**Healthcare Dashboard - Hospital Summary**

## Project Overview

This project involves the creation of an interactive and insightful Healthcare Dashboard built in Microsoft Excel. The dashboard provides a high-level summary of key hospital performance metrics, patient demographics, and financial data, enabling healthcare administrators to make data-driven decisions for improved patient care and operational efficiency.

The dashboard consolidates complex datasets into a single, visually intuitive interface, featuring metrics on patient volume, staff allocation, treatment costs, and revenue streams.

## Objective

The primary objective of this project is to transform raw hospital operational data into actionable insights. The dashboard is designed to:

* Monitor real-time key performance indicators (KPIs).
* Analyze trends in patient admissions (Inpatient vs. Outpatient) over time.
* Visualize revenue distribution across different age demographics.
* Track resource utilization, such as bed occupancy and staff-to-patient ratios.
* Identify areas for potential improvement in cost management and patient flow.

## Tools & Techniques Used

* **Tool:** Microsoft Excel
* **Key Techniques:**
  + **Data Modeling:** Structuring raw data into efficient tables for analysis.
  + **Advanced Formulas:** Using functions like SUMIFS, COUNTIFS, AVERAGEIFS, and XLOOKUP/VLOOKUP to aggregate and calculate metrics.
  + **Pivot Tables & Pivot Charts:** To summarize and analyze large datasets dynamically.
  + **Data Visualization:** Creating a cohesive set of charts (Line Charts, Bar Charts, Pie/Donut Charts, KPI cards) for effective storytelling.
  + **Dashboard Design:** Implementing slicers, form controls, and conditional formatting for interactivity and a user-friendly interface.

## Insights & Analysis

* The hospital handles a significantly higher volume of **inpatients** compared to outpatients (~67% vs. ~33%).
* The **patient-staff ratio of 0.10** suggests the facility is well-staffed, which could contribute to the relatively efficient **average ER time** of ~65 minutes.
* Tracking the **"In and Out by Week"** chart is crucial for identifying seasonal trends, planning staff schedules, and managing resource allocation.
* Analyzing **Revenue by Age Group** helps understand which patient demographics contribute most to revenue, informing marketing and service development strategies.