Medbed Systems

User Guide & Documentation

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1. Introduction

The Hospital Bed Management System is a web-based platform that helps hospital staff track, assign, and forecast bed availability across different wards. The system includes a secure login page, a real-time dashboard, and data visualization tools for predicting bed demand.

This guide explains how to log in, navigate the dashboard, view bed statuses, and interpret forecast data.

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2. System Requirements

- Modern web browser (Chrome, Edge, Firefox, Safari)

- Internet connection

- Staff login credentials (created through Firebase Authentication)

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3. Accessing the System

Website URL

- Access the system via the GitHub Pages–hosted URL:

  https://projectfoundrylab.github.io/capstone-f25-project-repository-group-5/

Logging In

1. Open the website.

2. Enter your **email** and **password**.

3. Click **Log In**.

4. If authentication is successful, you will be redirected to the main dashboard.

Note: Login uses **Firebase Authentication**, so passwords are securely stored and encrypted.

- Users are added and maintained by a third party.

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4. Main Dashboard Overview

After logging in, users will see the real-time dashboard. The dashboard consists of several key components:

4.1 Bed Availability Panel

Displays the total number of:

- Available beds

- Occupied beds

- Reserved beds

- Beds in cleaning

- Beds being transferred

Data is updated in real time from the SQL database (mock data for the prototype).

4.2 Bed Status Table

Each row shows:

- Bed ID

- Ward

- Status (Available / Occupied)

- Assigned patient (if applicable)

4.3 Forecast Visualization

Graphs created using **Power BI/Tableau** display:

- Predicted bed demand

- Seasonal patterns (flu season, winter peaks)

- Admission trends

This helps staff plan ahead.

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5. Navigation

Top Navigation Bar

- **Dashboard** – home screen

- **Manage beds** – detailed bed list

- **Patients** – patient admission info

- **Insights** – data visualizations

- **Manage rooms** – detailed room list

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6. Using the System

6.1 Viewing Bed Availability

1. Go to the **Dashboard**.

2. View the line chart and statistics for real-time availability.

3. Hover over peaks for exact numbers (optional).

6.2 Assigning a Bed

(Planned functionality / future feature)

- Staff will be able to assign patients to beds directly through the dashboard.

- Bed status will update automatically.

6.3 Viewing Admissions

- Navigate to **Patients**.

- See active admissions and history.

- Future versions will allow updating admission info.

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7. Logging Out

1. Save all work and click the **Logout** button in the top right corner.

2. Firebase Authentication ends your session.

3. You are returned to the login screen.