COLLEGE MANAGEMENT SYSTEM

Submitted in partial fulfilment of the requirements for the award of degree of

**BACHELOR OF ENGINEERING**

**IN**

**COMPUTER SCIENCE & ENGINEERING**



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**INTRODUCTION**

For our project, we have chosen COLLEGE MANAGEMENT SYSTEM (CMS), an online website created as for a college organization that manages every department inside the college. This system engages the association to make their organization override the problem of practising manual systems and moreover to keep records about their organization.

The world has become where there is a huge load of innovative new development; where every single thing done truly has been changed into modernized construction. Nowadays, individual's activities have been changed into work done by automated frameworks. One of which is the standard focal point of this errand which is College Management System.

Enrolments, admissions, students, faculty, attendance, fees, scheduling, assignments, grades, and the institution's library are all managed by a college management system. For data-driven decision-making, it generates automatic reports on all elements.

The website is reduced as much as possible to avoid errors while entering the data. It also provides error on entering invalid data. No formal knowledge is required by anyone who uses the website. Thus, it is user-friendly. It manages the departments of college at a fast pace.

Every college, large or small, faces issues in handling information on courses, colleges, faculty, assessments, and students, and other things. Because each college has its own set of requirements, we created a custom system to handle them all. This management system includes a strategic strategy and will assist you in obtaining the correct data for your future objectives.

**OBJECTIVES:**

The rule targets of this project are:

* To keep track of information about the college, course, batch, professors, and students.
* Because the project is entirely constructed at the administrative level, only the administrator has access.
* The goal of this project is to create a program that eliminates manual labour.
* The system should keep track of all relevant details.
* Increase the efficiency of managing the college.

**SCOPE:**

The extent of this project is:

It may be useful in obtaining detailed information about flawless management. Simple and sensible records are possible. It will also aid in the storage of previous information, such as student information. It will also save time and money by lowering the cost of obtaining management data. The collection procedure will go off without a hitch.

Various college management system operations have been attempted to be computerised.

**FEASIBILITY STUDY**

After doing the project Car Rental System, study and analysing all the existing or required functionalities of the system, the next task is to do the feasibility study for the project. All projects are feasible - given unlimited resources and infinite time. Feasibility study includes consideration of all the possible ways to provide a solution to the given problem. The proposed solution should satisfy all the user requirements and should be flexible enough so that future changes can be easily done based on the future upcoming requirements.

**A. ECONOMICAL FEASIBILITY**

This is a very important aspect to be considered while building a project. We decided the technology based on minimum possible cost factor.

All hardware and software cost has to be borne by the organization Overall we have estimated that the benefits the organization is going to receive from the proposed system will surely overcome the initial costs and the later on running cost for system.

**B. TECHNICAL FEASIBILITY**

This included the study of function, performance and constraints that may affect the ability to achieve an acceptable and adequate system. For this feasibility study, we studied complete functionality to be provided in the system, as described in the System Requirement Specification (SRS), and checked if everything was possible using different type of frontend and backend platforms.

**C. OPERATIONAL FEASIBILITY**

Most likely the proposed system is fully GUI based that is very user friendly and all inputs to be taken all self-explanatory even to a layman. In addition, a proper training has been conducted to let know the essence of the system to the clients so that they feel comfortable with new system. As far our study is concerned the clients are comfortable and happy as the system has cut down their heaps and doing,

**METHODOLOGY / PLANNING OF WORK**

Week 1: Discussion and idea pitching

**Thinking about Basic**

Here we think about all basic things like how we design and create website and database all the requirements and all the basic needs and think we requires for the project.

Week 2: Skill Development

**Design Models and Mock ups Designing**

The models and mock ups help to ensure clarity in view of the project as well as how it works. Stakeholders are to sit through this process as drawings are created.

Week 3: Data gathering & market analysis

**Database Creation**

A database is created using the models to provide storage for customer information, vehicle information, and payment reports. Testing of the database is ensured at this point.

Employee Software Creation The software that is to be used by the employees will be designed using Visual Basic using the guide of the mock ups, requirements, and models. The software will act as a simple and easy to understand user interface to ‘browse’ and among other functions the database - the information stored including customer information, vehicle information, and payment reports

Week 4: Finalise the first 3 weeks discussion and start frontend development

**Finalization and Reports**

All testing and function processes are finalized at this stage. Reports will be created to ensure all information and functionality is clear in order to make the user manual and to help ensure employees can use the software with ease

Week 5: Backend development & continue frontend development

**Website Creation**

The web site will be designed using programming language using the guide of the mock ups, requirements, and models. The website will be implemented using high-quality design techniques. It should allow for users to immediately see the rental cars that are available. They can also have the ability to search for a certain vehicle they desire. Once they select they can register or log in to store any private information they are about to give to the company in order to obtain their vehicle, although registering is not required.

Week 6: Website finished connected with database

**Complete Project**

The project is completed thoroughly except some error checking and testing remains. The website is connected to the database and given a dry run.

Week 7: Trial run, bugs found & fixed, errors or glitches fixed

**Testing**

Testing will be implemented on both the website and software. Test cases may be used to guide and understand the basic actions of both customers and employees. Any bugs or errors that occur will be identified and resolved.

**MODULE AND TEAM WISE DISTRIBUTION OF WORK**

Assignments were distributed evenly among the group assigned to the project. All of us worked together in the project planning, sharing in the opportunity of any models and analysing all specifications made.

We have divided our work in the following way:

1. Frontend:- Done by
2. Backend:- Done by
3. Content pitching and Market analysis:-Done by
4. Technical aspect analysis:- Done by
5. Website design :- Done by All
6. Synopsis & Content ;- Done by Kriti & Vanshika
7. Weekly planning:-Done by
8. Schedule checking:- Done by

The first month of the project (Feb) was used mainly for requirements setting and skill development. This took approximately two weeks. It took about 25 hours of work. Then we started building our project in the third week and finished it few days before deadline. In the third to fifth week, we were able to begin designing, which took 56 hours. Around the same time, testing began and continued throughout the remainder of the project. This total time was about 60 hours. We then wrote out the user manual, and gave a final report of the software. The time this took was about 42 hours. We then had a minor period for demonstration and final adjustments which totalled 10 hours.

We finished the project in mid-April.

* The percentage breakdown was as follows:
* Requirements: 25 hours – 13.58%
* Design and code: 56 hours – 30.43%
* Testing: 40 hours – 21.73%
* Manual and Final Report: 50 hours – 27.17%
* Demonstration and Adjustments: 13 hours – 7.06%
* Total: 184 hours - 100%

**INNOVATIONS IN PROJECT**

**LIMITATIONS OF OTHER PROJECTS**

Based on the research done, some car rental companies still use desktop application for their car rental services and thus making it to be limited to so many important feature that are not available unlike in the web based application where there are so many feature available. Also some upcoming companies do not only make use of these desktop applications, but also make use of phone call reservation, which is still lacking so many features that are needed for this type of system.

"Surge pricing" for Uber, or "prime time pricing" as it is called by Lyft, is controversial among customers. It's a classic use of the free market principle of raising or lowering prices according to supply and demand. For customers, this means how many cars are available (supply) and how many passengers want to ride in them (demand).

Low Fares Hurt Drivers

Some other car rental drivers say they struggle to earn even a minimum wage once Uber takes its cut. They bear most of the costs associated with the service, such as fuel, maintenance, and repairs. With competition from other ride-sharing services and the continuous hiring of new drivers, average earnings are being pushed downward. This means that drivers have to work longer hours to earn an income comparable to what they would have earned a year or two ago.

Negative Impact of Price Competition

Price competition can be destructive for any industry. Increasingly, these services are engaged in an intense battle to provide the cheapest service. They are directly competing with existing traditional taxi and car services for both customers and drivers. This has led to a precipitous drop in earnings for taxi drivers.

**INNOVATION IN OUR PROJECT**

The most recommended solution to these problems is to implement a web based system that will have the features required for this kind of services or business. In conclusion, the system will be able to serve as a web base application when it is finally developed, where these small upcoming companies can make use of it to publish their services in a wide range and also help the company to manage their service more effectively. On the other hand, it will enable customers to freely make their desire choice more freely and interactively.

The website is reduced as much as possible to avoid errors while entering the data. It also provides error message while entering invalid data. No formal knowledge is needed for the user to use this system. Thus by this all it proves it is user-friendly. Car Rental System, as described above, can lead to error free, secure, reliable and fast management system. It can assist the user to concentrate on their other activities rather to concentrate on the record keeping. Thus it will help organization in better utilization of resources

Our project is only a humble venture to satisfy the needs to manage their project work. Several user friendly coding have also adopted. This package shall prove to be a powerful package in satisfying all the requirements of the school. The objective of software planning is to provide a frame work that enables the manger to make reasonable estimates made within a limited time frame at the beginning of the software project and should be updated regularly as the project progresses.

At the end it is concluded that we have made effort on following points.

* Description of the background and context of the project and its relation to work A already done in the area.
* Made statement of the aims and objectives of the project.
* The description of Purpose. Scope, and applicability.
* We define the problem on which we are working in the project.
* Made statement of the aims and objectives of the project..
* We describe the requirement Specifications of the system and the actions that can be done on these things.
* We included features and operations in detail, including screen layouts.
* We designed user interface and security issues related to system. Finally the system is implemented and tested according to test cases.

**CONCLUSION**

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In a nutshell, it can be summarized that the future scope of the project circles around maintaining information regarding

* We can add printer in future.
* We can give more advance software for Car Rental System including more facilities
* We will host the platform on online servers to make it accessible worldwide
* Integrate multiple load balancers to distribute the loads of the system
* Create the master and slave database structure to reduce the overload of the database queries

**SOFTWARE AND HARDWARE REQUIREMENTS**

Using the requirement definition as a foundation, the requirements are divided into software and hardware. This is called system design.

**HARDWARE REQUIREMENTS**

The software should be run on any sort of desktop or laptop environment, regardless of the operating system. The software also has the potential of running on tablets, but with a more simplified version. Essential input/output devices are keyboards, mouse, hard disk devices and printers; nothing else is required but can be recommended if desired.

**SOFTWARE REQUIREMENTS**

The project will make use of the tools:

* The programming language to use will be HTML, CSS and JAVA SCRIPT.
* MySQL server will be used for the development of the database.
* IDE used while making the project is Komodo, Django, and Repl.it.
* The operating system will be Windows 10 as essential.

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