

ABSTRACT

Laboratory equipment inventory is an activity that requires someone to record all the devices that enter and exit the laboratory. Data collection will be long and not well organized when data collection is only recorded in a piece of paper. This is not efficient, because data collection errors can occur, losing paper containing the data, and also the paper can spend a lot of space in the laboratory.

The inventory system created in this final project is in the form of a web that manages the inventory requirements of laboratory equipment using a barcode scanner that is connected wirelessly with a database using Arduino through an access point, so that when data collection, a barcode scanner can be brought to the laboratory where the device is located.

Data entered into the database is then displayed on a web as information about the number of tools and conditions. As for borrowing and returning equipment is done by using a barcode scanner, so data about borrowers can be displayed directly on the web. This system can also display borrowing data that lasts for one month, so that it will make it easier for administrators to carry out maintenance tools that review how often the tool is used in the lab. This inventory system is able to manage laboratory equipment properly.

The results of this final project are in the form of an inventory system that is able to record laboratory equipment, record the borrowing of tools and return laboratory equipment, data collection of damaged equipment and maintenance must be done immediately. From the results of the questionnaire testing conducted on 10 people the faculty of applied science faculty of the university of Telkom produced an average value of 76% which means that the system can work in accordance with the expectations of the faculty of applied science faculty.

Keyword: *Barcode Scanner, Arduino, Web*