ABSTRACT

Security is a factor that should always be taken seriously anywhere, including in the parking area. The high number of users of motor vehicles and the density of the parking area is available is often not supported with adequate parking security system. That led to many cases of motor vehicle theft. Parking system using tickets are often problematic due to the ticket are easily lost or deliberately kept in the vehicle. These are the issues that the become the main reason to this thesis to create innovative parking system that can benefit the community.

The method used in the preparation of this thesis is experiments and designing for the control systems of automatic parking gate using fingerprint scanner and an ultrasonic sensor-based Arduino Uno. In its design, this study uses hardware and software, as well as the use of electronic components.

Ultrasonic sensor will read the arrival of vehicle, and a fingerprint scanner will scan the fingerprints of the driver that will be stored in the microcontroller Arduino Uno. Later fingerprint data will be matched back when the driver want to get out of the parking area. If it does not match then the system will initiate a warning message.

Keywords: Microcontrollerr, Arduino uno, fingerprint, ulrasonic