Department of Computer and Software Engineering

SE100L: Information and Communication Technologies Lab

Course Instructor: Mr. Hamza Shaukat	**Dated: 24 – 10 – 2023**
Lab Engineer : Asif Ali	**Semester: Fall 2023**
Batch: BSSE23	

LAB 8 MS Excel (Part b)

Name	Roll. No.	Total Marks (35)
Zunaira Abdul Aziz	**BSSE23058**	

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Signature: _____

8.1. Objective

This lab will familiarize the students with the processing of MS Excel. The last four tabs (Formulas, Data, Review and View tabs) will be discussed in the lab.

8.2. Formulas Tab

In "Function Library" group we have different option to insert function. We can insert any type of function using this option. There are three types of references in Excel i.e. absolute, relative and mixed references.

An absolute cell reference, such as $F$34 or $G$67, does not change when a formula or function is copied to other cells. The $ symbol represents the **absolute reference.**

Let's say the formula to calculate the expenses in **week A** is**=SUM (B5:B8).** This can be extended to other columns following it, so it's not necessary to rewrite the formula again and we can just auto fill this series (left click when the cursor is on the edge of the cell and then drag outside to extend series or fill). While extending here, the formulas are adjusted automatically to give reference to the corresponding columns. This is called **relative reference.**

While calculating the balance, let say, the total is always deducted from the constant cell value in all cases. If we write the formula **=B2-B10** and extend it to the following columns, this will give wrong references like **=C2-C10** and **=D2-D10**. So to avoid this, we use the mixed reference **=$B$2-B10**. Now when we extend, the formulas are correctly filled as **=$B$2-C10** and **=$B$2-D10**. A mixed reference is the combination of both the absolute and relative reference.

To know more details about the working of the functions, follow the following link;

http://office.microsoft.com/en-us/excel-help/excel-functions-by-category-HP005204211.aspx

By using the "Formula Auditing" group we can determine that at a particular cell, if formula is applied on it, which cells effect its value. First select the cell then click on any of the option provided in this group.

8.2.1. Data Tab

In data tab we can import our data from some external data source. Our source can be a text file or any other file that had relevant data.

"Filter" option is used to arrange data in some or order or in other words to find the required data quickly and easily.

In "Data tools" group we can use "Text to column" option to separate the content of a column into different columns. Similarly "Remove Duplicate" option is used to remove the duplicated entries from the selected cells.

Similarly, we can group the rows or columns by using the "Outline" group.

8.2.2. Review Tab

This tab is used for proofing purpose, inserting comments and for protecting the documents from unauthorized access. Document or part of document can be protected using the options provided in the “changes” group of this tab.

8.2.3. View Tab

In this tab we can change the views of the workbook, page layout etc. There are different options provided that can help the user to adjust the view of the document.

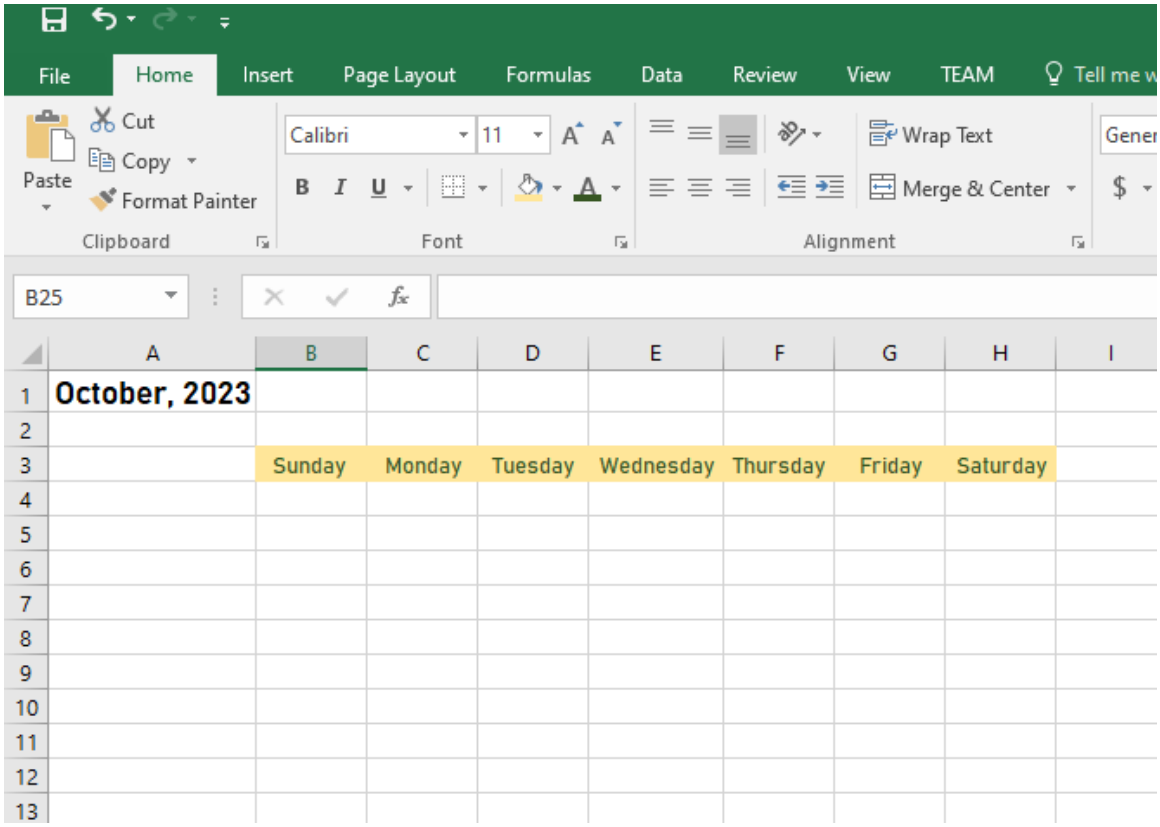
Courtesy:
http://www.lytebyte.com/2008/04/08/how-to-use-relative-and-absolute-references-in-excel/

8.3. Lab Tasks

8.3.1. Task 1

In this task you are required to perform,

- In cell A1, type the name of the month and year, for example, "October 2023." You can format this cell to make it stand out by changing the font, increasing the font size, and centering the text.
- Create a table for the days of the week across a row. In cells B3 through H3, enter the days of the week: "Sun," "Mon," "Tue," "Wed," "Thu," "Fri," and "Sat."
- Format the cells in the days of the week row to make them stand out. You can change the background color, font color, or apply bold formatting.



I used the font Bahnschrift SemiBold, font size 14, and centrally aligned the text in A1. I used the font Bahnschrift, font size 10 , background color yellow, font color to green and centrally aligned the text from B3 to H3.

8.3.2. Task 2

After performing task 1, this task requires you to achieve the following.

- Below the days of the week row, create a grid for the calendar. You can do this by merging cells to create larger cells for each day of the month. For example, to create a calendar for October 2023, you would need to create a 5x7 grid. The 5 rows represent the weeks in the month, and the 7 columns represent the days of the week.
- In the merged cells of the grid, enter the dates for October 2023. Start with 1 in the appropriate cell and continue to 31.
- Format the dates by applying a bold font or a different font color. You can also apply borders to the cells to create a neat calendar layout.
- Your final result should be a nicely formatted and merged cell calendar for the specified month and year.

	A	B	C	D	E	F	G	H	I
1	**October, 2023**								
2									
3	DAYS OF WEEK	Sunday	Monday	Tuesday	Wednesd	Thursda	Friday	Saturda	
4	Week 1	1	2	3	4	5	6	7	
5	Week 2	8	9	10	11	12	13	14	
6	Week 3	15	16	17	18	19	20	21	
7	Week 4	22	23	24	25	26	27	28	
8	Week 5	29	30	31					
9									
10									
11									
12									

8.3.3. Task 3

This task requires you to perform multiplication in Excel,

- Create a column using autofill containing numbers from 1 to 20.
- Generate column next to the first containing 5 in each cell.
- Now multiply the two columns and show the result in the third column.
- Perform this task using absolute referencing.

10	1	5	5
11	2	5	10
12	3	5	15
13	4	5	20
14	5	5	25
15	6	5	30
16	7	5	35
17	8	5	40
18	9	5	45
19	10	5	50
20	11	5	55
21	12	5	60
22	13	5	65
23	14	5	70
24	15	5	75
25	16	5	80
26	17	5	85
27	18	5	90
28	19	5	95
29	20	5	100

8.3.4. Task 4

This task requires you to perform addition of two columns in excel,

- You have sales data of the month in a column: "Sales in January".
- The other column contains data for the other month "Sales in February".
- Your task is to calculate the total sales for each row and display the results in a third column, "Total Sales".

Sales In Janaury	Sales In Feb	Total Sales
346	356	702
24	68	92
253	980	1233
13	654	667
685	785	1470
68	12	80
321	21	342

8.3.5. Task 5

In this task you are required to use AVERAGE IF formula for finding average of different products for different years.

You are given the yearly sales for each product.

- In the first column insert the number of year. This should contain values between 2016 and 2020.
- In the next column insert the product names. You can use the names of your own choice for example T-Shirt, Trouser and Joggers.
- In third column insert the amount of total yearly sale for the product.
- Use the AVEGRAGEIF formula for find average sales amount for each year.

YEARS	SHIRTS SALES	JEANS SALES	SOCKS SALES	AVERAGE SALES
2016	2325	756	685	1255.333333
2017	4526	5678	876	3693.333333
2018	3657	3765	45	2489
2019	54237	347	657468	237350.6667