

Universiti Teknologi MARA

**Home Alarm System Using Raspberry
Pi and Arduino**

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ABSTRACT

Home Automation is the idea of creating home that has life which demanded over a decade since 1990's but the current technology at that time does not allow it. Now days the system has been widely used all around the world but the cost of the system is high. As reported in the newspapers in Malaysia, the crime rate has been increased by 4.6% in 2016[1]. Therefore this paper introduce home alarm system which consider as the part of home automation system that capable to increase the security of the house. This system is built using the combination of Raspberry Pi and Arduino which attach with PIR sensor, Ultrasonic sensor and webcam camera. The technique that are used for this system is Master-Slave architecture which apply on Raspberry pi and Arduino that connected by Universal Serial Bus (USB) cable. The raspberry pi will be connected with the user devices using port forward technique which able the user to connect their device with Raspberry Pi using internet connection. The result has proved that the home automation system with the alarm system can reduce the crime rate and the affordable system is preferred by the society in Malaysia

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