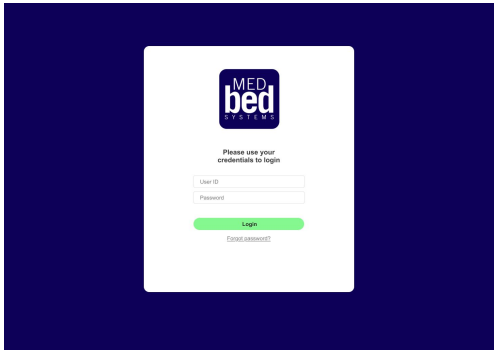
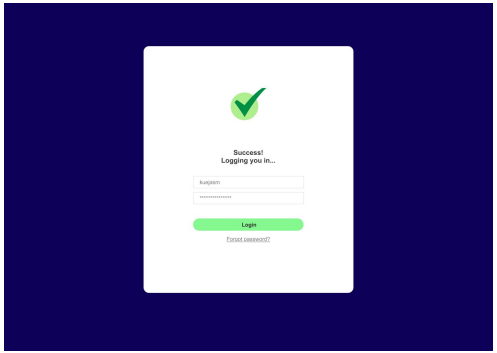
Progress 1 Presentation

MedBed Systems

Project Summary

MedBed Systems is a hospital bed management system designed to help hospital staff track, assign, and forecast bed availability in real time. The dashboard improves patient flow and resource allocation.





Sprint Timeline

- Sprint 1: Setup wireframes, schema, mock data, and GCP database ✅
- Sprint 2: Implement login, backend routes, frontend dashboard (in progress)
- Sprint 3: Integration, debugging, testing
- Final: System demo + full documentation

Progress So Far

- Completed feasibility report & system design
- Created database schema and GCP setup
- Built wireframes and planned sprint workflow

Next Steps

- Begin implementing frontend, backend, and authentication
- Start testing database integration

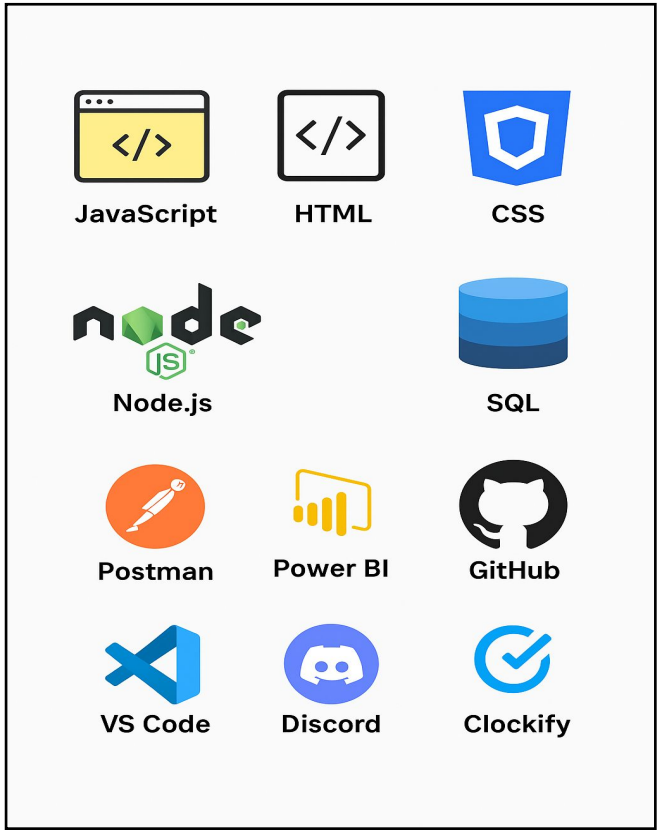
MedBed Systems

Tech Stack

- Frontend: HTML, CSS, JavaScript
- Backend: Node.js
- Database: SQL on Google Cloud Platform
- Analytics: Power BI, Tableau
- Collaboration: GitHub, VS Code, Discord, Clockify

Key Features

- Real-time bed availability dashboard
- Predictive analytics for future demand
- Secure login and role-based access



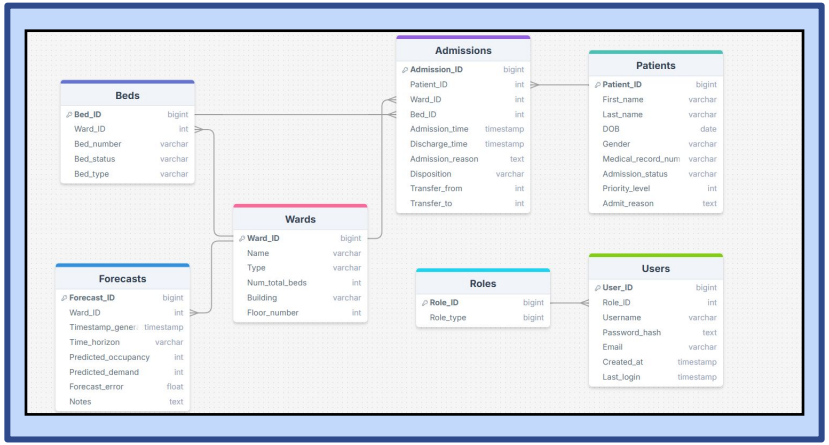
Database Schema and GCP

- Used GCP for live data updates
- Datastream - Change Data Capture (CDC)
- BigQuery - It allows you to store, query, and analyze massive datasets.

```
mysql> USE BedTest;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
mysql> SHOW TABLES;
+------------------+
| Tables_in_BedTest |
+------------------+
| admissions       |
| beds             |
| forecasts        |
| patients         |
| roles            |
| users            |
| wards            |
+------------------+
7 rows in set (0.02 sec)

mysql> DESC beds;
+------------+-----------------+------+-----+---------+----------------+
| Field      | Type            | Null | Key | Default | Extra          |
+------------+-----------------+------+-----+---------+----------------+
| bed_id     | bigint unsigned | NO   | PRI | NULL    | auto_increment |
| ward_id    | int             | YES  |     | NULL    |                |
| bed_number | varchar(20)     | YES  |     | NULL    |                |
| bed_status | varchar(50)     | YES  |     | NULL    |                |
| patient_id | int             | YES  |     | NULL    |                |
| bed_type   | varchar(50)     | YES  |     | NULL    |                |
+------------+-----------------+------+-----+---------+----------------+
6 rows in set (0.02 sec)
```



- SSL/TLS keys for security - 3 keys
  - Server-ca - It's issued by Google Cloud SQL and used to verify the server you're connecting to is genuine.
  - Client-cert - The Client Certificate. Identifies your application (or your backend) as a trusted client.
  - Client-key - A secure key that matches your client certificate.
- Buckets to store data

Beginning Implementation of Front End

capstone-f25-project-repository-group-5 / index.html

goodrist set up basic server and beginning of frontend

Code | Blame | 24 lines (23 loc) · 712 Bytes

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0"/>
  <link rel="stylesheet" href="styles.css" />
  <title>Login</title>
</head>
<body>
  <div class="login-container">
    <div class="logo">
      <img src="logo.png" alt="MED Bed Systems" />
    </div>
    <h2>Please use your credentials to login</h2>
    <form>
      <input type="text" placeholder="User ID" class="input-field" />
      <input type="password" placeholder="Password" class="input-field" />
      <button type="submit" class="login-button">Login</button>
    </form>
    <a href="#" class="forgot-password">Forgot password?</a>
  </div>
</body>
</html>
```

- Local host
- Login page CSS, HTML, server.js