BAHRIA UNIVERSITY, (Karachi Campus)
Department of Computer Science
PROPOSAL

Course Title: Introduction To Information & Communication Technology Lab

Course Instructor: Muhammad Tariq Siddique   **Course Code:** CSL-114

Lab Instructor: Asarim Aamir   **Date: 13-Dec-2024**

SEMESTER 1	Fall-2024	Class and section:	BS CS 1-B
TITLE OF PROJECT			
HEALTH CARE AUTOMATION SYSTEM			
Group Members			
S#	Student(s) Name		Enrollment Number
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PURPOSE:

This project aims to develop a comprehensive Healthcare Automation System to:

- Minimize manual tasks, enabling healthcare providers to focus more on patient care.
- Enhance the accessibility and usability of medical data for both patients and healthcare providers.
- Provide healthcare administrators with tools for effective resource allocation and financial management.
- Support scalable integration with existing healthcare IT infrastructure.

SCOPE:

The system will encompass:

Medical Documentation and Forms:

1. Creation of standard templates for patient registration, medical history, consent forms, and billing.
2. Ensure compatibility with regulatory standards.

Data Management:

1. Centralized repository for managing patient, staff, and appointment data.
2. Integration with financial records for seamless billing.

Patient Portal:

1. User-friendly interface for online appointment booking and record access.
2. Secure communication between patients and healthcare providers.

Visual Workflow Design:

1. Design workflows for patient intake, scheduling, billing, and medical record management.
2. Optimize storage and retrieval processes.

Implementation Timeline:

1. Structured plan for stepwise system deployment and staff training.

OBJECTIVES:

The primary objectives of the Healthcare Automation System are:

1. **Streamline Administrative Processes:** Automate documentation, appointment scheduling, and data management to reduce administrative burden.
2. **Enhance Patient Experience:** Provide patients with convenient online access to appointments, medical records, and tailored health information.
3. **Improve Data Accuracy:** Centralize and digitize patient, staff, and financial records to minimize errors and enhance decision-making.
4. **Optimize Workflow:** Create efficient workflows for healthcare administrators and staff, reducing redundancies and enhancing collaboration.
5. **Ensure Compliance:** Adhere to healthcare regulations (e.g., HIPAA) to maintain data security and confidentiality.

TASK DISTRIBUTION AND PLATFORMS:

Drafting Medical Forms and Documentation Guides

- **Task:** Create standardized templates for medical forms and documentation.
- **Platform:** Microsoft Word (for drafting), Adobe Acrobat (for creating fillable forms).

System Presentation to Healthcare Administrators

- **Task:** Develop and deliver an engaging presentation outlining the system's features, benefits, and implementation.
- **Platform:** Microsoft PowerPoint.

Analyzing Patient Data and Financial Records

- **Task:** Organize, visualize, and analyze patient demographics, medical histories, and financial data.
- **Platform:** Microsoft Excel (data analysis), Microsoft Access (database management).

Managing Patient, Staff, and Appointment Data

- **Task:** Centralize and organize patient and staff data with scheduling functionalities.
- **Platform:** Microsoft Access (database creation and management).

Designing Patient Information Leaflets

- **Task:** Create informative and visually appealing leaflets tailored to patient needs.
- **Platform:** Adobe InDesign or Microsoft Publisher.

Creating Workflow and Data Storage Diagrams

- **Task:** Design diagrams for patient intake workflows, appointment scheduling, billing processes, and data storage systems.
- **Platform:** Microsoft Visio.

Implementation Timeline

- **Task:** Develop a project timeline with milestones for design, development, testing, and deployment.
- **Platform:** Microsoft Project.

Building the Patient Portal

- **Task:** Develop a secure web-based portal for online appointments, medical record access, and communication.
- **Platform:** HTML and CSS(frontend).

EXPECTED OUTCOME:

- Efficient and transparent healthcare processes.

- Reduced operational costs and time wastage.

- Enhanced patient satisfaction through easy access and improved communication.

"Implementation Timeline"

Phase	Tasks	Duration	Platform
Phase 1: Planning	Documentation drafting, workflow design	2 days	Word, Visio
Phase 2: Design	Leaflets, database, and diagrams	3 days	InDesign, Visio, Access
Phase 3: Development	Build portal and integrate systems	4 days	HTML, CSS, MySQL
Phase 4: Testing	Test portal and database functionality	2 days	N/A
Phase 5: Deployment	Train staff and roll out the system	2 days	PowerPoint, Project

Teacher Signature: _____

Remarks: _____

Submission Date: _____