

CHAPTER I

INTRODUCTION

1.1 Background of The Final Report

Nowadays the technology development is growing rapidly. Almost every second a new technology innovation is created. Even things that were once thought impossible now can be realized with the existence of technology. High economic growth makes the demand of safe and comfortable home is increasing and the most obvious application of this technology is home automation or commonly known as Smart Home.

With this technology home controlling and monitoring can be done anytime and anywhere. For example, when people leave their house, sometimes they forget to turn off the light or are not sure they have locked the door, so they have to go home and make sure all of it. That is very inefficient, both in terms of time and financial. Therefore, the idea called Smart Home appears to solve this problem. Smart Home is a home in which all or some home electrical subsystems (lighting, air conditioner, security/monitoring, entertainment) or devices are all more accessible and integrated so that they work together (Clauser, 2015). The Smart Home is one of the most-well defined and popular sub-domains of the Internet of Thing (IoT) (Desai, 2015).

According to Schwartz (2016), The Internet of Things (IoT) is an exciting field that proposes not only to have all the devices that surround us connected to the Internet and interacting with us, but also between each other. It is estimated that there will be 50 billion IoT devices in the world by the year 2020. The term *Internet of Things* was first used by Kevin Ashton, co-founder and executive director of the Auto-ID Center, when he was doing RFID (Radio-Frequency Identification) related research at Massachusetts Institute of Technology in 1999 (Zhou, 2015).

Realizing the importance of the technology that is explained above, the writer is motivated to write a final report entitled “Smart Home Prototype with Internet of Things (IoT) Concept Using Raspberry Pi and Arduino”.

1.2 Objectives of The Final Report

According to the statements that have been described previously, the objective of this final report is to produce an effort that is able to do the following things:

- a) Introducing Smart Home more interactively, and
- b) Becoming a consideration for people who want to apply the Smart Home in real life.

1.3 Significances of The Final Report

There are several benefits of writing this report. First, it is expected that this report can be a reference for people in implementing Smart Home in actual life. Second, this report is expected to increase public interest in using the Internet as well as possible.