**Advance Excel Assignment 2**

1. What does the dollar($) sign do?   
In Excel, the dollar sign ($) is used to create an absolute reference in cell references. When a cell reference has a dollar sign before the column letter and/or row number (e.g., $A$1), it indicates that the reference is fixed and will not change when copied to other cells. This is useful when you want to maintain the same reference while copying formulas across different cells.

2. How to Change the Reference from Relative to Absolute (or Mixed)?   
To change a reference from relative to absolute (or mixed), you can manually add or remove the dollar signs ($) in the cell reference. Here's how:

* For an absolute reference: Add a dollar sign ($) before the column letter and/or row number.
* For a mixed reference: Add a dollar sign ($) before either the column letter or the row number, depending on which part you want to remain fixed.
* For example, changing a relative reference like A1 to an absolute reference like $A$1 would mean adding dollar signs before both the column letter and the row number.
* 3. Explain the order of operations in excel?
* The order of operations in Excel determines the sequence in which mathematical operations are performed in a formula. The order of operations is as follows:
  + Parentheses ()
  + Exponents (^)
  + Multiplication (\*) and Division (/), evaluated from left to right
  + Addition (+) and Subtraction (-), evaluated from left to right
* Parentheses are evaluated first, followed by exponentiation, then multiplication and division, and finally addition and subtraction.

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

Some of the top 5 functions in Excel include:

SUM: Adds up all the numbers in a range.

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

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

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

IF: Performs a logical test and returns one value if the test is true and another value if the test is false.

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

AVERAGE: Calculates the average of a range of numbers.

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

COUNT: Counts the number of cells in a range that contains numbers.

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

5. When would you use the subtotal function?

The SUBTOTAL function in Excel is typically used to perform calculations on filtered data. It can ignore values in hidden rows, allowing you to perform calculations only on visible cells after applying filters. This function is particularly useful in situations where you want to calculate subtotals or totals of filtered data without including the hidden rows.

6. What is the syntax of the vlookup function? Explain the terms in it?  
Syntax: =VLOOKUP(lookup\_value, table\_array, col\_index\_num, [range\_lookup])

lookup\_value: The value you want to search for in the first column of the table.

table\_array: The range of cells that contains the table of data. The first column of this range should contain the lookup values.

col\_index\_num: The column number in the table from which to return the value. For example, if you specify 2, VLOOKUP returns the value from the second column in the table.

range\_lookup: Optional. A logical value that specifies whether you want an exact or approximate match. If TRUE or omitted, an approximate match is returned. If FALSE, VLOOKUP searches for an exact match.

