**Question: Using LOOKUPVALUE in Power BI**

You are given a dataset with **Sales Data** and another dataset with **Product Details**. Your task is to use the **LOOKUPVALUE function** to retrieve missing information based on one or multiple conditions.

**Dataset 1: Sales\_Data**

| **Order\_ID** | **Product\_ID** | **Quantity** | **Sales\_Amount** |
| --- | --- | --- | --- |
| 101 | P001 | 2 | 500 |
| 102 | P002 | 3 | 750 |
| 103 | P003 | 1 | 250 |
| 104 | P004 | 5 | 1250 |
| 105 | P005 | 4 | 1000 |

**Dataset 2: Product\_Details**

| **Product\_ID** | **Product\_Name** | **Category** | **Price** |
| --- | --- | --- | --- |
| P001 | Laptop | Electronics | 250 |
| P002 | Mobile | Electronics | 250 |
| P003 | Headphones | Accessories | 250 |
| P004 | Monitor | Electronics | 250 |
| P005 | Keyboard | Accessories | 250 |

**Tasks:**

**(1) Single-Condition Lookup**

Create a **calculated column** in Sales\_Data that fetches the **Product\_Name** from Product\_Details using **LOOKUPVALUE** with a single condition (Product\_ID).

**(2) Multiple-Condition Lookup**

Now, assume that the Product\_Details table has duplicate Product\_ID values but with different Category. Modify the LOOKUPVALUE function to fetch the correct Product\_Name by considering both Product\_ID and Category as conditions.

## **Scenario: Advanced Lookup with Multiple Conditions & Date Filtering**

You are working for a **Retail Chain** that tracks customer purchases across multiple stores. You have two datasets:

1. **Sales\_Data** – Contains transaction details (Order, Customer, Store, Purchase Date, and Product).
2. **Customer\_Info** – Contains customer details, including membership status and last purchase date.

Your task is to **fetch the Membership Status** from Customer\_Info and dynamically fetch the **last purchase date** within the same store for each customer.

### ****Dataset 1: Sales\_Data****

| **Order\_ID** | **Customer\_ID** | **Store\_ID** | **Product\_ID** | **Purchase\_Date** |
| --- | --- | --- | --- | --- |
| 1001 | C001 | S001 | P100 | 2024-01-01 |
| 1002 | C002 | S002 | P101 | 2024-01-02 |
| 1003 | C001 | S001 | P102 | 2024-01-05 |
| 1004 | C003 | S003 | P103 | 2024-01-08 |
| 1005 | C002 | S002 | P104 | 2024-01-12 |

### ****Dataset 2: Customer\_Info****

| **Customer\_ID** | **Membership\_Status** | **Last\_Purchase\_Date** | **Store\_ID** |
| --- | --- | --- | --- |
| C001 | Gold | 2023-12-28 | S001 |
| C002 | Silver | 2023-12-30 | S002 |
| C003 | Bronze | 2023-12-25 | S003 |

## **Tasks:**

### ****(1) Fetch Membership Status (Multi-Condition Lookup)****

Create a **calculated column** in Sales\_Data to fetch the **Membership\_Status** of each customer based on Customer\_ID and Store\_ID using **LOOKUPVALUE**.

### ****(2) Get Last Purchase Date Before the Current Purchase (Dynamic Lookup)****

For each row in Sales\_Data, retrieve the **latest purchase date BEFORE the current purchase** from Customer\_Info, based on Customer\_ID and Store\_ID.