Healthcare Management System – Sequence Diagram Documentation

1. Objective

To visualize how patients interact with the system from **registration to result delivery**, showing the **flow of information** between all key participants.

2. Participants and Roles

Participant	Role
Patient	Registers, selects services, and makes payments
Healthcare System	Manages workflow, generates reports, delivers advice
Payment Module	Processes and validates payments
Doctor / Advisor	Performs consultations and prescribes treatment
Checkup / Records	Stores reports, treatment records, and final status

3. Process Flow Overview

1. **Registration & Service Selection**
   Patient provides personal details and selects the required service.
   System records this in the Checkup module.
2. **Report Generation & Advice**
   System generates initial reports and provides guidance to the patient.
3. **Payment**
   Patient makes payment. Payment module validates it, and system confirms success or failure.
4. **Consultation & Treatment**
   System sends patient details and reports to the doctor. Doctor consults the patient and treatment details are stored in the Checkup module.
5. **Final Checkup & Result Delivery**
   System conducts a final checkup and sends results or confirmation to the patient, completing the workflow.

4. Highlights
- Sequential flow ensures each step is completed before the next begins.
- Data moves clearly from patient to system to modules and back.
- All actions are logged in the Checkup module to maintain consistency.
- Focuses on **dynamic interactions**, complementing static ER diagrams.

Healthcare System Sequence Diagram

Patient   Healthcare System   Payment Module   Doctor / Advisor   Checkup / Records

Patient Registration & Service Selection

Patient → Healthcare System: Register & Select Services

Healthcare System → Checkup / Records: Store Patient Details

Report Generation & Advice

Healthcare System → Checkup / Records: Generate Preliminary Report

Checkup / Records ⇢ Healthcare System: Report Ready

Healthcare System → Patient: Show Report

Healthcare System → Patient: Provide Advice

Payment Handling

Patient → Healthcare System: Make Payment

Healthcare System → Payment Module: Validate Payment

Payment Module ⇢ Healthcare System: Payment Status

Healthcare System → Patient: Confirm Payment Success/Failure

Consultation & Treatment

Healthcare System → Doctor / Advisor: Send Patient Details & Reports

Doctor / Advisor ⇢ Healthcare System: Consultation Done / Treatment Plan

Healthcare System → Checkup / Records: Update Treatment Records

Final Checkup & Result

Healthcare System → Checkup / Records: Conduct Final Checkup

Checkup / Records ⇢ Healthcare System: Final Status

Healthcare System → Patient: Send Final Results & Confirmation

Patient   Healthcare System   Payment Module   Doctor / Advisor   Checkup / Records