

Business Analyst Project Documentation

Project Name: Smart Medico – Hospital Management Dashboard

Prepared By: Dinesh Sanjay Nikam

Role: Business Analyst

1. Project Charter

Objective:

To conduct a comprehensive Business Analysis for the Hospital Management System by preparing detailed documentation (Project Charter, BRD, FRD, Use Case, ERD, Workflow Diagrams, Data Analysis) and developing an interactive dashboard that consolidates patient, doctor, billing, and payment data, thereby supporting hospital management in faster, accurate, and data-driven decision-making.

Stakeholders:

- Hospital Management
- Finance & Accounts Team
- Doctors & Medical Staff
- IT / BI Development Team

• Scope:

- Visualize KPIs such as Patient
- Count, Doctors, Billing Amount, Paid vs Pending Amount.
- Provide insights into Diseases, Doctor Specializations, and Payment Modes.
- Enable filtering by State, City, Doctor, and Registration Type.
- Enhance decision-making with interactive and real-time data representation.

2. Business Requirement Document (BRD)

Key Business Requirements:

- Hospital administrators should be able to track **total patients, doctors, and billing amounts** in real-time.
- Finance team should view **Pending vs Paid bills** for better collection management.
- Management should analyse **Payment Modes (Cash, Card, UPI, Insurance)** usage.
- Disease trends must be tracked to **predict healthcare resource requirements**.
- Ability to drill down reports by **State, City, Doctor Specialization, and Registration Type**.

3. Functional Requirement Document (FRD)

Functional Components:

- **KPI Cards:**
- Total Patients, Average Age, Total Doctors, Total Amount, Total Paid, Pending Amount.
- **Charts & Visuals:**
- **Doctors by Specialization** → Bar Chart
- **Payment Mode Analysis** → Donut Chart (Alternative: 100% Stacked Bar for better comparison)
- **Disease by Patients** → Line Chart (Trend Analysis)
- **State-wise Billing (Paid, Pending, Total)** → Clustered Bar Chart
- **Filters / Slicers:**
- State, City, Doctor Name, Registration Type
- **Additional Features:**
- Tooltips for extra insights
- Footer: “Powered by Power BI | Designed by Dinesh Nikam”
- Last Refresh Date/Time info

4. Use Case Document

Use Case 1: Track Hospital Performance

- Actor: Hospital Administrator
- Goal: View KPIs and overall hospital statistics
- Output: Instant overview of total patients, doctors, and revenue

Use Case 2: Monitor Pending Payments

- Actor: Finance Manager
- Goal: Identify high pending states and patients
- Output: State-wise Paid vs Pending comparison

Use Case 3: Disease Trend Analysis

- Actor: Medical Director
- Goal: Identify rising diseases (e.g., Diabetes, Cancer, Covid-19)
- Output: Line chart trends for resource allocation

5. Data Requirement Document

- **Data Sources:** Hospital database (SQL)
- **Tables Required:**
- Patient Details (Name, Mobile No, Patient Id, Address, Age, Disease, City, State, Registration ID)
- Doctor Details (Dr Name, Dr id, Dr Mobile No, Department, Specialization)
- Billing Details (Date, Total Bill, Paid Amount, Pending Amount, Payment Mode)
- **Data Refresh:** Daily / Weekly (as per hospital IT policy)

6. System Diagrams & Visual Models

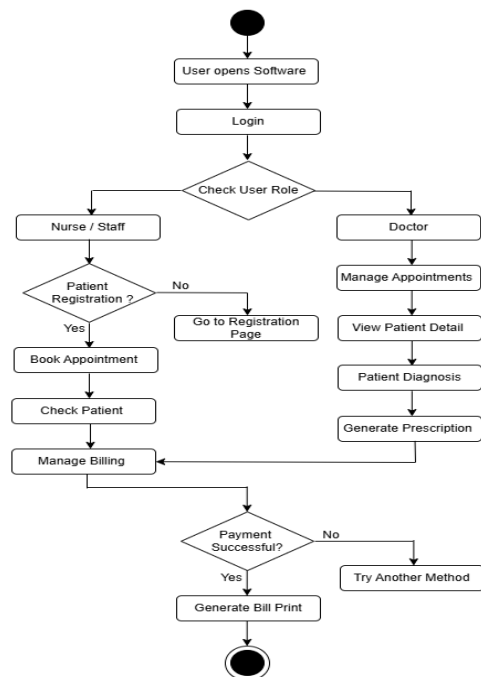


Fig. Activity Diagram

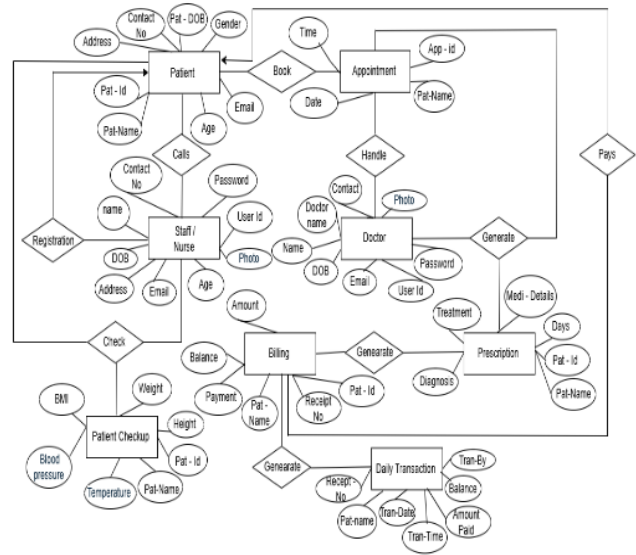


Fig. ERD Diagram

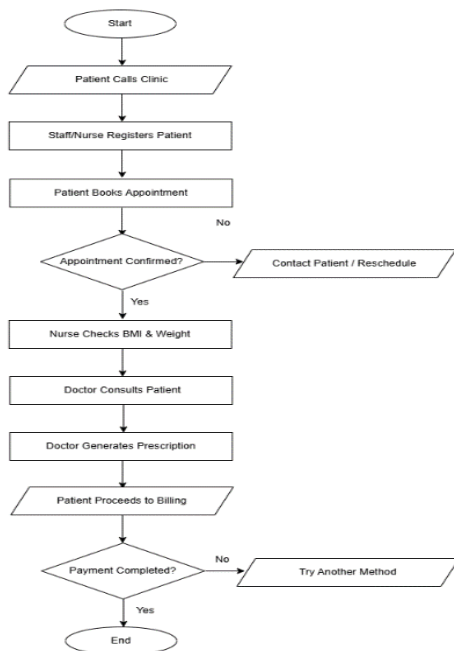


Fig. Flow Chart

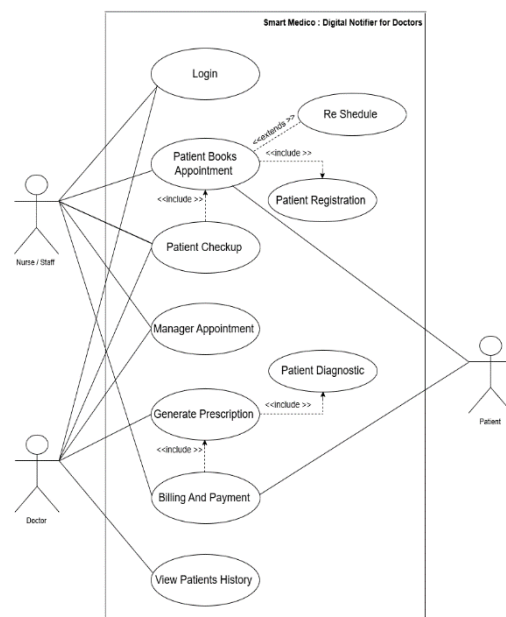


Fig. Use Case Diagram

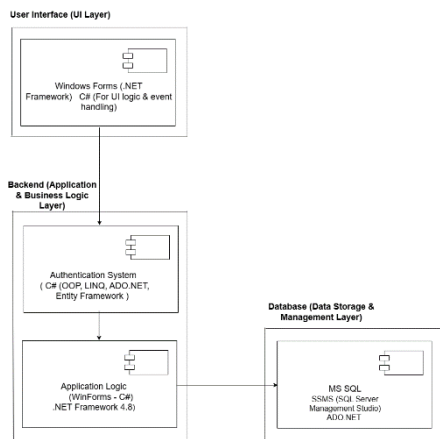


Fig. Component Diagram

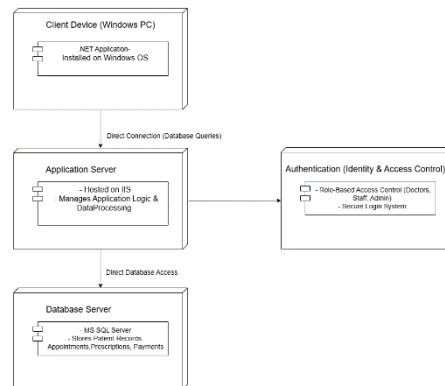
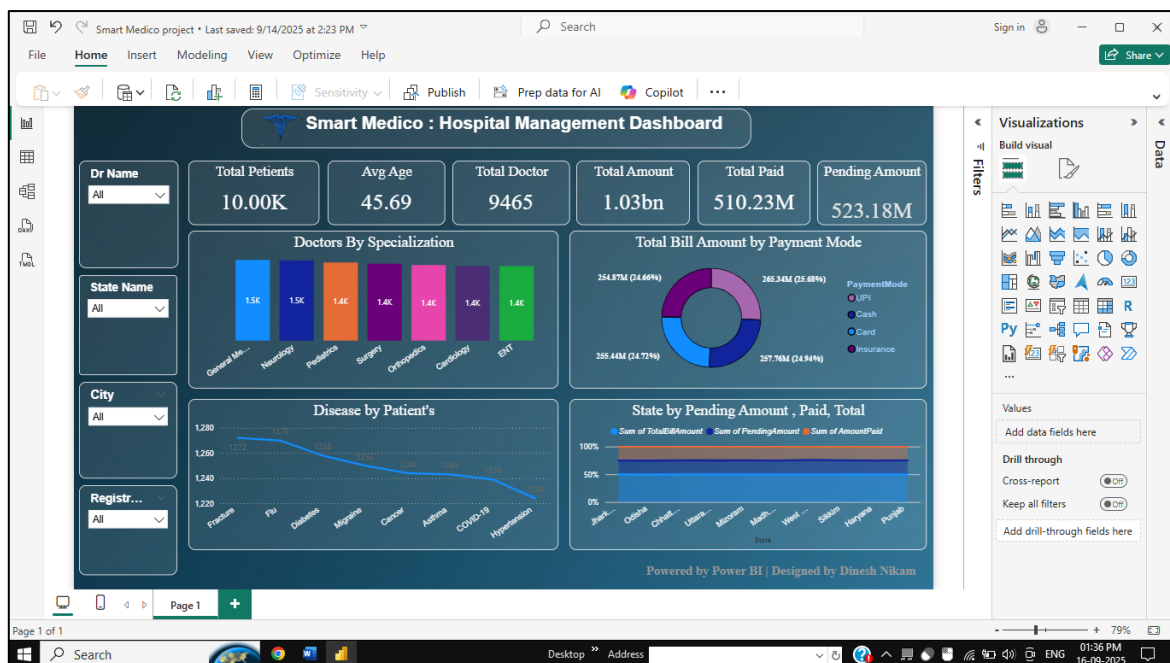


Fig. Deployment Diagram



Dashboard Screenshot

7. Final Deliverables (as a Business Analyst)

- ✓ Business Requirement Document (BRD)
- ✓ Functional Requirement Document (FRD)
- ✓ Use Case Document
- ✓ Data Requirement Document
- ✓ Final Power BI Dashboard (Screenshots attached)