

Abstract

With the increasing population in Indonesia, the need for transportation is also increasing, especially private vehicles. The increasing number of private vehicles will make it difficult to find parking spaces. Lack of information about which points are available causes parking service users to be trapped in a parking lot and have to look for other parking spaces that are still available. The parking lot manager must improve services so that parking lot users know the availability of the parking lot. In overcoming these problems, the author will create a tool called Smart Parking System. The purpose of making a smart parking system is to create an efficient parking system for both parking users and parking lot managers. The smart parking system uses an Arduino AT-Mega microcontroller to find out which points in the parking lot are still available, and uses the Floyd-Warshall method to find out which parking points are closest to the entrance to the shopping center. The distance of each parking cell from the entrance to the shopping center was calculated using the Floyd-Warshall method. The results of these calculations become a reference in determining the closest parking cell to the farthest from the entrance to the shopping center. The control of this tool uses the Arduino AT-Mega so that the device can function as expected. The test results of this tool can work randomly according to the conditions of the parking lot in general.

Keywords: distance, floyd-warshall, parking lot, led indicator.