

Abstract

Automatic car parking is a MATLAB program which is used for automatic vehicle data entering such as number plate for identifying the car to be parked. First snapshot of the vehicle would be taken at entering gate, then system will detect the number plate from the whole picture and will extract the license number from the number plate .After extracting number it will send the number to the sever to enter in data base. Data base will contain the following entering , and number plate of car in database .At Exit side the same procedure will repeat like snapshot of vehicle, number plate extraction and send to the sever to update entry in database.

So our aim is to develop an effective automatic car parking for a specific and fixed no of cars for a company using image processing for using MATLAB.

Dedication

Throughout this project there have been a number of people who have helped to make it successful. We would like to thank the following:

- Muhammad Ali Murtaza (lecturer at UMT) for providing a basic concept of project. He has a constant source of guidance throughout the project and encourages us to do this project.
- And our friends who gave us a resources to do this project.
- And finally our parents for their financial support and help throughout the project.

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Chapter 1: Introduction

The idea of the project was to design a software which enable a machine to detect the number plate of a random car and then tell the server that should that car be allowed to get parked or not. This would help in decreasing the man power and the machine will itself tell the car driver to park the car.

For this purpose we divided our project in two parts

- Image Processing Using MATLAB
- Serial Communication

1.1 Image Processing Using Matlab:

First step was to detect the number plate of a random car, convert it into grey scale, and then by using the method of correlation, extracting the numbers and alphabets from the plate.

1.2 Serial Communication:

Then the number extracted will be serially communicated to the micro controller and then the micro controller will help in operate the motor. The motor in this case will rotate clockwise and anticlockwise showing the movement of a parking hurdle moving up and down respectively.

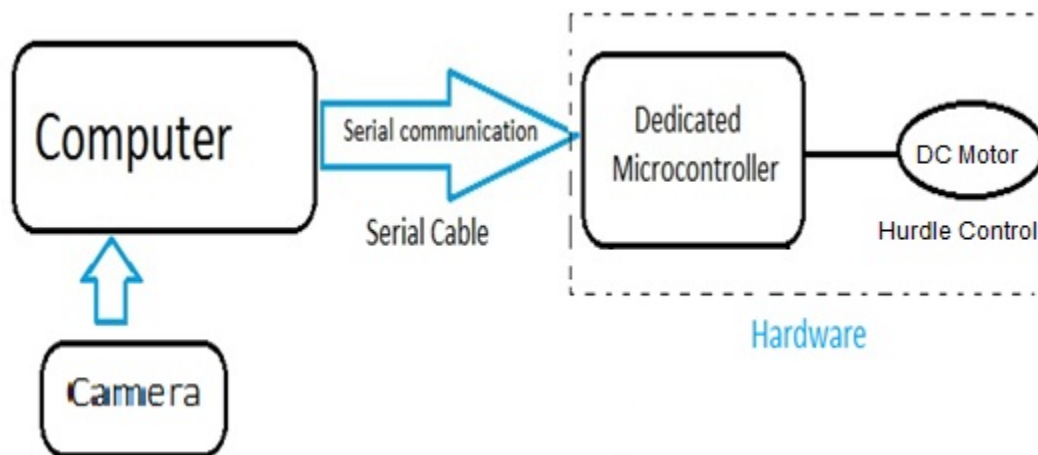


Figure 1: Block Diagram