ABSTRACT

Elderly is a period in which humans are aged approximately 60 years and over and reach the peak of their growth period. In addition, the elderly will also experience a period of physical decline over time. Therefore, the elderly are vulnerable to falling in daily life which requires special attention. This is quite inconvenient for the elderly supervisors because they have to continuously monitor.

Therefore, in this study, we will design a system that is designed and developed using the internet of things and smartphone systems. The feature of this system uses an acoustic fall detection system and can detect sound that will be detected via a smartphone. The purpose of this study is that the elderly can be closely monitored for their activities, especially for people who are busy with their work who cannot supervise 24 hours

From the results of the research conducted, it can be concluded that the devices in this study can detect the sound of falling elderly people using a microphone as a recording device and then it will be processed on a Raspberry Pi which will be sent to a webserver whose output will be displayed on the elderly supervisor's smartphone.

Keywords: elderly, fall detection acoustic system, internet of things, smartphone