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| ***Title*** | *:* | ***Design of Android Based Home Security System With Fuzzy Logic Method Using Microcontroller*** |
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***ABSTRACT***

*The need for security is one of the most important things in human life. The era of globalization has demanded humans to create security in everyday life. Likewise with technology based home security systems. Frequent occurrence of crime at home requires creating an integrated security system with smartphone devices so that home owners can monitor his house in realtime. Based on these thoughts the writer makes a home security system that can monitor the house and provide early warning to the homeowner if unknown person is detected entering the house. The home security system consists of PIR (Passive Infra Red) sensor that acts as human motion detectors, ultrasonic sensor that serves to measure the distance when humans are detected outside the home, and a magnetic switch that serves to detect whether the door of the house is opened or closed , the three sensors are integrated with the arduino microcontroller device as the control center. The method applied in this research is fuzzy logic method. The fuzzy logic method plays a role in determining the decision in the home security system whether the house is safe or not based on the input value of the reading from the installed sensor. The arduino device connects directly to the Internet via an ethernet module that is bridged by the web service so the system can be accessed through android smartphone devices. Based on the results of system implementation and testing, the system can run well. The system can display notifications on android smartphone devices when the sensor detects a person coming into the house. The system can also be enabled or disabled through the application by the home owner.*

*Keywords : Android, Arduino, Fuzzy Logic, Home Security, Mikrocontroler, Sensor.*