

# Hospital Equipment Dashboard Assignment

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## Objective

The objective of this assignment is to create an interactive Excel dashboard to analyze hospital equipment data using Pivot Tables, Slicers, Charts, and other advanced Excel features such as VLOOKUP/XLOOKUP, Data Validation, and Text-to-Columns.

## Dataset Description

You are provided with a dataset containing hospital equipment information. The dataset contains 100 entries with the following columns:

Column	Description
<b>Equipment_ID</b>	Unique ID for each equipment (E001, E002, ...)
<b>Equipment_Name</b>	Name of the equipment (ECG Machine, X-Ray Machine, ...)
<b>Department</b>	Department where equipment is used (Cardiology, Radiology, ICU, Surgery, Pharmacy)
<b>Purchase_Date</b>	Date when the equipment was purchased
<b>Warranty_Years</b>	Warranty period in years
<b>Cost</b>	Cost of the equipment in INR
<b>Supplier_Name</b>	Name of the supplier providing the equipment
<b>Status</b>	Current status (Working, Under Repair, Out of Service)
<b>Notes</b>	Additional notes (e.g., Calibration required; Replacement next year)

## Tasks

### 1. Data Cleaning

- Correct inconsistent entries in the **Status** column.
- Use **Text-to-Columns** to split multiple notes in the **Notes** column.

### 2. VLOOKUP/XLOOKUP Practice

- Create a reference table **SupplierDirectory** with **Supplier\_Name** and **Contact\_Info**.

- Use VLOOKUP/XLOOKUP to fetch **Contact Info** for each equipment automatically.

### 3. Data Validation

- Create dropdown lists for **Department** and **Status** columns.
- Ensure only valid entries can be selected.

### 4. Pivot Tables

- Count of equipment per department.
- Average cost per department.
- Count of equipment under repair.

### 5. Charts

- Bar chart for equipment count per department.
- Pie chart for status distribution.
- Line chart for total cost per purchase year.

### 6. Slicers

- Add slicers to filter the dashboard by **Department**, **Status**, or **Supplier\_Name**.

### 7. Dashboard Layout

- Top: KPIs (Total Equipment, Average Cost, Equipment Under Repair)
- Middle: Pivot charts
- Left: Slicers for filtering
- Bottom: Pivot tables for details

### Optional Challenge

- Highlight equipment nearing warranty expiry using **Conditional Formatting**.
- Add a timeline for **Purchase\_Date** to filter by year.
- Add interactive buttons to switch between charts.

## Sample Dataset (First 5 Rows)

Equipment_ID	Equipment_Name	Department	Purchase_Date	Warranty_Years	Cost
E001	ECG Machine	Cardiology	2023-05-12	5	15000
E002	X-Ray Machine	Radiology	2022-08-20	7	50000
E003	MRI Scanner	Radiology	2021-11-15	10	350000
E004	Ventilator	ICU	2023-02-05	3	120000
E005	Infusion Pump	ICU	2022-06-10	3	45000

## Submission Instructions

- Submit a PDF report containing all analysis, visualizations, and insights.
- Include the code used for analysis Excel in an appendix.
- Ensure the report is well-structured and clearly explains your findings.