VLOOK UP

VLOOKUP in Excel

What is VLOOKUP?

VLOOKUP (Vertical Lookup) is an Excel function used to **search for a value in the first column of a table** and return a value in the **same row from another column**.

Syntax of VLOOKUP

=VLOOKUP(lookup_value, table_array, col_index_num, [range_lookup])

Parameter Description lookup_value The value you want to search for table_array The range of cells that contains the data col_index_num The column number (starting from 1) from which to return the value range_lookup Optional: TRUE = approximate match (default), FALSE = exact match

Steps to Implement VLOOKUP

Example Scenario: You have a list of student names and roll numbers in one sheet, and you want to fetch the student's department based on their roll number from another sheet.

Step-by-Step:

- 1. Place your **main table** (e.g., list of roll numbers) in one sheet.
- 2. Create a **reference table** with all data (e.g., roll numbers with departments) in another sheet or area.
- 3. Click on the cell where you want the result (e.g., department).

- 4. Use the formula:
- =VLOOKUP(A2, Sheet2!A2:C100, 3, FALSE)
- 2 A2 = value to look up (roll number)
- Sheet2!A2:C100 = range where data is stored
- 2 3 = column number from which to return value (department is 3rd column)
- ? FALSE = exact match

★ Use Cases of VLOOKUP

Use Case	Description
ii Employee Lookup	Find employee name or department based on Employee ID
Student Records	Get marks, grades, or details from student roll numbers
Product Information	Get product price or stock by entering product ID
Invoice/Orders	Fetch item descriptions or rates using product codes
■ Merging Data from Different	Combine customer names and orders stored in separate
Sheets	sheets

▲ Limitations of VLOOKUP

- Only searches **left to right** (lookup column must be first).
- Can become slow with very large datasets.
- If structure of the table changes, formula may break.
- ☑ **Tip:** Use XLOOKUP (available in Excel 365 and Excel 2019+) for more flexibility.

Let me know if you'd like me to generate a complete **Word document with all your Excel notes so** far:

- Data Cleaning
- Sorting

- Filtering
- VLOOKUP

I'll create a well-formatted .docx file ready for download.

MATCH

- **©** MATCH Function in Excel
- What is MATCH?

The MATCH function is used to **find the position** of a specific value **within a range** (row or column).

It returns the position number, not the value itself.

Syntax of MATCH

=MATCH(lookup_value, lookup_array, [match_type])

Argument Description

lookup_value The value you want to find

lookup_array The range of cells to search in (must be one row or one column)

match_type Optional: 0 = exact match, 1 = less than, -1 = greater than

- Best Practice: Use 0 to ensure an exact match.
- Steps to Use MATCH

Example:

You have a list of employee names in cells **A2:A10**, and you want to find the **position of "John"** in that list.

=MATCH("John", A2:A10, 0)

This will return something like 4 if "John" is the fourth value in the list.

We will be seen up to the seen of MATCH

Use Case Description

Find Item Position in a List Find which row/column a name, ID, or value appears in

Dynamic Formula Logic Create dynamic references in advanced formulas

Interactive Dashboards Build formulas that update based on user selection

Example: Using MATCH with INDEX

=INDEX(B2:B10, MATCH("John", A2:A10, 0))

- MATCH("John", A2:A10, 0) → finds John's position
- INDEX(B2:B10, ...) → fetches value from the same position in column B
- This returns **John's salary**, if column B holds salary data.

Notes

- MATCH is case-insensitive
- Returns #N/A if no match is found
- Works only on **1D ranges** (rows or columns)

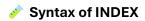
Would you like to include this in the Word document along with VLOOKUP and other Excel topics? I can prepare the .docx file for download with everything organized neatly.

INDEX

What is INDEX?

The INDEX function returns the **value at a specific position** (row and/or column) in a given range or array.

It's very useful when you want to **fetch data from a specific location**, especially when combined with MATCH.



=INDEX(array, row_num, [column_num])

Argument Description

array The range of cells or array from which to return a value

row_num The row number in the array to return data from

column_num (Optional) The column number (if the array has multiple columns)

Steps to Use INDEX

Example 1: Simple Vertical INDEX

Suppose A2:A6 contains:

Α

Apple

Banana

Mango

Grapes

Guava

Formula:

=INDEX(A2:A6, 3)

Output: Mango (the 3rd item in the list)

Example 2: 2D INDEX

Suppose A2:C4 contains:

Name Dept Salary

John IT 40000

Mary HR 42000

Steve Finance 39000

Formula:

=INDEX(A2:C4, 2, 3)

Output: 42000 (2nd row, 3rd column)

★ Use Cases of INDEX

Use Case Description

- P Lookup with row and column Find a specific value from a data table
- © Combine with MATCH Create powerful, flexible lookups
- Dynamic Dashboards Fetch values based on user selections
- Alternative to VLOOKUP More flexible than VLOOKUP (works left or right)

INDEX + MATCH Combo Example

You want to find Steve's salary, but his row may change.

=INDEX(C2:C4, MATCH("Steve", A2:A4, 0))

- MATCH("Steve", A2:A4, 0) returns 3 (Steve is 3rd row)
- INDEX(C2:C4, 3) returns 39000 (Steve's salary)
- This is a powerful alternative to VLOOKUP, and doesn't require the lookup column to be the first.

Notes

- INDEX returns the **value**, not the position
- Works both vertically and horizontally
- If you omit column_num in a single-column range, that's fine