The NorthCap University, Gurugram

REPORT OF PROJECT

FOCP

SECTION:- E

SEMESTER /YEAR :- 1ST

PROJECT NAME :- MEDICARE

SUBMITTED BY:-

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Project Title:-

Medicare Management System

1. Project Overview:-

This project aims to develop a console-based system for managing patient records, doctor information, and appointment scheduling. The system allows registering patients and doctors, scheduling appointments, and maintaining medical history. It is designed to simplify healthcare management tasks through a user-friendly console-based interface.

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2. Objectives:-

1. Register patients and doctors.
2. Schedule and manage appointments efficiently.
3. Maintain patients' medical history.
4. Provide console-based UI forms for registration and scheduling.
5. Display tables for patient and doctor lists.

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3. Functional Requirements:-

Example Structure:

- **User Registration**:
  The system allows users to register new patients and doctors. Information such as names, ID numbers, and contact details will be stored.
- **Appointment Scheduling**:
  Doctors' availability is managed, and appointments can be scheduled, updated, or canceled.
- **Medical History Management**:
  Maintain and update patient medical history with consultation details.
- **Console UI Forms**:
  The system includes console-based forms for easy registration and scheduling.
- **Data Display**:
  Tables to list patient records and doctor details.

4.Non-Functional Requirements:-

- **Performance**: The system should efficiently handle user inputs and display results instantly.
- **Scalability**: It should be capable of managing multiple records simultaneously.
- **Security**: Sensitive patient data will remain confidential.

5.System Architecture Overview:-

The system follows a simple architecture based on structured programming in C language. It includes:

1. **Data Storage**: Arrays or files for storing patient and doctor records.
2. **User Input Handling**: Console-based forms for entering and retrieving data.
3. **Scheduling Module**: Logic for checking doctor availability and scheduling appointments.

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6. Technologies Used:-

- Programming Language: C
- Input/Output: Console-based interaction
- Data Storage: File handling for persistence

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7. Data Requirements:-

- **Patient Records**: Name, ID, age, medical history.
- **Doctor Information**: Name, specialization, availability slots.
- **Appointment Data**: Patient ID, doctor ID, date, and time.

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8. Assumptions and Constraints:-

- Data storage uses text files to maintain records.

- Console-based, no graphical UI.
- Limited to managing basic healthcare data.

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9. Timeline and Milestones:-

1. **Phase 1**: Requirement gathering and system design (Date).
2. **Phase 2**: Development of registration and scheduling modules (Date).
3. **Phase 3**: Testing all functionalities and resolving issues (Date).
4. **Phase 4**: Final submission and presentation (Date).

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10. References:-

1. C Programming Language Documentation.
2. File Handling Techniques in C.
3. c a reference manual by Samuel p
4. online resources

APPENDICES:-

Patient Records Table

Patient ID	Name	Age	Gender	Contact Number	Medical History
P001	John Doe	45	Male	123-456-7890	Diabetes, Hypertension
P002	Jane Smith	30	Female	987-654-3210	None
P003	Michael Brown	50	Male	555-666-7777	Previous Surgery (2018)
P004	Sarah Johnson	25	Female	444-333-2222	Allergies: Penicillin

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Doctor Information Table

Doctor ID	Name	Specialization	Available Slots	Contact Number

Doctor ID	Name	Specialization	Available Slots	Contact Number
D001	Dr. Emily Davis	Cardiologist	Mon, Wed, Fri (10AM-4PM)	123-111-2222
D002	Dr. Mark Wilson	Orthopedic	Tue, Thu (12PM-6PM)	555-888-9999
D003	Dr. Alice Johnson	Dermatologist	Mon-Sat (9AM-3PM)	777-555-4444
D004	Dr. Robert Clark	General Physician	Mon-Fri (8AM-2PM)	999-333-2222
D005	Dr. Olivia Adams	Pediatrician	Mon, Wed, Sat (11AM-5PM)	888-444-7777

Appointment Schedule Table

Appointment ID	Patient ID	Doctor ID	Date	Time	Status
A001	P001	D001	2024-12-20	10:00 AM	Confirmed
A002	P002	D003	2024-12-21	11:30 AM	Confirmed
A003	P003	D002	2024-12-22	01:00 PM	Pending
A004	P004	D004	2024-12-23	09:00 AM	Confirmed
A005	P005	D005	2024-12-24	12:00 PM	Confirmed

These tables represent the following:

1. **Patient Records**: Details of patients registered in the system.
2. **Doctor Information**: Details of doctors, their specialization, and available time slots.
3. **Appointment Schedule**: Scheduled appointments, their statuses, and associated IDs.

Chart of Patients and Doctors:-

DOCTORS

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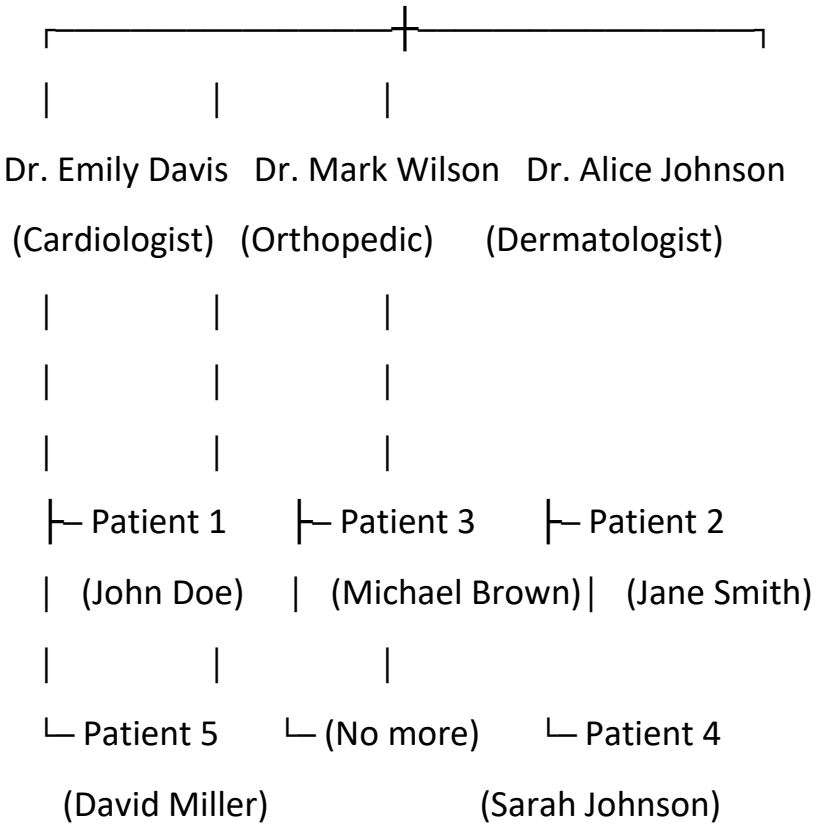
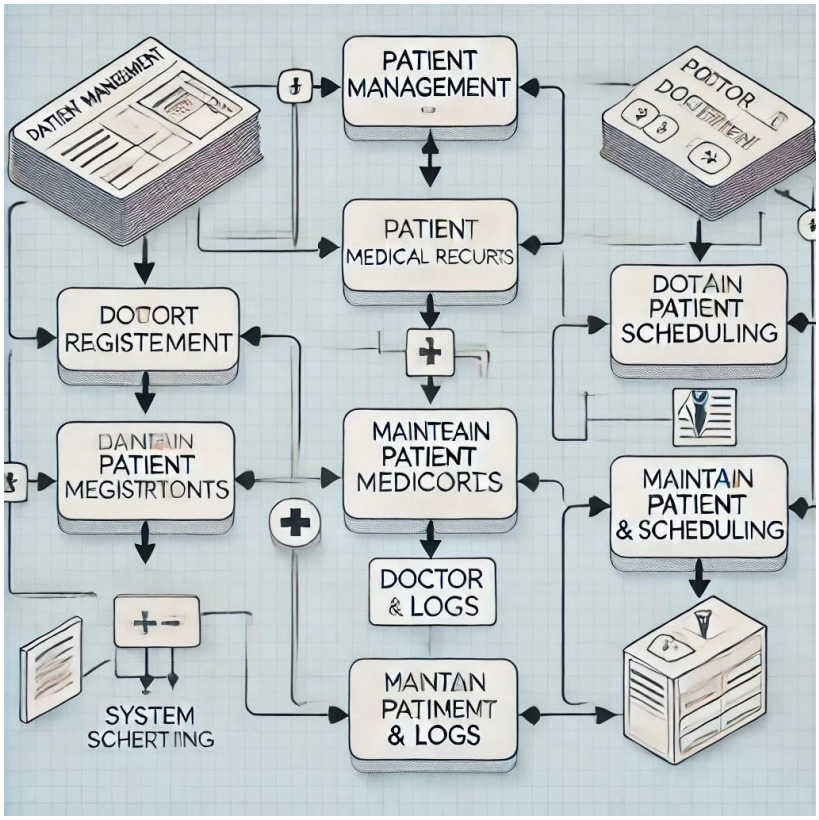


Explanation of the Chart:

1. The **Doctors** are shown at the top, representing their respective specializations.
2. **Patients** are listed below each doctor based on appointments or assignments.
    - For example, **Dr. Emily Davis** has Patient 1 (John Doe) and Patient 5 (David Miller).
    - **Dr. Mark Wilson** has Patient 3 (Michael Brown).
3. This chart can be expanded further with more patients or doctors.



Explanation:

1. **Patient Registration** and **Doctor Registration** are the initial steps where data is entered.
2. **Appointment Scheduling** connects registered patients to doctors based on availability.
3. **Medical Records** maintain patient history.
4. **Doctor Availability & Scheduling** ensures doctors' working slots are managed.
5. A final output layer: **Reports/Logs**, summarizes and manages all data.