



# “COLLEGE MANAGEMENT SYSTEM”

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## **ABSTRACT**

Maintaining records of application for estates, the manual system is too complex and cumbersome. Since time and resources available we have been proposed to develop an inventory system.

The entire outset the application requirements were studied and analysis and design were carried out. The development platform and software tool were identified as Core Java and MS Access database. Using Java programming, object are manipulated directly and also due to the feature of fast and easy prototyping and GUI building Java as used.

In the system analysis and design part, data is processed using query techniques and study of the existing system.

During the development phase various option are developed like menu bar. Menu, report generation, utility etc.

The detail of the programming steps followed and important clauses incorporated in the screen are described in documents.

## INTRODUCTION

### INTRODUCTION AND OBJECTIVE OF THE PROJECT

This system provides the detail structure of the college campus and its departments. **College Management System** synchronizes the working of all the departments. It looks on all aspects of a college, its students, faculties, Departments, marks and other co – curricular activities.

CMS is the easiest way to manage all functionalities of a college. It is a value-added service offered by Neural, which facilitates colleges to maintain the functionality related to college employees and their students.

College Management Software is a simple yet powerful one joint integrated platform that connects all the various departments of an institution like Administration, Attendance, Staff details and many more specialized modules.

### OBJECTIVE OF THE PROJECT

Main aim in developing “**College Management System**” is to provide an easy way not only to automate all functionalities of a college, but also to provide full functional reports to top management of college with the finest of details about any aspect of college.

College Management System is software has the perspective of attaining attraction of those colleges which don't have one good performing software for keeping their information secure and make their management easier. College Management System provides one attractive environment where you can manipulate data and information about students and staff easily. So we can say the Core purpose of designing “**College Management System**” is to manage the task related to the college students/employees and to reduce time to searching of appropriate candidates in college view.

### ADVANTAGES

- Our project provides secure access of confidential data.
- It becomes easy to manage the records.
- Provide managed authority control.
- Availability of data on a click.

### CURRENT SYSTEM

College management software is prepared to maintain the day to day operations in a leading college. This software helps them to maintain the student and employee records. So the maintain becomes easier.

This is of generic type software, suitable to all colleges. This software has all the modules to manage college

transactions. Separate division is provided to maintain admission process. Student management, Employee management etc. At present in colleges all records maintained manually. There are thousands of students joining each year. As the year's goes then number of students also get increases, for the staff to maintain all these students' records is very tedious and time consuming. Update fee, test marks, test result all these need to be done in time to achieve college management need to be recruit more peoples. To solve this problem this project is prepared which help the management to maintain the records accurately.

## **FEATURES OF JAVA:-**

### **Simple**

Java was designed to be easy for the Professional programmer to learn and to use effectively. If you are an experienced C++ Programmer. Learning Java will oriented features of C++. Most of the confusing concepts from C++ are either left out of Java or implemented in a cleaner, more approachable manner. In Java there are a small number of clearly defined ways to accomplish a given task.

### **OBJECT-ORIENTED**

Java was not designed to be source-code compatible with any other language. This allowed the java team the freedom to design with a blank state. One outcome of this was a clean usable, pragmatic approach to objects. The object model in java is simple and easy to extend, while simple types, such as integers, are kept as high-performance non-objects.

Many of java's object-oriented concepts are inherited from c++, the language on which it is based, but it borrows many concepts from other object-oriented languages as well. Like most object-oriented programming languages, java includes a set of class libraries that provide basic data types, system input and output capabilities, and other utility functions. These basic classes are part of the java development kit, which also has classes to support networking, common internet protocols and user interface toolkit functions. Because these class libraries are written in java, they are portable across platforms as all java applications are.

## **JAVA ARCHITECTURE**

Java architecture provides a portable, robust, high performing environment for development. Java provides portability by compiling the byte codes for the Java Virtual Machine, which is then interpreted on each platform by the run-time environment. Java is a dynamic system, able to load code when needed from a machine in the same room or across the planet.

## Compilation of code

When you compile the code, the Java compiler creates machine code (called byte code) for a hypothetical machine called Java Virtual Machine (JVM). The JVM is supposed to execute the byte code. The JVM is created for overcoming the issue of portability. The code is written and compiled for one machine and interpreted on all machines. This machine is called Java Virtual Machine.

## E – R DIAGRAMS

- The relation upon the system is structure through a conceptual ER-Diagram, which not only specifies the existential entities but also the standard relations through which the system exists and the cardinalities that are necessary for the system state to continue.
- The Entity Relationship Diagram (ERD) depicts the relationship between the data objects. The ERD is the notation that is used to conduct the data modelling activity. The attributes of each data object noted in the ERD can be described using a data object description.
- The set of primary components that are identified by the ERD are
  - Data object
  - Relationships
  - Attributes
  - Various types of indicators.

The primary purpose of the ERD is to represent data objects and their relationships.

## DATA FLOW DIAGRAMS

A data flow diagram is a graphical tool used to describe and analyze the movement of data through a system. These are the central tool and the basis from which the other components are developed. The transformation of data from input to output, through processing, may be described logically and independently of physical components associated with the system. These are known as the logical data flow diagrams. The physical data flow diagrams show the actual implementation and movement of data between people, departments and workstations. A full description of a system actually consists of a set of data flow diagrams. The development of DFD'S is done in several levels. Each process in lower level diagrams can be broken down into a more detailed DFD in the next level. The top-level diagram is often called context diagram. It consists of a single process bit, which plays a vital role in studying the current system. The process in the context level diagram is exploded into other processes at the first level DFD.

## FUTURE ENHANCEMENTS

It is not possible to develop a system that makes all the requirements of the user. User requirements keep changing as the system is being used. Some of the future enhancements that can be done to this system are:

- As the technology emerges, it is possible to upgrade the system and can be adaptable to desired environment.
- Because it is based on object-oriented design, any further changes can be easily adaptable.
- Based on the future security issues, security can be improved using emerging technologies.

## CONCLUSION

This Desktop application provides easy way to manage Inventory. This application developed is designed in such a way that any further enhancements can be done with ease.

This application is going to be used for our college to easily manage document. So, we are happy to develop this desktop application as it provides all the requirements of our college.

## REFERENCE

The project is identified by the merits of the system offered to the user. The merits of this project are as follows: -

- Sometimes the user finds in the later stages of using project that he needs to update some of the information that he entered earlier. There are options for him by which he can update the records. Moreover there is restriction for his that he cannot change the primary data field. This keeps the validity of the data to longer extent.
- User is provided the option of monitoring the records he entered earlier. He can see the desired records with the variety of options provided by him.
- From every part of the project the user is provided with the links through framing so that he can go from one option of the project to other as per the requirement. This is bound to be simple and very friendly as per the user is concerned. That is, we can say that the project is user friendly which is one of the primary concerns of any good project.
- Data storage and retrieval will become faster and easier to maintain because data is stored in a systematic manner and in a single database.
- Decision making process would be greatly enhanced because of faster processing of information since data collection from information available on computer takes much less time than manual system.
- Allocating of sample results becomes much faster because at a time the user can see the records of last years.
- Easier and faster data transfer through latest technology associated with the computer and communication.
- Through these features it will increase the efficiency, accuracy and transparency.