HOSPITAL MANAGEMENT SYSTEM

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PROBLEM

- A HOSPITAL WITHOUT A MANAGEMENT SYSTEM, HEALTHCARE FACILITIES FACES NUMEROUS CHALLENGES. IT CAN BE RELATED TO DISORGANIZATION, MISSING DOCUMENTS, ERROR IN DELIVERY, CHAOTIC SCHEDULES,AND REDUCE STAFF PRODUCTIVITY.

PLAN OF ACTION

Upgrade the HMS to a modern and flexible software solution to address these limitations. This can help with almost fullproof management to mitigate all errors as best as possible and help with productivity and efficiently organizing all necessary tasks, while helping with easier access to patient files.

AGILE METHODOLOGY

- - ITERATIVE AND FLEXIBLE APPROACH TO SOFTWARE DEVELOPMENT.
- - EMPHASIZES ADAPTIVE PLANNING AND CONTINUOUS IMPROVEMENT, ALLOWING FOR EVOLVING REQUIREMENTS IN THE HEALTHCARE INDUSTRY.
- - DELIVERS WORKING SOFTWARE IN SMALL, INCREMENTAL RELEASES (SPRINTS), ENABLING QUICK FEEDBACK AND ITERATION.
- - PRIORITIZES COLLABORATION BETWEEN STAKEHOLDERS, INCLUDING HOSPITAL STAFF AND PATIENTS, ENSURING THE SYSTEM MEETS THEIR NEEDS EFFECTIVELY.
- - SUPPORTS THE INTEGRATION OF NEW TECHNOLOGIES AND SERVICES, SUCH AS AI, THROUGH INCREMENTAL DEVELOPMENT AND ITERATIVE ENHANCEMENTS.
- - RAPID ADAPTATION TO CHANGING HEALTHCARE NEEDS, AND CONTINUOUS IMPROVEMENT OF PATIENT CARE PROCESSES.

Task	Jana	Rani	Mhmd	Abdallah
Task1	Gather requirements from hospital stakeholders.	Define system functionalities and features based on requirements.	Design database schema to store patient, staff, and facility data.	Research existing hospital management systems and gather insights
Task2	Create project plan and timeline.	Design system architecture considering scalability and security.	Plan data migration strategy if necessary.	Collaborate on designing user interface mockups
Task3	Assign roles and responsibilities to team members.	Develop user authentication and authorization mechanisms.	Set up and configure database management system (DBMS).	Implement core functionalities such as patient registration.
Task4	Coordinate communication between team members and stakeholders.	Implement core functionalities such as appointment scheduling.	Perform database optimization and indexing for efficient queries.	Conduct unit testing for individual system components
Task5	Monitor progress and ensure tasks are completed on schedule.	Conduct unit testing for individual system components.	Back up and restore database regularly to prevent data loss.	Address identified bugs and issues
Task6	Document project milestones, decisions, and changes.	Perform integration testing to ensure different modules work together seamlessly.	Create database documentation including entity-relationship diagrams (ERD) and data dictionary.	Document debugging process and solutions.
Task7	Evaluate project risks and implement mitigation strategies.	Gather feedback from hospital staff and patients for system improvement.	Monitor database performance and troubleshoot any issues.	Optimize code for performance and efficiency.
Task8	Prepare project documentation for final submission.	Finalize system deployment plan and execute deployment.	Implement database security measures to protect sensitive patient information.	Create user manual and documentation.

TASK MANAGEMENT

FEASIBILITY STUDY

- AN **INTERNAL FEASIBILITY** STUDY HIGHLIGHTS THE IMPORTANCE OF IMPLEMENTING A HOSPITAL MANAGEMENT SYSTEM (HMS) TO ENHANCE PATIENT CARE AND OPERATIONAL EFFICIENCY. WITH A FOCUS ON IMPROVING PATIENT ENGAGEMENT, APPOINTMENT SCHEDULING, AND BILLING PROCESSES, THE HMS PROMISES SIGNIFICANT COST SAVINGS AND REVENUE ENHANCEMENT OPPORTUNITIES. HOWEVER, CAREFUL CONSIDERATION MUST BE GIVEN TO RESOURCE AVAILABILITY, INCLUDING SKILLED PERSONNEL AND ADEQUATE INFRASTRUCTURE. WHILE AN HMS CAN IMPROVE HEALTHCARE SERVICE QUALITY, PRIVACY AND ACCESSIBILITY CONCERNS MUST BE ADDRESSED TO PREVENT POTENTIAL DISPARITIES IN HEALTHCARE DELIVERY. OVERALL, SUCCESSFUL IMPLEMENTATION REQUIRES UNDERSTANDING THE PROCESS AND ENGAGING A RELIABLE SOFTWARE DEVELOPMENT PARTNER.
- AN **EXTERNAL FEASIBILITY** STUDY FOR A HOSPITAL MANAGEMENT SYSTEM (HMS) INVOLVES VARIOUS KEY ASPECTS. MARKET FEASIBILITY ENTAILS SURVEYING HEALTHCARE PROFESSIONALS AND PATIENTS TO IDENTIFY DESIRED FEATURES. LEGAL AND REGULATORY COMPLIANCE ENSURES ADHERENCE TO DATA PROTECTION LAWS AND PATIENT PRIVACY REGULATIONS. COMPETITIVE FEASIBILITY ASSESSES THE SYSTEM'S UNIQUE VALUE PROPOSITION AND ITS ALIGNMENT WITH INDUSTRY STANDARDS. MARKETING SUSTAINABILITY INVOLVES ANALYZING MARKET DEMAND AND COMPETITION, WHILE CONSIDERING ENVIRONMENTAL IMPACT AND LEGAL CONSIDERATIONS. ECONOMIC FEASIBILITY EVALUATES DEVELOPMENT AND MAINTENANCE COSTS, POTENTIAL BENEFITS, AND PATIENT REQUIREMENTS, ENCOMPASSING FACTORS LIKE SOFTWARE, HARDWARE, STAFF TRAINING, AND OPERATING EXPENSES.

FUNCTIONAL REQUIREMENTS:

- **DATABASE MANAGEMENT:**
  - REQUIRED PATIENT INFORMATION
  - UPDATING PATIENT'S INFORMATION
- **GENERATING REPORTS:**
  - PATIENT INFORMATION
  - BED AVAILABILITY
- **PATIENT CHECKS:**
  - APPOINTMENT SCHEDULING
  - MEDICAL HISTORY MANAGEMENT
- **STAFF MANAGEMENT:**
  - SCHEDULING AND SHIFT MANAGEMENT
  - TRAINING AND DEVELOPMENT
- **ORDER PROCESSING:**
- **USER INTERFACE:**

NON-FUNCTIONAL REQUIREMENTS:

- **SECURITY:**

  - PATIENT IDENTIFICATION

  -LOGON ID

  -DATABASE MODIFICATIONS

  - FRONT DESK STAFF ACCESS

  -ADMINISTRATOR PRIVILEGES

- **PERFORMANCE:**

  - RESPONSE TIME

  - CAPACITY

  -USER-INTERFACE

- **MAINTAINABILITY:**

  - BACK-UP

  - ERROR TRACKING

- **RELIABILITY:**

  - AVAILABILITY

  - RESILIENCE

- **THANK YOU FOR LISTENING TO MY PRESENTATION.**