

# **PROJECT PROPOSAL**

## **MEDICO 360 – Complete Healthcare Management System**

### **1. PROJECT OVERVIEW**

MEDICO 360 is a comprehensive healthcare management system designed to digitalize and streamline clinical, administrative, and patient-centric operations of medical facilities such as clinics, hospitals, and diagnostic centers.

The system provides a centralized platform for managing patients, doctors, staff, appointments, billing, pharmacy inventory, reporting, and system security. Additionally, a Patient Application (Web/Mobile-ready) allows patients to interact directly with the healthcare facility.

### **2. OBJECTIVES**

- Automate healthcare operations
- Reduce manual paperwork
- Improve patient experience
- Enhance data accuracy & security
- Provide real-time analytics and reporting
- Enable role-based access for secure operations

### **3. SCOPE OF WORK & DELIVERABLES**

#### **A. Admin Dashboard**

- Centralized system control panel
- User & role management
- System-wide analytics overview
- Permissions & access control

#### **B. Patient Management System**

- Patient registration & profiles
- Medical history & visit records
- Prescription tracking
- Lab reports & documents upload
- Patient status tracking

#### **C. Doctor Management**

- Doctor profiles & specialization
- Availability & schedules
- Appointment access
- Patient consultation records

#### **D. Staff & Employee Management**

- Staff profiles & roles
- Attendance & duty management
- Department assignment

#### **E. Appointment Scheduling**

- Online appointment booking
- Doctor-wise scheduling
- Appointment status updates

- Notifications & reminders

## **F. Billing & Invoicing**

- Automated invoice generation
- Payment tracking
- Service-based billing
- Printable receipts

## **G. Inventory & Pharmacy Management**

- Medicine & stock management
- Expiry alerts
- Supplier records
- Sales & stock reports

## **H. Reports & Analytics**

- Patient reports
- Financial summaries
- Doctor performance reports
- Inventory usage reports

## **I. Role-Based Access Control**

- Admin
- Doctors
- Staff
- Patients
- Secure access per role

## **J. System Security**

- Authentication & authorization
- Encrypted passwords
- Secure APIs
- Data protection measures

## **4. PATIENT APPLICATION (WEB / MOBILE READY)**

- Register & login securely
- Book appointments online
- View appointment history
- Access prescriptions & reports
- View bills & payment history
- Receive notifications & updates
- Manage personal profile
- Responsive & mobile-friendly; mobile-app-ready backend architecture

## **5. PROJECT PHASES (7 PHASE MODEL)**

### **Phase 1: Requirement Analysis & Planning**

- Detailed requirement gathering
- Feature finalization
- Technical planning

### **Phase 2: System Architecture & Database Design**

- Backend architecture planning
- Database schema design
- API structure planning

### **Phase 3: UI/UX Design**

- Admin panel UI
- Patient application UI
- User experience optimization
- Design approval

### **Phase 4: Frontend Development**

- Admin dashboard development
- Patient application frontend
- Responsive UI implementation

### **Phase 5: Backend Development**

- API development
- Authentication & authorization
- Business logic implementation
- Database integration

### **Phase 6: Testing & Quality Assurance**

- Functional testing
- Security testing
- Bug fixing & optimization
- Performance testing

### **Phase 7: Deployment & Final Delivery**

- System deployment
- Final review & approval
- Source code handover
- Documentation & training support

## **6. TOOLS & TECHNOLOGIES**

### **Frontend**

- React.js
- HTML5, CSS3
- Tailwind CSS / Bootstrap

### **Backend**

- Node.js
- Express.js

### **Database**

- MongoDB

### **Authentication & Security**

- JWT (JSON Web Tokens)
- Bcrypt password encryption

Development Tools

- Git & GitHub
- Postman (API testing)
- VS Code

Deployment

- Cloud-based deployment (optional)
- Environment configuration

7. PAYMENT TERMS

- 25% Advance Payment
- 50% After Core System Completion
- 25% After Final Delivery & Deployment

8. PROJECT ASSUMPTIONS

- Content & requirements will be provided timely
- Scope changes may affect timeline & cost
- Hosting & domain are not included

9. CONCLUSION

MEDICO 360 will provide a scalable, secure, and user-friendly healthcare management solution that improves operational efficiency and enhances patient engagement. The system is designed for future expansion, including mobile applications and advanced analytics.

10. PROJECT TIMELINE (2 MONTHS)

Phase	Description	Duration
Phase 1	Requirement Analysis & Planning	Week 1
Phase 2	Architecture & Database Design	Week 2
Phase 3	UI/UX Design	Week 3
Phase 4	Frontend Development	Weeks 4–5
Phase 5	Backend Development	Weeks 5–6
Phase 6	Testing & QA	Week 7
Phase 7	Deployment & Handover	Week 8

11. PROJECT BUDGET

Component	Cost (PKR)
System Design & Planning	30,000
Frontend Development	45,000
Backend Development	55,000
Patient Application	20,000
Testing & Deployment	20,000
TOTAL PROJECT COST	170,000