

Feasibility Study

1. Introduction

The feasibility study examines whether the *HealCare – Online Hospital Management System* can be practically developed, deployed, and maintained within an organizational environment. HealCare integrates multiple hospital operations such as patient registration, appointment booking, medical records, laboratory workflows, pharmacy handling, canteen management, queue tracking, billing, staff interactions, and administrative control.

The feasibility analysis evaluates technical, operational, and economic factors to determine if the system is realistic, viable, and beneficial.

2. Objectives of the Feasibility Study

- To analyze whether HealCare meets hospital requirements and improves current workflow.
- To verify if the system can be implemented with available technologies and resources.
- To check whether HealCare integrates smoothly with pharmacy, laboratory, billing, and administrative units.
- To assess the system's usability for patients, doctors, staff, and administrators.
- To understand cost implications and long-term financial/operational benefits.

3. Information Assessment

During analysis, the following questions are considered:

- What problems do hospitals face without a centralized digital system?
- How will HealCare reduce manual errors, delays, and workload?
- What contribution does HealCare make toward hospital operational goals?
- Can the system securely exchange data between patients, doctors, lab units, canteen, and billing systems?
- Do we need new hardware or advanced technology?

- What processes must be supported immediately, and what can be added later?

Types of Feasibility

Technical Feasibility

This examines whether the technology and resources required for HealCare are available and sufficient.

Findings:

- HealCare can be built using widely supported technologies such as:
 - Web frameworks (HTML,CSS,Javascript)
 - Database systems (MySQL)
 - Cloud hosting platforms
 - Secure authentication modules
 - Role-based access control
 - APIs for pharmacy, lab, and billing integration
- Features like appointment booking, EMR, queue management, and e-prescription can be implemented using established tools.
- Hospital staff, doctors, and patients can access the system through any browser-enabled device.
- No specialized hardware beyond normal hospital computers and internet connectivity is required.

HealCare is Technically Feasible, as all required technologies are mature, stable, and available.

Operational Feasibility

Operational feasibility checks whether the system will work effectively in the real environment and whether users can adopt it easily.

Findings:

- Patients benefit from online appointment booking, digital prescriptions, report downloads, and queue viewing.
- Doctors can view patient history, enter diagnoses, generate e-prescriptions, and monitor treatments.
- Staff can manage reception, pharmacy, labs, billing, canteen orders, and patient assistance from one platform.
- Admins have full control over departments, user roles, analytics, hospital reports, and operational monitoring.
- The system eliminates errors in manual record-keeping and improves workflow speed.
- Training requirements are minimal as the system is user-friendly with intuitive UI screens.

HealCare is Operationally Feasible, as all stakeholders—patients, doctors, staff, and administrators—can comfortably adopt and use the system.

Economic Feasibility

This determines whether the system is cost-effective and beneficial in the long run.

Costs Involved:

- Software development (design, coding, testing)
- Database setup and hosting
- Security implementation and encryption
- Annual maintenance and updates
- Training for staff and administrators
- Hardware/software upgrades if required

Benefits:

- Reduced manual workload and staffing expenses
- Faster patient processing → more daily appointments
- Reduced paper usage (digital reports, prescriptions, bills)
- Error-free medical records → better treatment accuracy
- Improved lab-pharmacy-doctor integration increases efficiency

- Automated billing increases revenue transparency
- Enhanced patient satisfaction leads to higher hospital trust and usage

Conclusion:

HealCare is Economically Feasible, as long-term benefits outweigh implementation costs.

The conducted feasibility study confirms that the **HealCare is technically, operationally, and economically feasible**.