# VLOOKUP :

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

VLOOKUP is a function in Excel that allows you to **search for a value in the first column of a table** and then return a value from the same row in another column.

**Purpose:**  
It is mainly used when data is arranged in a **vertical format** (i.e., values are stored in columns).

**How it works:**

1. Excel looks for the given value (lookup value) in the **leftmost column** of a specified range (table array).
2. Once it finds the match, it moves horizontally across that row to fetch the data from the column number you specify.

* **Uses:**
  + To find marks of a student using roll number.
  + To get product price based on product ID.
  + To fetch employee details using employee ID.

**Syntax:**

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

* **lookup\_value** → The value to search for.
* **table\_array** → The range of cells containing data.
* **col\_index\_num** → The column number (from the left) in the table to return a value from.
* **range\_lookup** → TRUE (approximate match) or FALSE (exact match).

**Example:**

| **Roll No** | **Name** | **Marks** |
| --- | --- | --- |
| 101 | Raj | 85 |
| 102 | Neha | 90 |
| 103 | Aman | 78 |
| 104 | Sakshi | 92 |

**Formula to find marks of Roll No 103:**

=VLOOKUP(103, A2:C5, 3, FALSE)

**Result:** 78

# HLOOKUP

**Definition:**  
HLOOKUP (Horizontal Lookup) is used to search for a value in the **first row** of a table and return a value in the same column from another row.  
HLOOKUP is a function in Excel that allows you to **search for a value in the first row of a table** and then return a value from the same column in another row.

**Purpose:**  
It is mainly used when data is arranged in a **horizontal format** (i.e., values are stored in rows).

**How it works:**

1. Excel looks for the given value (lookup value) in the **topmost row** of a specified range (table array).
2. Once it finds the match, it moves vertically down that column to fetch the data from the row number you specify.

**Uses:**

* To find student marks by looking at IDs arranged in the first row.
* To retrieve monthly sales data from a row-based table.
* To get product details stored horizontally.

**Syntax:**

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

* **lookup\_value** → The value to search for.
* **table\_array** → The range of cells containing data.
* **row\_index\_num** → The row number (from the top) in the table to return a value from.
* **range\_lookup** → TRUE (approximate match) or FALSE (exact match).

**Example:**

|  | **A** | **B** | **C** | **D** |
| --- | --- | --- | --- | --- |
| Row 1 | ID | 101 | 102 | 103 |
| Row 2 | Name | Raj | Neha | Aman |
| Row 3 | Marks | 85 | 90 | 78 |

Formula to find Marks of ID 102:

=HLOOKUP(102, B1:D3, 3, FALSE)

**Result:** 90