Advance Excel Assignment 2

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

In Excel, the dollar sign ($) is used to create an absolute cell reference in a formula. There are two types of absolute references: absolute column reference (e.g., $A1) and absolute row reference (e.g., A$1). When both the column letter and row number have dollar signs (e.g., $A$1), it creates an absolute reference for both the column and the row.

Here's what each type of absolute reference means:

$A1 (Absolute Column Reference): If you copy this formula to another column, the column reference remains fixed (absolute), but the row reference adjusts based on the new location.

A$1 (Absolute Row Reference): If you copy this formula to another row, the row reference remains fixed (absolute), but the column reference adjusts based on the new location.

$A$1 (Absolute Cell Reference): If you copy this formula to any other cell, both the column and row references remain fixed (absolute).

Using dollar signs in references is helpful when you want certain parts of a formula to stay constant while others adjust relative to the new location.

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

To change the reference from relative to absolute (or mixed) in an Excel formula, you can use the dollar sign ($) to lock specific parts of the cell reference. Here's how to do it:

1. Absolute Reference:
2. Place a dollar sign before both the column letter and row number to make the reference absolute. For example, changing A1 to $A$1 will fix both the column (A) and the row (1) when you copy the formula.
3. Mixed Reference (Absolute Column or Row):
4. Place a dollar sign before either the column letter or row number to make it absolute while leaving the other part relative. For example, changing A1 to $A1 will keep the column (A) absolute but allow the row (1) to adjust when copied.
5. Alternatively, changing A1 to A$1 will keep the row (1) absolute but allow the column (A) to adjust when copied.

To change the reference in an existing formula:

1. Click on the cell containing the formula.
2. In the formula bar, navigate to the part of the reference you want to change.
3. Add or remove dollar signs accordingly.

By adjusting references using dollar signs, you can control how the formula behaves when copied to other cells in Excel.

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

The order of operations in Excel follows the acronym PEMDAS:

P: Parentheses: Expressions in parentheses are calculated first. If there are nested parentheses, the innermost calculations are done first.

E: Exponents: Calculations involving exponentiation (raising a number to a power) are performed next.

M and D: Multiplication and Division: Multiplication and division operations are carried out from left to right. If there are multiple multiplication or division operations, they are performed in the order they appear.

A and S: Addition and Subtraction: Addition and subtraction operations are carried out from left to right. If there are multiple addition or subtraction operations, they are performed in the order they appear.

It's important to note that Excel evaluates formulas based on this order, so if you want a specific part of your formula to be calculated first, use parentheses to prioritize that calculation. This helps ensure accurate results in complex formulas.

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

Certainly! Some commonly considered top functions in Excel include:

1. SUM:

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

Example: =SUM(A1:A10) adds up the values in cells A1 through A10.

1. VLOOKUP:

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

Example: =VLOOKUP(A2, B1:D10, 3, FALSE) searches for the value in A2 within the range B1 to D10 and returns the corresponding value from the third column.

These functions are versatile and widely used for various calculations and data lookup tasks in Excel.

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

The SUBTOTAL function in Excel is typically used when you have a range of data and you want to perform a calculation on that data, such as sum, average, count, etc., but you also want to control whether to include or exclude other subtotals within the range.

Use the SUBTOTAL function when you want to:

1. Perform Calculations with Flexibility: SUBTOTAL allows you to perform various calculations, and you can choose whether to include or exclude hidden values in the range.
2. Work with Filtered Data: When dealing with filtered data, SUBTOTAL can be useful. It automatically considers only the visible cells, ignoring the hidden ones.
3. Create Dynamic Subtotals: Unlike some other functions, SUBTOTAL adapts its calculation based on whether the cells are hidden or visible, providing dynamic and context-aware results.

Here's a basic syntax example for the SUBTOTAL function:

=SUBTOTAL(function\_num, ref1, [ref2], ...)

function\_num: A number that represents the f

1. unction to be performed (e.g., 1 for SUM, 2 for AVERAGE, 3 for COUNT, etc.).
2. ref1, [ref2], ...: The ranges or references for which you want to perform the specified calculation.

This function is particularly useful in situations where you need to maintain flexibility and adaptability in your calculations, especially in the presence of hidden or filtered data.

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

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

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

**Let's break down each term in the syntax:**

1. **lookup\_value: The value you want to search for in the first column of the table or range.**
2. **table\_array: The table or range of data containing the information you want to retrieve. The lookup value must be in the first column of this range.**
3. **col\_index\_num: The column number in the table from which to retrieve the data. The first column in the table is 1, the second column is 2, and so on.**
4. **[range\_lookup]: An optional argument that specifies whether to find an exact match or an approximate match. If TRUE or omitted, VLOOKUP will look for an approximate match. If FALSE, it will look for an exact match.**

**Here's a brief example:**

**=VLOOKUP(A2, B1:D10, 3, FALSE)**

1. **A2 is the lookup value.**
2. **B1:D10 is the table array.**
3. **3 indicates that the data to be retrieved is from the third column of the table.**
4. **FALSE means an exact match is required.**

**In this example, the VLOOKUP function searches for the value in A2 within the range B1 to D10 and returns the corresponding value from the third column of that range.**