DEPLOYMENT OF SERVICES IN A WEB TO VEHICLE PARKING SYSTEM

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Abstract— This document is a web application that delivers an effective solution of making advances Parking bookings. This system is Present a miniature model of vehicle parking system that can regulated an manage the number of vehicles that can be park in a given space at any given time base on the availability of parking spot. The aim of this paper is to solve the parking problem . It discusses a project which presents a miniature model of the vehicle parking system that can regulate and manage the vehicles that can be parked in a given space at any given time based on the availability of parking spot.
The number of personal vehicles usage is increasing manifold. People prefer personal vehicles to commute than depend on public transportation. Finding a parking space in most metropolitan areas, especially during the rush hours, is difficult for drivers. Due to this there is a need to provide sufficient parking places coupled with plenty of slots to help the user park his vehicle safely, also to ensure the user does not end up parking on non-parking area and cause discomfort to pedestrian. This will help reduce the load on the administrator as his physical work reduces drastically and user can search the parking slot through Application.

INTRODUCTION

Vehicle parking system application offers a web based reservation system where users can view the parking space available and can select it for booking for required time. The system provides a graphical view of the parking spaces so it becomes convenient for users to access. Purpose of this application is to solve a problem that really bothers many vendors today for managing of parking slots inside a parking storey. So it provides you a very simplistic solution of managing parking slots which provides you with making an entry of incoming and outgoing vehicles. Parking Management System beside managing slots also provides you with several functionalities in order to keep your database upto date. The system does not allocate the already booked space to anyone and marks it grey. Parking slots which are not booked will be shown as white in colour and after booking of that slot it will be marked as green. It has an additional feature of cancelling the bookings that have been already selected. After cancellation some charges will get deducted from actual amount and rest of the amount will get reimbursed into their account. It thus overcomes the problem of finding a parking space in commercial or public areas that unnecessarily consumes time.

Every vehicle trips requires parking at its destination, so parking facilities are an integrated component of the roadway system. Parking is one of the first experiences that people have when traveling to a destination. Convenient and affordable parking are considered a sign of welcome. Parking that is difficult to find, inadequate, inconvenient or expensive will frustrate users and can contribute to spillover (motorists parking where they should not). As a result, inadequate parking supply can create problems to both users and nonusers.
However, excessive parking can also create problems. Parking facilities are expensive to construct, imposing financial costs on developers, building users and governments. In addition, parking facilities impose environmental costs, contradict community development objectives for more livable and walkable communities, and abundant, unpriced parking tends to increase driving and discourage use of alternative modes

This application delivers an effective solution of making advance parking bookings. This system presents a miniature model of an automated car parking system that can regulate and manage the number of cars that can be parked in a given space

at any given time based on the availability of parking spot. The aim of this paper is to automate the car and the car parking as well. It discusses a project which presents a miniature model of an vehicle parking system that can regulate and manage the number of vehicle that can be parked in a given space at any given time based on the availability of parking spot.

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MODULE DESCRIPTION:

The system consists of the following modules

A) Admin

This module consist of the information regarding the parking slots available in parking area. The admin and provider has to sign up in this module and register themselves .Whenever they need to login they have to log in using registration number.

B**) User**

The user module contains information about the user and vehicle of the user.A user can only have username so if they joins the parking house then only he can login. This prevents misuse unauthorized access and hacking of the product.

b) Security and Authentication

The security and authentication module contains about access privileges to customers and employees for various operations .The security is very important for online transactions to done correctly without being hacked.

c) Reporting:

In this module confirmation email will be send to the user that his/her parking space has been booked.

Problem Definition:

It is roughly estimated that out of 8760 hours in a year ,on an average, a car runs for only 400 hours or so, leaving the remaining 95% of its time in parking.

According to management experts, “A problem correctly defined is a problem half solved.” How parking problems are defined affects which solutions are considered and how they are evaluated.

Parking problems are often defined to mean that motorists consider parking inadequate, inconvenient or expensive. This implies that the best solution is to increase parking supply without directly charging users. But there are other ways to define parking problems that suggest other Parking Solutions. Parking problems may reflect:

- Inadequate information for motorists on parking availability and price. The solution could be to improve use information.
- Inadequate user options. The solution could be to improve parking options, such as letting motorists choose between convenient, priced parking and less convenient, free/inexpensive parking.

Inconvenient Parking Pricing methods, such as mechanical meters that require users to predict how long they will be parked and only accept certain coins. The solution could be to improve pricing systems.

- Inefficient use of existing parking capacity .The solution could be to use Parking Management strategies that result in more efficient use of parking facilities.

- Concerns over spill over parking congestion in nearby areas if parking supply is inadequate or priced. The solution could be

to provide parking management and enforcement in impacted areas.

- Economic, environmental and aesthetic impacts of parking facilities. The solution could be to reduce parking supply and improve parking facility design.

Existing System :

➢ **Overview:**

In earlier system , the guard used to keep all records of entry and exit of people in their register and even he provides receipt and the employee have to pay for it. This become very difficult to handle record . In case , if receipt book is not available it also becomes difficult because he may not be able to manage his data. Also if in case someone wants to know about the parking records then the guard have to go through each and every record to search for that information. This becomes difficult for guard to handle such information. The user have to struggle in traffic in search for parking place. After parking employee has to wait for paying money. It also consume much time.

Driver should nearly always be able to easily find, convenient, free parking at every destination. Parking planning consists primarily of generous minimum parking requirements, with costs borne indirectly, through taxes and building rents.

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➢ **Scope**

- Maximize benefits and minimize the disadvantages of a common parking systems.
- User friendly, easy to use.

➢ **Objectives:**

- The objective for the system is to provide residence and visitors with viable system that is safe and easy to use. In our admin module ,the admin will have all the records for different parking area, how much space will be available for parking and also time .So, in admin module all the information will be stored about space and time used by user which will make handling of data easier for admin.

Literature Survey

- Over the years, car parking systems and the accompanying technologies have increased and diversified. Car parking systems have been around almost since the time cars were invented. In any area where there is a significant amount of traffic, there are car parking systems. Car Parking systems were developed in the early 20th century in response to the need for storage space for vehicles.
- It's application that delivers an effective solution of making advance parking bookings. This system presents a miniature model of the vehicle parking system that can regulate and manage the number of cars that can be parked in a given space at any given time based on the availability of parking spot. The aim of this paper is to automate the vehicle and the vehicle parking as well.

It discusses a project which presents a miniature model of an automated car parking system that can regulate and manage the number of cars that can be parked in a given space at any given time based on the availability of parking spot.

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- physical work reduces drastically and user can search the parking slot through Application.

Platform for Project

- This project is based on the ruby on rails where ruby is a language and rails is framework.
- The version of Ruby is 2.3.1
- The version of Rails is 4.0.0.1

- **Minimum Hardware Requirement**

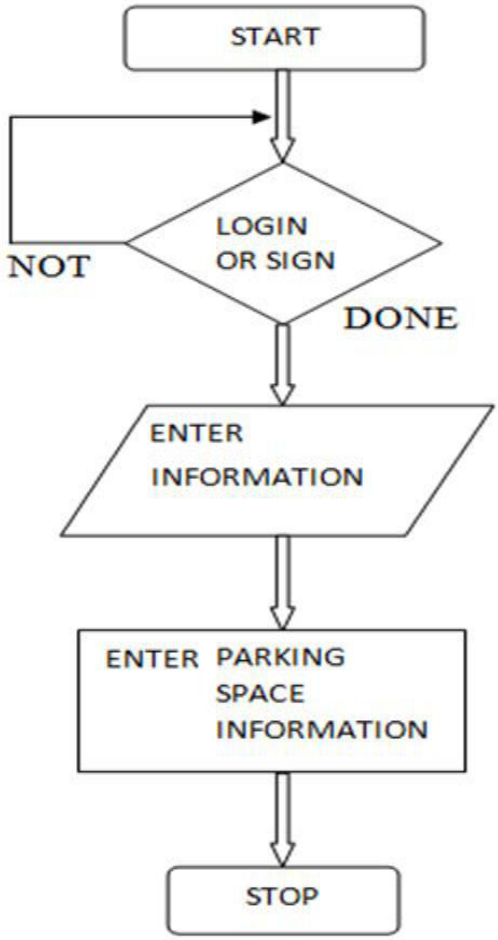
S/W Requirement

- **Language: Ruby on Rails**
- **Database: My SQL**
- **Sublime Text**
- **Server : Puma/web brick**
- **Cloud : Heroku**

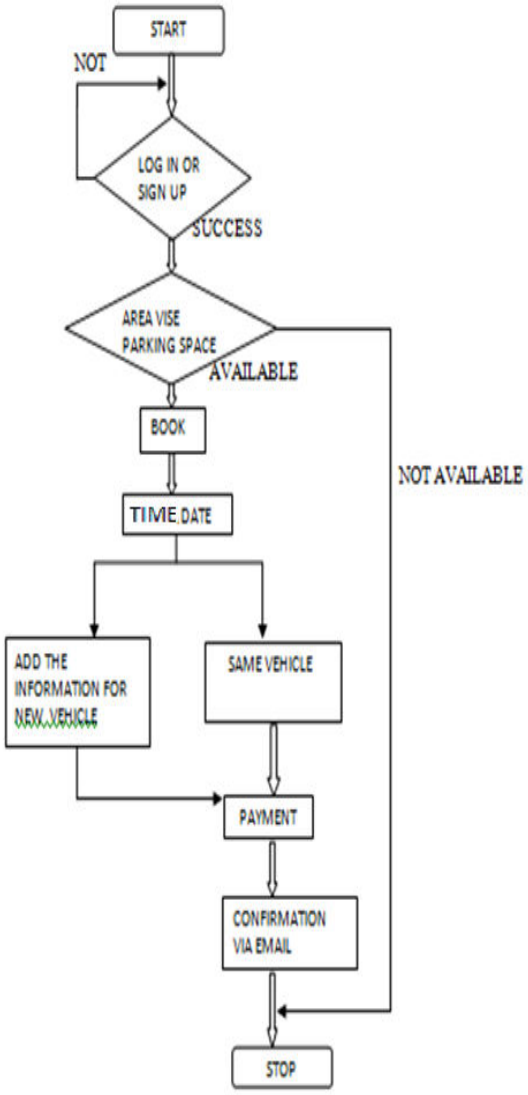
H/W Requirement

- **RAM: 2GB**
- **MEMORY:80 GB**
- **OS: 64 BIT**
- **PROCESSOR: Intel@ Core i3-5005U@2.00 GHz*4**

Flow chart for user module



Flow chart for admin module



7.Conclusion And Future Scope

Conclusion:

Consumer

- When and where
- Flexibility and convenience

Parking space owner and manager

- Parking revenue
- Utilization
- Increase value

Cities and community

- Traffic congestion and pollution
- Parking revenue
- Important factor in traffic area

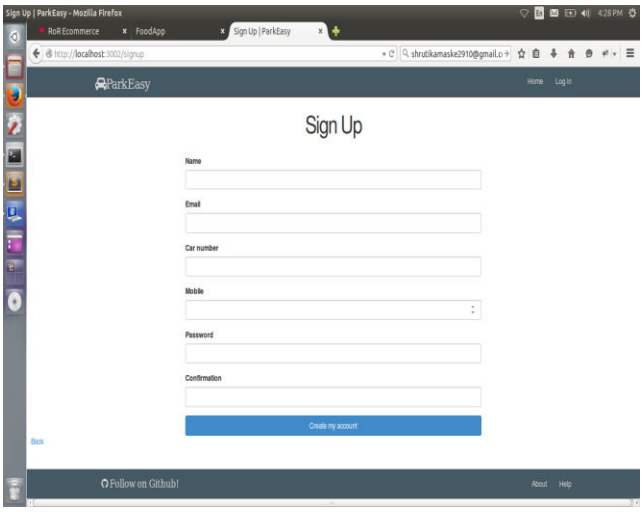
The environment

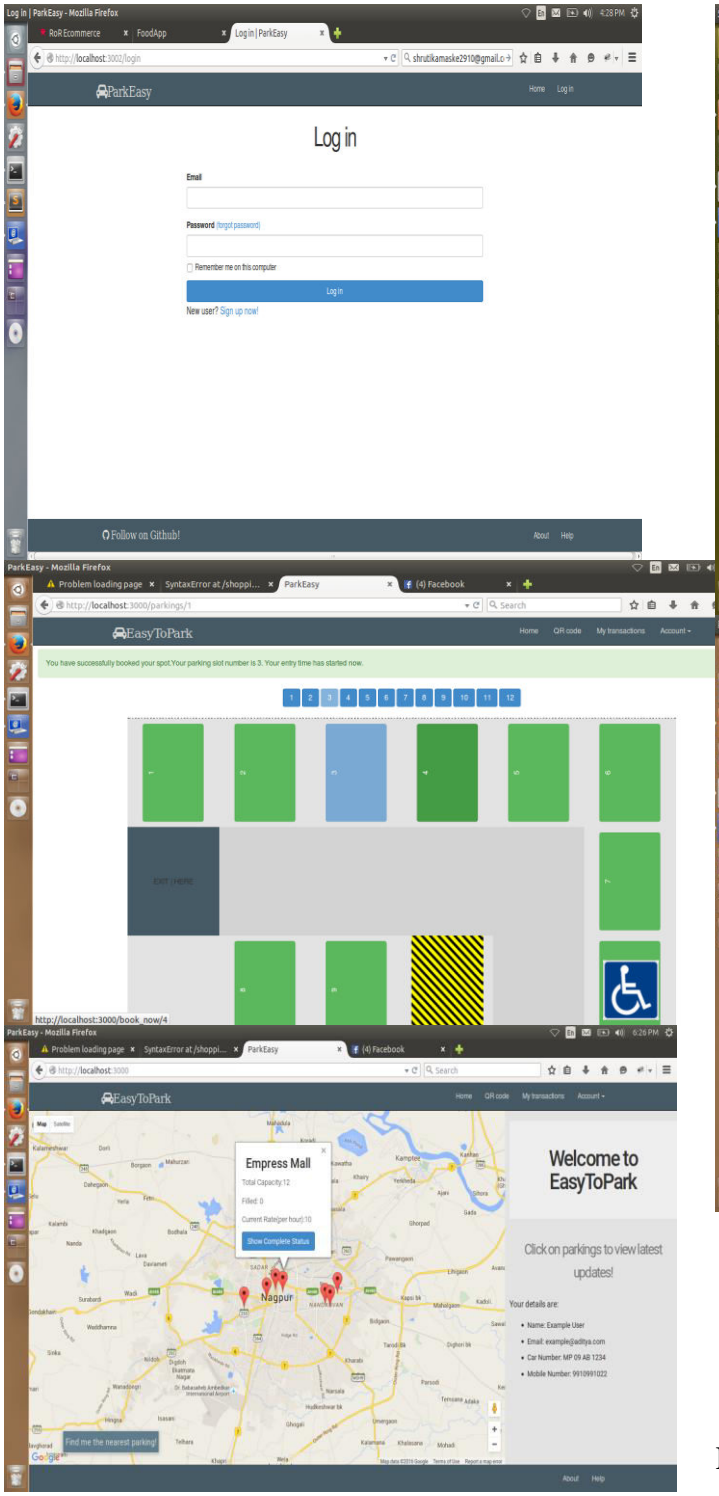
- Less fossil fuels
- Reduce pollution

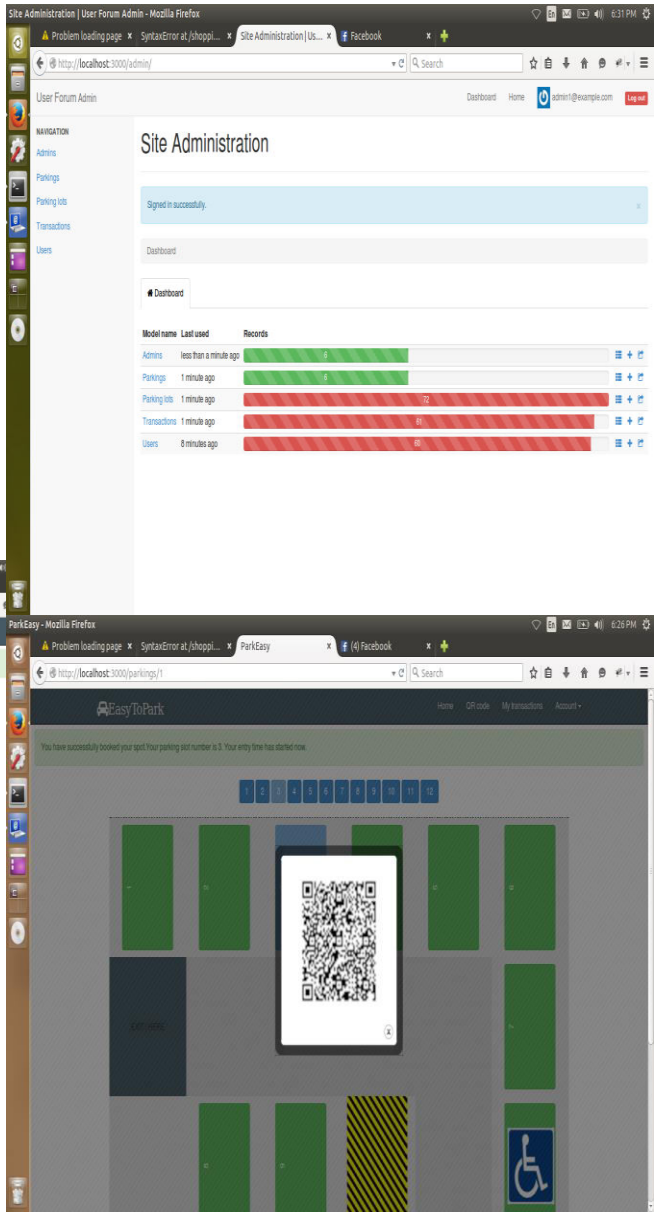
Future scope:

The "Deployment Of a Services In a Web To the vehicle parking System" Application can be developed for other popular mobile operating systems. In future, our application can be implemented on the existing operating systems like iOS, Windows and BlackBerry also on the upcoming and promising operating systems like Firefox OS, Jolla and Tizen. Our application can be used as an alternative to the present parking systems in malls, at railway stations, near airports, theatres, etc. as an efficient means to park. Google Wallet can used to make secure payments fast and convenient.

Result:







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