BMS INSTITUTE OF TECHNOLOGY & MANAGEMENT
YELAHANKA, BENGALURU - 560064

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

PROJECT BASED LEARNING

Odd Semester - 2021-22

Synopsis of

"HOSPITAL MANAGEMENT SYSTEM"

III Semester

Section B

Submitted By

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2021-2022

INSTITUTE VISION

To emerge as one of the finest technical institutions of higher learning, to develop engineering professionals who are technically competent, ethical and environment friendly for betterment of the society.

INSTITUTE MISSION

Accomplish stimulating learning environment through high quality academic instruction, innovation and industry-institute interface.

DEPARTMENT VISION

To develop technical professionals acquainted with recent trends and technologies of computer science to serve as valuable resource for the nation/society.

DEPARTMENT MISSION

Facilitating and exposing the students to various learning opportunities through dedicated academic teaching, guidance and monitoring.

PROGRAM EDUCATIONAL OBJECTIVES

1. Lead a successful career by designing, analyzing and solving various problems in the field of Computer Science & Engineering.
2. Pursue higher studies for enduring edification.
3. Exhibit professional and team building attitude along with effective communication.
4. Identify and provide solutions for sustainable environmental development.

Program Specific Outcomes (PSOs):

1. Analyze the problem and identify computing requirements appropriate to its solution.
2. Apply design and development principles in the construction of software systems of varying complexity.

Data Structures And Application–18CS32- Course Outcomes (COs) w.r.t this PBL	
CO 1	Implementation of Data structures like Arrays, Stacks, etc.
CO 2	Explain the fundamentals of data structures and their applications essential for problem solving.

Software Engineering– 18CS35 - Course Outcomes (COs) w.r.t this PBL	
CO 1	Illustrate the technique, skill and modern engineering tools necessary for software engineering practices.
CO 2	Apply the software engineering principle and techniques for software development process.

Project to Program Outcomes (PO) Mapping

Project Name: HOSPITAL MANAGEMENT SYSTEM

COURSE	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Software Engineering						✓	✓			✓	✓	✓
Data Structure and Application	✓	✓	✓									✓

Program outcomes (POs):	
PO1	**Engineering knowledge:** Apply the knowledge of Mathematics, Science, Engineering fundamentals and an engineering specialization to the solution of complex engineering problems
PO2	**Problem analysis:** Identify, formulate, review research literature, and analyses complex Engineering problems reaching substantiated conclusions using first principles of mathematics, Natural sciences and engineering sciences
PO3	**Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
PO4	**Conduct investigations of complex problems**: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the Information to provide valid conclusions
PO5	**Modern tool usage**: Create, select, and apply appropriate techniques, resources, and modern Engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.
PO6	**The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO7	**Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for Sustainable development
PO8	**Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
PO9	**Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings
PO10	**Communication:** Communicate effectively on complex engineering activities with the engineering Community and with society at large, such as, being able to comprehend and write effective reports And design documentation, make effective presentations, and give and receive clear instructions.
PO11	**Project management and finance:** Demonstrate knowledge and understanding of the Engineering and management principles and apply these to one's own work, as a member and Leader in a team, to manage projects and in multidisciplinary environments.
PO12	**Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Project to Program Specific Outcomes (PSO) Mapping

Program Specific Outcomes (PSOs):	
PSO1	Analyze the problem and identify computing requirements appropriate to its solution.
PSO2	Apply design and development principles in the construction of software systems of varying complexity.

Project Name: HOSPITAL MANAGEMENT SYSTEM

COURSE	PSO1	PSO2
Software Engineering	✓	✓
Data Structure and Application	✓	✓

Abstract

Hospital Management System brings together all the information and processes of a hospital, in a single platform. The system automatically generates a highly-efficient process and makes it quick. Besides, it also converts all paper works into digital form. Thereby, allowing hospitals to provide quality service in addition to professional medical care. All the activities in the hospital can be recorded systematically in the digital form which helps professionals to keep track of their work.

This project Hospital Management system includes registration of patients, storing their details into the system, and also computerized billing in the pharmacy, and labs. It includes a search facility to know the current status of each patient. Only they can add data into the database. The data can be retrieved easily. The data can be retrieved easy and makes the data processing very fast.

Introduction

Hospital management system (HMS) is a computer system that helps manage the information related to health care and aids in the job completion of health care providers effectively. HMS provides the ability to manage all the paperwork in one place, reducing the work of staff in arranging and analyzing the paperwork of the patients. The main advantage of this hospital information management system is it eliminates the risk of "lost files". A hospital information management system reduces labor and seamlessly manages patient data. In this project of HMS, we can add a new patient, search for the details, edit the details and delete the patient records.

Some advantages of HMS are as follows:

- Time-saving Technology
- Improved Efficiency by avoiding human errors
- Reduces scope for Error
- Cost effective and easily manageable
- Easy access to patient data with correct patient history
- Easy monitoring of supplies in inventory
- Reduces the work of documentation

Motivation

This project gives us the scope of improving our skill and knowledge. It also opened doors to think out of box. It helps us to use our creativity. The aspects of team and resource management also give us the motivation to build a better project while reaching our goal with at most perfection. Challenges are also a motivation to choosing of this project, resulting in satisfaction. Self-development, self-actualization and ability to work in a team are non-technical skills we will be better at by the end of the project. Time management is another key skill we will be seeing to improve.

Existing System and its Limitations

Hospitals currently use a manual system for the management and maintenance of critical information. The current system requires numerous paper forms, with data stores spread throughout the hospital management infrastructure. Often information (on forms) is incomplete, or does not follow management standards. Forms are often lost in transit between departments requiring a comprehensive auditing process to ensure that no vital information is lost. Multiple copies of the same information exist in the hospital and may lead to inconsistencies in data in various data stores and few technical challenges that fail the implementation of HMS in the healthcare industry includes Networks and computer have different maintenance problems, lack of no standards for Data entry and data retrieval, difficulties in training users technically to use HMS.

Proposed System

The Hospital Management System (HMS) is designed for Any Hospital to replace their existing manual, paper-based system. The new system is to control the following information:

Patient information, Deletion of old patient record, Editing of existing patient records and Outpatient summary. These services are to be provided in an efficient, cost effective manner, with the goal of reducing the time and resources currently required for such tasks.

System Requirement Specification

This software requirement for this project includes Windows 7 operation system or later (64 bit) and a Disk space of 3GB and some applications like VMWARE Player, a compiler like GCC, Turbo C, a text editor like Code blocks. The Programming Language used is C.

Methodology

The project uses iterative and waterfall model and follows software engineering ethics and methods. Data structures like arrays, structures etc are used to create, insert, delete and update on the arrival of a necessity.

The user can perform add patient details by entering his/her name, disease name, phone number, cabin number, etc. The user can also view all the available patient records. Such as details and search a patient by its name, age, disease, cabin number. Besides, the user can edit information as well as remove a patient's whole date or only his/her name, phone number, disease name, cabin number.

References

1. https://itsourcecode.com/free-projects/c-projects/simple-hospital-management-system-in-c-with-source-code/
2. https://mocdoc.in/blog/a-detailed-view-of-hospital-management-system-hms
3. https://medium.com/the-mission/10-reasons-a-guide-for-why-we-do-what-we-do-90f42877d5bf
4. https://www.yourarticlelibrary.com/project-reports/project-report-on-motivation-of-employees/85048
5. https://dl.acm.org/doi/book/10.5555/2208089
6. https://www.scribd.com/doc/49588162/Hospital-Management-System-abstract
7. https://itsourcecode.com/fyp/hospital-management-system-project-report-documentations-pdf/