**COPYING DATA OR WHOLE TABLE FROM ANOTHER SHEET IN EXCEL AND GOOGLE SHEET**

There are several ways to do it—

1. **Excel-**

* **Simple Copy and Paste:** Select table or data and hit **Ctrl+C, then Ctrl+V** to the desired sheet.
* **Consolidation:** Consolidation is Using functions like (sum, average, count). If any change happens in the main sheet, it will automatically update in the background.
* **Direct Cell Reference:** This method make mirror of the original, means if any change occurs in the main sheet, it’ll automatically updated to the another.

Syntax: **=SheetName!A1)**

* **VLOOKUP or HLOOKUP:** This method is a bit lengthy because the main functionality of VLOOKUP and HLOOKUP is to search a specific value in the table. But we can also achieve this task.  
  Syntax: =**VLOOKUP(lookup\_value, table\_array, col\_index\_num, [range\_lookup])**

1. **Google Sheet-**

* **Simple Copy and Paste**
* **IMPORTRANGE-**Using this formula we can import any Spreadsheet and if any changes happen in main sheet this sheet will also get updated.
* **Consolidation**
* **VLOOKUP, HLOOKUP, XLOOKUP**

**VLOOKUP/HLOOKUP in depth –**

**VLOOKUP** is used to search the value in vertical direction in a table using below formula.

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

But the main problem with this is we cannot iterate the previous value of the selected lookup\_value

For example:-

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Order Date** | **Region** | **Rep** | **Item** | **Units** | **Unit Cost** | **Total** |
| 6 January 2024 | East | Jones | Pencil | 95 | 1.99 | 189.05 |
| 23 January 2024 | Central | Kivell | Binder | 50 | 19.99 | 999.5 |
| 9 February 2024 | Central | Jardine | Pencil | 36 | 4.99 | 179.64 |
| 26 February 2024 | Central | Gill | Pen | 27 | 19.99 | 539.73 |
| 15 March 2024 | West | Sorvino | Pencil | 56 | 2.99 | 167.44 |
| 1 April 2024 | East | Jones | Binder | 60 | 4.99 | 299.4 |

**=VLOOKUP(“**6 January 2024**”,$A$2:$G$8,4,0)**

**O/P- Pencil**

**Limitation:-**

**=VLOOKUP(“East”,$A$2:$G$8,4,0)**Here this formula will not work because **lookup\_value** is in **second column** and **table\_array** is started from **first column.**

**HLOOKUP** is used to search the value in horizontal direction in a table using below formula.

=HLOOKUP(lookup\_value, table\_array, row\_index\_num, [range\_lookup])

But the main problem with this is we cannot iterate the previous value of the selected lookup\_value

**=VLOOKUP(“**6 January 2024**”,$A$2:$G$8,5,0)**

**O/P- West**

**Limitation:-**

**=VLOOKUP(“East”,$A$2:$G$8,4,0)**

\***The same thing is as VLOOKUP ‘previous values cannot be iterated’.**

**To overcome this problem there is XLOOKUP**

**XLOOKUP**

Using this we can search/iterate previous values also of columns/rows.

**=XLOOKUP(lookup\_value, lookup\_array, return\_array, [if\_not\_found], [match\_mode], [search\_mode])**

Example**-**

=XLOOKUP(A1, $A$1:$G$7, $A$1:$G$7, “NOT FOUND”, 0)

* This will iterate the value of **A1** present in **$A$1:$G$7** .
* Now we can drag this to any direction left/right/top/bottom.

### Relative References VS Absolute References VS Mixed References

### 1. Relative References

* **Definition**: A relative reference changes when the formula is copied or moved to another cell. It is based on the relative position of the cell being referenced.
* **Example**: If you have a formula in cell B2 that references cell A2 (e.g., =A2), and you copy the formula to cell B3, the reference will automatically adjust to A3.
* **Use Case**: Relative references are useful when you want to apply the same calculation or operation across multiple rows or columns.

**2. Absolute References**

* **Definition**: An absolute reference does not change when the formula is copied or moved. It always refers to the same cell, regardless of where the formula is copied.
* **Syntax**: In Excel and Google Sheets, you make a reference absolute by adding dollar signs ($) to the column letter and row number (e.g., $A$2).
* **Example**: If you have a formula in cell B2 that references cell $A$2 (e.g., =$A$2), and you copy the formula to cell B3, the reference will still point to $A$2.
* **Use Case**: Absolute references are useful when you want to refer to a fixed value or cell (e.g., a constant, tax rate, or specific data point).

**3. Mixed References**

* **Definition**: A mixed reference is a combination of relative and absolute references. You can fix either the row or the column while allowing the other to change.
* **Syntax**:
  + Fix the column: $A2 (column A is absolute, row 2 is relative).
  + Fix the row: A$2 (column A is relative, row 2 is absolute).
* **Example**: If you have a formula in cell B2 that references $A2, and you copy the formula to cell C3, the reference will adjust to $A3 (column A remains fixed, but the row changes).

**Example in Practice**

* **Relative**: =A2+B2 (copied from C2 to C3 becomes =A3+B3).
* **Absolute**: =$A$2+$B$2 (copied from C2 to C3 remains =$A$2+$B$2).
* **Mixed**: =$A2+B$2 (copied from C2 to C3 becomes =$A3+B$2).

Understanding these references is crucial for creating efficient and accurate spreadsheets!

### DATA VALIDATION

### Data validation in excel is a feature that allows user to control the type of data entered into the cell. It helps to ensure that the only valid data is entered into the cell, reducing the errors and improve the accuracy of the data.

### With data validation user can:

### Strict entries to date, number, decimal or time.

### Can set a list of pre-defined choices from dropdown.

### Can limit values.

### Can set custom validation using formula.

### The only disadvantage of data validation is if the source data is deleted than every where we have used that data will also be removed. So, to prevent this we can move that data to hidden place.