**CHAPTER ONE**

**1.0 INTRODUCTION**

The college management system is developed by using the Web Application. The main aim of this project is to develop web application which covers all the details of college like student profile, teacher profile, student profile, notice, student attendance, feedback. All the data related to college, staff and student is securely stored on database which is managed by the college administrator. The system utilizes the authentication, each sub activity has authentication allowing the authorized users to login in the system to create or update information in the particular activity. The staff can submit request for the leave thus reducing the processing time. The application reduced the time needed to access and delivers the student records to users. College Management system is integrated web application that handles various academic or non-academic activities of college. The system can access by every students/faculties/employee of the college through internet mobiles with their username and password. Every user in college management system home page with their respective levels like student has the different level and teacher has the different level. Through that displayed menu user can access the different option of the application assigned him. The system college management system can be used to manage data of all type of education institute. It will support both stand alone and also networking environment. The application reduces as much as possible to avoid error while entering the data. No formal knowledge is needed for the user to use this application. Thus, it provides user-friendly environment for everyone.

**1.1 BACKGROUND OF STUDY**

This project deals with the various functioning in College management process. The main idea is to implement a proper process to system. .In our existing system contains a many operations registration, student search, fees, attendance, exam records, performance of the student etc. All these activity takeout manually by administrator.

In our model, it deals with the Operations in system. For example, when students fill the registration form the record is stored in the database. And display the details of student are perform by retrieving information from database table.

**1.2 STATEMENT OF PROBLEM**

We identify several problems including unauthorized privilege escalation, incorrect use of cryptography, vulnerabilities to network threats, and poor software development processes. We show that only college administrator can start the system. Administrator can search the particular student by his/her enrollment number or student dandy we are adding notification module where administrator should add the notification with start and end date.

**1.3 PURPOSE OF STUDY**

The proposed system for college information system is fully an automated one. In this system, we are using MySql database for Admin side to maintain the student details. Admin can register the student details and requirements such as attendance, exam details are added into the database. This centralized one, by which the data server updates the each and every detail; the coordination between server and client becomes much easier. The system provides high security for all its data. Server can update or delete student information. In server side, easily add the details about attendance, exam schedule, exam results and grade details. Server easily updates each and every student’s details. The system architecture has a smart phone with android OS, a web services, a database server and the user as its components. The android smart phone or tablet must use 3G or Wi-Fi network for internet connectivity to ensure better performance however 2G should also satisfy user request with added disadvantage of time lag.

**1.4 SIGNIFICANCE OF THE STUDY**

The importance of this study (COLLEGE MANAGEMENT SYSTEM) is based on transaction changes in the operation, the cost of executing some other operations, their functions and their benefits.

**1.5 LIMITATIONS AND CONSTRAINTS OF STUDY**

Whenever a new system (a hardware or software) is to be introduced, there is a need to study the new system in every aspect or manner before working on it. We get the idea whether the project is adequate or not.

**The feasibility study on three major questions:**

* Does the candidate system meet the user requirement?
* Is the problem worth solving?

**1.6 DEFINITION OF TERMS**

**COMPUTER**: This is an electro-mechanical device that is capable of accepting data as inputs, stores it, processes the data and outputs it as result or information.

**DATA**: Data are raw facts which undergo processing and become information. They are also the simplest unit of information that can stand on its own.

**DIGITAL CERTIFICATE**: It is a certificate that enables a merchant to do on-line business and it is been issued by a corporate body.

**HYPERTEXT DOCUMENTS**: They are documents written with HTML, ASP, ASP.NET, PHP, JAVA SCRIPT PAGES (JSP), CODE FUSION, and PROGRAMMING LANGUAGES.

**INTERNET**: It is an interaction of computer networks connecting other networks from computers, companies, houses etc. ISP: (Internet Service Provider): This is a company(s) that provides internet access to homes or business users.

**MY SQL:** This is relational database server that is ideal for both small and large applications.

ON-LINE BOOKSHOP: It is representation of material or real bookshop on the internet or on the web.

**PHP (HYPERTEXT PRE-PROCESSOR):** This is a powerful server side scripting language for creating dynamic and interactive website.

**PROGRAM:** A program is a sequence of instructions written in a computer to execute a certain task and solve a problem. A program must possess clarity, be specific, effective and user friendly.

**WWW** (World Wide Web): It is a multimedia interface that connects us to resources such as documents, e-mails, chat, web sites that are available on the internet with the computer.

**CHAPTER TWO**

**2.0 INTRODUCTION**

College management system (CMS) provides a simple interface for maintenance of student information. It can be used by educational institute or colleges to maintain the records of students easily. The creation and management of accurate, up-to-date information regarding a students’ academic career is critically important in the university as well as colleges. Student information system deals with all kinds of student details, academic related reports, college details, course details, curriculum, batch details, placement details and other resource related details too. It will also have faculty details, batch execution details, student’s details in all aspects.

**2.1 TECHNICAL, ECONOMICALLY & OPERATIONAL FEASIBILITY**

1. **Financial feasibility:**

Financial feasibility refers to financial support required. It refers to finance incurred during the development of the project.

1. **Technical feasibility:**

Technical feasibility refers to technical knowhow and auxiliary devices required.

1. **Behavioral feasibility:**

Refers to reaction of the people towards the project.

1. **Operational feasibility:**

Operational feasibility means is it possible to practically implement the project. While installing this software, the hardware and software requirements should be specified.

* 1. **FEASIBILITY GAINEED BY THE SYSTEM**

**Technical Feasibility**

Since the project will be implemented JavaScript and PHP, so we need to have a strong base in programming. A computer with necessary installation is required.

**Economical Feasibility**

To implement the system we require more than one computer. Since the system will be implemented in existing environment there will be no need to buy the computers. The system is economically feasible to implement.

**Operational Feasibility**

The system will be easy to install and use. Hence the system is operationally feasible.

**Cost-Benefit Analysis**

The cost incurred by the system includes only the software cost and cost of the computer needed to run the project. The benefits incurred by the system will include.

**2.2.1 CONCEPT OF COMPUTER NETWORKING AND THE INTERNET**

According to Microsoft Encarta premium (2022), computer networking is simply a system used in linking two or more computers. Networking itself is a group of connected computers that allow people share information and equipment. Computer networking uses a communication link or node through which the E-mails, files resources and other applications are sent and received. A computer system and a printer can both serve as communication links in a network. However, there are other devices. It has layers, and criteria, parts and connection types, topology and types of networks, network peripherals and at areas of applications. All these a computer networking process must pass through to ensure effective on-line business. Networks are specified through broad and narrow definitions. The broad definition considers an on-line transaction to be the sale or purchase of goods or services either between businesses, households, individuals, government, and other private or public organizations. The role of networking in on-line book shopping is that of conveying, providing computer system and other resources and connecting them for the on-line transactions. The internet on the other hand is a computer based global information

system. It is composed of many interconnected computer networks. Each network may link tens, hundreds or even more. The satellite systems are vital tools/equipments in internet computer network. Its role is of paramount importance. It includes advertising the books selling, buying delivery and providing other customer services. Meanwhile, the narrow definitions of Batty J.B and Lee R.M (2022) have it that internet transaction (on-line shopping) to the sale or purchase of goods and services whether between businesses; households’ individual’s governments and other public or private organizations are conducted over the internet. The goods and services are ordered over the internet, but the payment and the ultimate delivery of goods or services may be conducted on or off line.

**2.2.2 INTERNET ACCESS**

According to Microsoft Encarta premium (2021) Internet Access technological refers to the communication between residences or a business and the ISP (internet services provider) that connects them to the internet. They are of three types namely; dedicated, dial up and wireless internet access. It is therefore the communication that is going to exist between the customer, the ISP and the bookshop through the internet. It is all about the easy accessibility the customers will enjoy.

**2.2.3 THE CONCEPT OF INTERNET GATEWAYS**

The computer system hardware contains software that connects networks that use different protocols (the rules the hardware components and the software components use to communicate) or that transfers data between two incompatible applications on a network. It reformats data so that it is acceptable to the receiving network application. The term internet gateway is usually used to describe any computer that transfers data from one computer system to another.

**2.2.4 THE WORLD WIDE WEB AND ITS BENEFITS**

This is the multimedia interface that connects us to resources or the customers to the documents, goods, services, e-mails, chats about the books and other websites available on the internet. The World Wide Web which is abbreviated www is the window from which we see the information in the internet. It all began in 1992, prior to it, the internet was just an ordinary text, documents without pictures, sounds or video, it is through the website that we will carry out the on-line book shopping. The benefits accruing from the use of the World Wide Web are so numerous. To mention but a few, the ease it has given to people to send and receive messages to study and even purchase goods on-line and to know and see things and other people in other parts of the world.

**CHAPTER THREE**

**3.0 INTRODUCTION**

After analyzing the requirements of the task to be performed, the next step is to analyze the problem and understand its context. The first activity in the phase is studying the existing system and other is to understand the requirements and domain of the new system. Both the activities are equally important, but the first activity serves as a basis of giving the functional specifications and then successful design of the proposed system. Understanding the properties and requirements of a new system is more difficult and requires creative thinking and understanding of existing running system is also difficult, improper understanding of present system can lead diversion from solution.

The main function of the **analysis phase** is to look carefully at the requested features with an eye towards the issue that each may create in the actual coding. This phase is the time during which reasonably deliverable thoughts of each module can decide.

**User Requirements:**

The following requirements are raised during the analysis of the needs of the users:

* A Person Should be able to login to the system through the first page of the application.
* The Administrator can create users as per user requirement.
* A general user will have access to see the status of particular [Student ID number].
* Student (user) can use all the facilities, same as which are provided to him/her in the college.
* Student can see attendance, notices, grades, report and other facilities in updated manner.
* There will be a separate page for every student as his account in which he can get notices, attendance, grades, assignments etc.
* Faculty can give the attendances and notices for the students.
* The administrator verifies all these reports and generates them for users to view them.

**3.1 METHODOLOGY**

The first phase of software project is to gather requirements .Gathering software requirements begins as a creative brainstorming process in which the goal is to develop an idea for a new and modules that no other software vendor has thought. New software modules ideas normally developed as a result of analyzing the project The main function of requirements gathering phase is to take an abstract idea that fills a particular needs or that solves a particular problems and create a real world project with a particular sets of objectives, timeline and team. The main function of the analysis phase is to look carefully at the requested features with an eye towards the issue that each may create in the actual coding. This phase is the time during which reasonably deliverable thoughts of each team member can decide.

**3.2 LITERATURE REVIEW**

In 2023, “College Management System”, Srikant Patnaik, Khushboo Kumari Singh, Rashmi Ranjan and Niki Kumari have established College management system assists in modifying the existing system to site-based system. This is a paperless work. It can be monitored and controlled remotely. It reduces the manpower required. It provides accurate information always. Malpractice can be reduced. All gathered and extra information can be saved and can be accessed at any time. The data which is stored in the project helps in taking intelligent and quick decisions by the management. So, it is better to have a Web-Based Information Management system. All the stakeholders, staff members can get the desired information without delay. This system is essential in the colleges/hostels and universities.

In 2022, “College Management System”, Shike Sahiba, A.N. Ramamani have introduced Web Application for College Management and Time Table Generation System is software developed for students, staff’s daily timetable and director’s schedule, invigilation’s in collages. It facilitates to access particular timetable for students, staff and invigilation slots, including director’s schedule to conduct meetings. The information is sorted by the operators on user’s request. By just a click on the mouse, the system will be able to produce the users’ optima schedule report thus reducing the need for manual work which is prone to human errors and time consuming.

In 2021, “Leave Management System”, Kartika Dattarkar, Neha Hajar proposed system with Application Online College Management System (OCMS) provides a simple interface for maintenance of student information. It can be used by educational institutes or colleges to maintain the records of students easily. The creation and management of accurate, up-to-date information regarding a students’ academic career is critically important in the university as well as colleges. Student information system deals with all kind of student details, academic related reports, college details, course details, curriculum, batch details, placement details and other resource related details too. It will also have faculty details, batch execution details, students’ details in all aspects, the various academic notifications to the staff and students updated by the college administration. It also facilitate us explore all the activities happening in the college, Different reports and Queries can be generated based on vast options related to students, batch, course, faculty, exams, semesters, certification and even for the entire college The placement officer is responsible for updating the placement related information like eligible criteria for a particular company, arriving date for the company which is coming for recruitment, the list of students who are eligible for attending the recruitment process. ELibrary (also referred to as digital library) is a special library with a focused collection of digital objects.

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| --- | --- | --- |
| **Year** | **Author** | **Name of Paper** |
| 2023 | Srikant Patnaik, Khushboo, Nikki Kumari. | College Management System |
| 2022 | Kartiki Datarkar, Neha Hajar, Nidhi | Online College Management System |
| 2021 | Sheke sabina, A.N.ramamani | College Management and Time Table Generation System |

**Table 1:** A Comparative Study of Various Literature Paper

* 1. **SYSTEM ARCHITECTURE**

There are three functional component of this system i.e. the admin, the student and the employee. Both employee and student need to login in order to access the information. In this system admin has highest priority. Main functionality of admin is to add the employee and manage the database dashboard. Admin gives the login credential to the employee. Main functionality of student is to register the account and login into system. After the login student has the various menus to do the task related their profile like view notification, view assignment, views their progress. Employee module has further divided into sub-modules the main functionality of employee module is login to system and do the task related their profile like teacher profile has task related teaching while HOD profile has task related department and so on.

**3.4. MODULES**

**1. Admin Module -:** This is the main module in college management system. It plays very important role in the college management system. This module contains the main registration part of the employee in the college system. This is main task in system because it is necessary to maintain the security. Admin create the accounts of employee. These accounts created are stored according to their department and designation. Admin have the highest priority in college management system. Admin have the all access of the database. They have permission like view the information, edit the information, delete the information etc.

**2. Employee Module -:** The registration part of employee in college management system done by the admin. This module only contains the login part with their email id and password that are provided by admin. The system has facility to forgot their password. This module is further divided into sub-module with their designation of employee in college. The sub-module are as follows:

**a. Teacher Module -:** After the login they have different sections like profile section, assignment section, notification section, leave section and attendance section. Teacher can upload the assignments or delete the assignments. Also, they take the attendance of student of particular class. They give the notification to the student related to department or college. Whenever they need a leave, they give the leave application to head of department.

**b. HOD Module -:** After the login the head of department contains the same options like teacher module along with that, they contain extra options because they play both roles as a teacher and as a HOD. The extra options are like manage the record of department, manage the timetable of classes, accept the leave application from teachers and send to the principle for approving.

**3.5 FRONT END - BACK END CONNECTIVITY**

**FRONT END**

1. HTML/CSS offers several benefits to the developer creating front end application for database server.
2. JavaScript is platform independent language hence can be executed on architecture that support on DOM (Document Object Model).

**MYSQL-BACK END**

Databases are the systems that contain many different objects used together to facilitate fast and efficient access to the data.

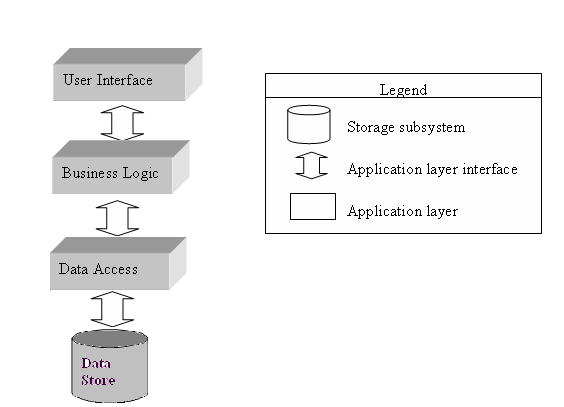
**MySQL** is an application program interface form Microsoft that lets a programmer writing Windows applications; get access to a relational as well as non-relational database from both Microsoft and other database providers.

**Setting up MySQL Control:**

First step to use the MySQL in project is to add the MySQL Data Control to the form. The setting up of MySQL Data Control involves first few steps:

* Connecting to a data source and,
* Specifying a command to gain access to the data source.
* Executing the command.
* Storing the rows in a cache i.e., the Record set.
  + 1. **LOGICAL VIEW**

It provides the user with an abstract view of the overall system functionality.

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**Figure 1:** Abstract view of CMS (College Management System)

* + 1. **EVALUATION OF GOOD DESIGN SOFTWARE (LIFE CYCLE MODEL)**

**System Definition**

**Scope and Boundaries**

Scope of this system can be described as follows:-

* It is a standalone module, available for desktop application used by computer

Administrator to store student’s data.

* The storing and retrieval of data is quick
* It is an offline application.
* Access is given to only authorize person and no other person can access this

software.

* Data security is maintained properly by authentication of users.
* Large amount of data can be processed quickly with ease

**USER VIEW**

* **Admin:** It is the administrator account having rights to govern wholesoftware. He can create and delete student and details ,create and change password, he also have rights to add and delete record, various criteria and notification.
* **User:** users are having only read permission; user type can only see his details, he will not be able to manipulate or change any information, it also have same privileges as that of admin.
  + 1. **CONTEXT LEVEL DFD**

**CMS**

**Student**

**admin**

**CMS**

**3.5.4 LEVEL- 1 DFD**

**Help**

**Notification**

**Login**

**Student Search**

**Registration**

**Performance**

**Fees**

**Attendance**

**3.5.5 LEVEL- 2 DFD**

**Level -2**

**Notification**

**Home Page**

**Performance**

**Attendance**

**Login**

**Registration**

**Admin**

**Help**

**Student Search**

**Fees**

**Data Base**

**3.5.6 ENTITY RELATIONSHIP DIAGRAM**

Student\_details

Provides

Registration

Successful search

se

profile

notification

Provides

Attendance

Provides

Student Search

login

Admin

**3.5.7 EXPECTED RESULTS**

**Login:**

The login page only used by the authority or admin.

**Admission:**

The admission form can be filled by the student who wants to register him/herself. And after admission complete, the details can be stored in database.

**Student Search:**

The student search form is only designed for the searching particular student or details about the student.

**Fees:**

The fees module only accessible for the admin .The details about the fees detail is contain in this module.

**Attendance:**

This module displays the attendance record of the student and also displays the defaulter’s list.

**Notification:**

Notification module only used for adding notification, start date and time. This is acts as a small alarm system for any task i.e. submission, examination time- table etc.

**Help:**

The help can be provided any application help.

|  |  |
| --- | --- |
| **Table name** | **Purpose** |
| 1.admin | Admin table contain password and user name field. |
| 2.admission | Admission table contain student details like name, dob, address etc. |
| 3.notification | Notification table contain notification detail. |
| 4.performance | Performance table contain the performance details about the student. |
| 5.student table | Student table holds the student id. |
| 6.fees | Fees table contain the fees details of the students. |

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