## **ABSTRACT**

## PROTOTYPE DESIGN OF DOOR SECURITY SYSTEM USING ARDUINO MEGA 2560

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Conventional keys still have many weaknesses, including keys duplicated, small key shapes often make these keys easily lost, tucked away and may fall in an unsafe place. In addition, using a conventional key cannot provide door access data and warning notifications about things that are not desirable. A tool that is added to the conventional key is needed to provide warning if someone else wants to enter the ICT server room of Pembangunan Jaya University next to people who have access to enter the room. The researcher used prototype modeling which adopted the SDLC method (System Development Life Cycle). A microcontrollerbased door security system was developed in this study. The system can provide SMS notifications, alarm notifications, door access using PIN, door access via SMS, door access via web, capture images and record users on the web. Register for access via web. The door using solenoid that will open when the PIN is correct. The camera will take photos by pressing the PIN button. The SMS will be sent by the system to the admin phone if the password entered is incorrect or the door is forcibly opened. When the door is forcibly opened the system will turn the alarm on. The system that are made can improve the security of various unwanted problems or bad things can be anticipated.

Keywords: Door Security System, Microcontroller, Web, SMS, Camera, PIN

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