

Project Title

Hospital Management Analytics: Performance and Billing Dashboard



Hospital Management Dataset: Column Details

Column Name	Description
Patient ID	Unique identifier for each patient
Name	Full name of the patient
Age	Age of the patient in years
Gender	Patient's gender (Male/Female)
Admission Date	Date of patient admission (format: yyyy-mm-dd)
Discharge Date	Date of discharge (format: yyyy-mm-dd)
Department	Department where treatment was provided (e.g., Cardiology, Neurology)
Diagnosis	Patient's primary diagnosis (e.g., Asthma, Fracture)
Treatment Cost	Cost incurred for the treatment (in currency units)
Billing Status	Whether the bill was paid or unpaid (e.g., Paid/Unpaid)
Attending Physician	Doctor in charge of the treatment
Nurse Assigned	Primary nurse assigned to the patient
Room Type	Type of hospital room (Private, Shared, Semi-Private)
Length of Stay (Days)	Number of days the patient stayed in the hospital

Objective

To analyze hospital operations using Excel functions and Pivot Tables, focusing on:

- **Financial Analysis:** Billing status, treatment costs.
 - **Operational Metrics:** Length of stay, room utilization.
 - **Staff Performance:** Physician and nurse assignments.
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Task Breakdown

Task 1: Calculate Total Treatment Cost Using SUMIF

- **Objective:** Sum the treatment costs for patients with 'Paid' billing status.
- **Formula:**

```
=SUMIF(J2:J6, "Paid", I2:I6)
```

Task 2: Count Patients by Room Type Using COUNTIF

- **Objective:** Count the number of patients assigned to 'Private' rooms.
- **Formula:**

```
=COUNTIF(M2:M6, "Private")
```

Task 3: Determine Length of Stay Using IF

- **Objective:** Flag patients with a length of stay greater than 3 days.
- **Formula:**

```
=IF(P2>3, "Extended", "Normal")
```

Task 4: Create a Pivot Table for Department-wise Billing Status

- **Objective:** Analyze the billing status distribution across departments.
- **Steps:**
 1. Insert a Pivot Table.
 2. Rows: Department.
 3. Columns: Billing Status.

4. Values: Count of Patient

Task 5: Generate a Pivot Chart for Treatment Costs by Physician

- **Objective:** Visualize total treatment costs per attending physician.
- **Steps:**
 1. Create a Pivot Table with Physician as Rows and Sum of Treatment Cost as Values.
 2. Insert a Column Chart.

Task 6: Analyze Length of Stay by Room Type Using Pivot Table

- **Objective:** Compare average length of stay across different room types.
- **Steps:**
 1. Insert a Pivot Table.
 2. Rows: Room Type.
 3. Values: Average of Length of Stay.

Task 7: Create a Dashboard with Key Metrics

- **Objective:** Develop a dashboard displaying:
 - Total treatment cost.
 - Patient count by room type.
 - Average length of stay by department.
 - Billing status distribution.
- **Tools:** Use Pivot Tables, Charts, and Slicers for interactivity.