

# **Design and Build a Counter System Number of Library Visitors Hang Tuah University, Surabaya**

## *Rancang Bangun Sistem Penghitung Jumlah Pengunjung Perpustakaan Universitas Hang Tuah Surabaya*

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Currently developing from science and technology, especially technology and knowledge in the field of electronics has developed very rapidly. For that we need to learn about the development of science, if not we will be increasingly left behind. Counter people entering the library, the function of this tool is counting everyone who enters the library or who is outside the library. To support the quality and quality of libraries, the system provided for services must be fast and automatic. For example, the system processes data on the number of visitors that have been used. As a follow-up to developing administrative facilities at the Hang Tuah University library specialized institutions, it requires adequate visitor data processing. To find out how many visitors are active in the library each visit, without having to look in the visitor's absence book. Then it will be easy to determine better management of the library management. then the need for tools that can count visitors who enter the library automatically. Overall this system will be composed by the arduino uno microcontroller system, with an ultrasonic sensor as a visitor detection device. From the results of each component's experiment, the HC-SR04 ultra sonic sensor system was obtained to run up to a distance of 50 cm. The bell can ring properly every time a sensor moves a moving object. The experimental system as a whole is produced from a system that can run well at the ideal distance of the ultrasonic reading sensor between 3 - 50 cm. By using 2 ultrasonic sensors which are placed on two sides (in and out), the microcontroller-based system can work well when reading incoming and outgoing visitors which are then displayed to the screen. With this system, it is possible to develop a library in terms of visitor data collection.q

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