DESIGN AND CONSTRUCTION OF A SYSTEM FOR ACCESS TO LABORATORY SPACES AND ELECTRICITY SUPPLY USING RFID BASED ON THE INTERNET OF THINGS (IOT)

Daffa Mahendra Subagyo Putra

Electrical Engineering Study Program, Faculty of Science & Technology
University of Technology Yogyakarta
Jl. Ringroad Utara Jombor Sleman Yogyakarta
E-mail : dafam82@gmail.com

ABSTRACT

The laboratory room is one of the important facilities for students to receive learning materials. In the laboratory room there are various kinds of equipment used as learning media. Therefore, there is a need for security in the laboratory space. Apart from securing the laboratory space, the use of learning tools certainly requires care and supervision in their use. Unmonitored use of equipment can result in damage. Efficient access arrangements and intelligent management of electricity supply in laboratory spaces are essential to maintain operational safety and efficiency. A system that utilizes RFID to identify authorized users and provide access rights to laboratory space is deemed very necessary. Every user who has a registered RFID card can access the room by facing the card to the RFID Reader installed in front of the entrance. This system can also record and monitor each user's access time for administration and security purposes. Apart from limiting access rights to enter the laboratory room, this tool can also regulate access in using the electricity supply so that only the admin can access the electricity supply to turn on the equipment used as learning media, thus making the laboratory space safer and more monitored. in the use of learning equipment contained in the laboratory room.

Keywords*: Laboratory space, RFID, Access*