others that can be useful for a variety of tasks..

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

The subtotal function in Excel is used to perform calculations such as sum, average, count, max, and min on groups of data within a list or table. The subtotal function is useful when you have a large dataset that you want to summarize and then perform calculations on the subsets of data.

For example, you might have a large table of sales data, and you want to calculate the sum of sales for each region. You can use the subtotal function to first group the data by region, and then calculate the sum of sales for each group. The subtotal function allows you to perform this calculation without having to manually create separate formulas for each group.

Additionally, the subtotal function can also perform other calculations, such as average, count, max, and min, depending on the value you provide for the function\_num argument. This makes the subtotal function a versatile tool for summarizing and analyzing large datasets in Excel.

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

The syntax of the VLOOKUP function in Excel is:

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

The terms in the VLOOKUP function are:

* lookup\_value: This is the value you want to look up in the first column of the table\_array. It can be a value, a cell reference, or a calculation that results in a value.
* table\_array: This is the range of cells that contains the data you want to look up. It must be organized with the lookup\_value in the first column, followed by the columns containing the data you want to return.
* col\_index\_num: This is the column number in the table\_array that contains the data you want to return. It is a positive integer that starts counting from the first column of the table\_array, which is column 1.
* [range\_lookup]: This is an optional argument that determines whether you want an exact match or an approximate match. If you set it to TRUE or omit it, Excel will return an approximate match. If you set it to FALSE, Excel will return an exact match.

In summary, the VLOOKUP function allows you to search for a value in the first column of a table and return a corresponding value from a specified column in the same row. The VLOOKUP function is a powerful tool for working with large datasets in Excel and can be used to automate many manual tasks, such as finding and combining data from multiple sources.