**DIGITAL PARKING MANAGEMENT SYSTEM FOR IIMS COLLEGE**

A system that manages the parking space allocation at IIMS COLLEGE, DHOBIDHARA, KTM

**Abstract**

This project is designed for vehicle parking to records the information of drivers. Typically, at IIMS COLLEGE, DHOBIDHARA, KATHMANDU, Looking out for a vacant parking slot, however it's a paid office with a security monitor. It is simple web-based application using Html, CSS, SQL, and PIIP. It is very user-friendly and easy to use and provides both benefits to customers and owners. This system can be edit if there is mistake on names, time, or other contents. This system can help tracking the entry and exit vehicles which helps to know there is place for parking or not inside the parking area. The purpose behind the documentation is to give the explanation about the process of design and usage alongside description of usefulness gave by the system and plans for what's to come in future. This system will record all the details of customer's vehicle that is parked in parking area. These systems also save more time for owner. An iterative approach also helps to solve the problem and primary method is used to research the problem solution. This system will helpful to the admin as well as to the customer also.

**Introduction**

In the early days there was no such system as there is today. But nowadays in the age of internet and technology they have become a part of our daily life. Many businesses and organizations have integrated these technologies, the software "Vehicle Parking Management System for IIMS College" online system to provide free services to their customers. The overall structure of this report consists of five main chapters: summary, introduction, data collection, analysis, synthesis, evaluation, conclusion and recommendation. All this content consists of their subdivisions. The first part introduces the car parking management system, how it works, what tools and technologies are used to develop the system. And the second part is to collect information that contains all the information and data that I used to build my system. Gathering information such as: literature review, research methodology, and system development methodology. I choose research methods such as questionnaires, fact-finding skills, primary data sources, and secondary data sources. Part 1 of the analysis includes some sub-materials such as process model, functional requirement, non-functional requirement, constraint and assumption, feasibility, software requirement. In the synthesis section I’ve designed all the diagrams like Use Case diagram, Activity diagram, Gantt Chart. The diagnostic section does all the testing and also finds all the objectives and scope that I’ve find in the information gathering. The final conclusion and recommendation section summarizes all of the systems, therefore, the software vehicle parking management system that helps to record the details of the customer standing in the parking area that helps to control the parking area. And also, the tools and technologies used to develop the system. Customer details are stored in the database.

**Background**

In today's days in many public places, such as, shopping centers, multiplex systems, medical clinics, offices, markets there is an urgent issue of vehicle parking. The vehicle parking area has many lanes/spaces for vehicle parking. So, to park a vehicle one needs to search for all the slots. In addition, this includes lot of time. So, there is a need to build up a computerized parking system that shows directly available of empty parking slots in any path directly at the passageway. The project includes record details of customer vehicle that are parked in parking area. So, the person can leave their vehicle safe and secure. The main aim of this project is to reduce the traffic in the parking area, Normally, we can find in the movie hall shopping mall there is an issue they need to search which line is empty and line is had spot to leave the vehicle for parking. So, to maintain this problem vehicle parking management system is implemented. Parking management system is the managing the records of the approaching and active vehicle in parking areas. Parking system has created such a way that is filled up with secure device such as parking control gates, vehicle checking device, CCTV, and others. Accordingly, we need to create and design a parking management system. This software "Vehicle parking management system" is a web based online system which is developed in PHP, as a front-end development and Xampp for connecting MYSQL server and Apache server for development for backend of my system. This system helps to record the number plate, in and out vehicle from parking area. The purpose behind this system is to make easier for vehicle owner to park safely and secure. This system solves the problem, by helping the user to locate parking areas, locate the place of parked area, and manage the parking fees.

The Parking areas are very necessary in everywhere especially within the cities of the countries. Every day the drivers are throwing time by searching parking area. In this era of increases need to travel, the more of vehicles likewise expands, which brings about addition in the space required for parking vehicles. The management of these parking areas is to be done in an extremely proficient manner utilizing limited assets. The goal of this project is to get data of the parking area at wherever and to give that data to the new coming vehicle There are two sections in our vehicle parking management system. The first section shows:

Customer Name

Vehicle Number

Vehicle Type

Vehicle Entry Time

Vehicle Exit Time

**Report**

Vehicle Parking Details: This report provides the brief summary of vehicle parking activities. It will show all the In and Out Vehicles details. It also shows the time of entry and exits and shows the cost according to the time.

**Transaction Details**

This detail shows the transaction of both the customers and the systems. It will have time in the transaction. Customer gets their printed receipt after they pay the parking cost.

**Problem Statement**

Problem Statement is the one of the fundamental and significant phases of the project. At the point when the essential issue is resolved, it is reported and the symptomatic issue is examined. At that point the current rundown of essential issue is finished. A system is essentially a lot of segments that communicate to achieve some reason.

➢ Every time the driver enters the parking area, they had turn to find an empty parking, it is more effective if the area has an automated vehicle parking system that can help drivers to park their car automatically.

➢ Lack of sufficient parking areas in events:

Special events can potentially disrupt traffic flow and require crowed management. Every occasion can create its own unique transportation issues.

➢ Overpopulation can lead to increase in number of vehicles that can cause unmanaged parking and other issues.

How many vehicles are parked in the parking area? And second part tells the time of the parked vehicle. However, solving the parking difficulty problem is now an emergent issue.

**Stake holders:**

In this system there are two holders they are:

Admin:

The admin will have full control of the system. The admin can remove or edit of the customers. The admin can also manage the price of the customers according to the time.

Customers:

The customers can park their vehicle safe and secure don't need to worry about anything. The customers get their paid printed receipt.

**Data Records**

Staff records

It provides details of staff that uses the vehicle parking management system. It helps to describes Office staffs like

❖ Staff names

❖ Address

❖ Contact Number

**User Records**

This record helps for the approval for utilizing Vehicle Parking Management System. It provides the Username and Password for the User. It likewise incorporates the authority that implies it

Separates the users and administrator.

**Vehicle Records**

The most important records which focuses in vehicle parking management system. It stores the

fundamental Vehicle record like:

• A 35% travel during times of heavy traffic searching parking spaces that are hard to find it.

That is the reason parking is very imperative to manage vehicle's How and reduce air

pollution.

• Lacking of space may cause parking conflict, so the management of it should maintain

proper space in order to reduce problems.

• CCTV surveillance should be kept in each part of parking area so that whoever goes against

the rules and regulation should be charged fines.

• Parking management should work computerized so that it won't be difficult to maintain

records of vehicles.

• Vehicles should be parked well in the proper area to avoid disturbance to other customers.

• There should be division of parking of four wheelers and others so that both vehicles find

comfort when doing up and downs

• Smart parking systems should be followed so that there won't be any problems regarding to

parking system in future. Penalty should be charged if someone violates the rules of parking

management system Providing proper information to the customers in order to reduce

parking management problems.

Data Security is not secured:

This is because of the manual method of recording the information. It is realized that, in

manual way, information is being put away by recording it on paper. Therefore, it can easily

get damage or mistakenly thrown away by anyone. Performance: Since the workplace

performs recording client data manually, it takes a lot of time in looking and information

recovering component of the system.

**Aim**

This project aim is to develop a vehicle parking management system based on web

application that runs on web/online. And to make system that everyone can use and satisfied

from that. Some of the aims are as follows

• To make the garage energy efficient by using efficient management

• To make a simple web-based site that keeps record of booking and parking vehicles that

is parked in the parking area.

• Increase the security in parking system.

• Make system that everyone can use and satisfied from that.

**Objectives**

Some of the objectives of vehicle parking management are as follows:

• To make good research about people's park and gather all important information that

helped in planning the parking management system.

• Monitoring of parking space and updated on empty parking slots

• Parking charges display

• Printed receipt

• To track in and out vehicle system

• To focus on more secure data backup rather than paper-based system

• To develop prototype as per design.

• To enhance the visitor's experience.

• In case of any damages and issue of vehicle that will guarantee take a responsive by

parking management.

• The main important benefit of digital parking management system is its advanced

technology. It follows latest technologies and concepts to assure profitable outcome.

• Another unique advantage of it is it’s a cost-effective technique with less manpower,

large sum of money is saved.

• Moreover, it saves manual labor and energy.

• For parking authorities of IIMS College and clients parking lot system resources are

flexible enough to operate and manage.

• This system can be easily handled by the attendants because of its well-organized

structure.

• The vehicle users are well assured on grounds of security and privacy.

• The system prohibits unauthorized entry or exit and is suitable for multiple entry and exit

points