

ABSTRACT

As the time goes, all of us have to realize that discipline is one of Indonesian's deficiency. And there's no exception in institution of governance's employees. At the case of Dinas Sosial Tenaga Kerja dan Transmigrasi Karanganyar-office, there're some employees that coming lately and going back before time that has been fixed before. That matter is hard to be detected because presence system that is used still manual and using signature as an authentication media. And because presence system that is used still manual, there's trouble in data recapitulation, and there's big possibility of human error happens in the process of data recapitulation.

From that problem, they needed a technology that can help coping that problem. A system which can detect employee's arrival time, employee's homecoming time, and a system which can help the recapitulation data processes automatically, and it can decrease possibility of error happening. This system is made based on Single Board Computer like Raspberry Pi type B and used RFID Mifare RC-522 in 13,56MHz operation frequency as an authentication media. For user interface device, this system used website with a local server and used database like MySQL. Some of programming language is used on the system building processes. Some of them are Python, HTML, PHP, CSS, and also SQL.

Result which is achieved from this Final Project is a presence system based on Raspberry Pi which can recapitulate presence data weekly, or monthly with 99.99% accuracy, has 27.8ms ID reading speed, and also good system performance which is signed by time of recapitulation every presence is 28.8 ms. This final project has been checked and implemented directly in Dinas Sosial Tenaga Kerja dan Transmigrasi Karanganyar, Central Java-office.

Keywords: Presence System, *Raspberry Pi*, *Single Board Computer*, RFID, *MySQL*, *Database*.