

ABSTRACT

PROTOTYPE OF HOME AUTOMATION USING MOBILE PHONE WITH WIRELESS TECHNOLOGY FOR DISABILITIES

Disability is an inability of a person to perform a certain activity within the range considered normal for humans, largely due to an inability to move around. Someone who has disability problems, especially people with body abnormalities or less mobility will be difficult to move freely. This is because these people have limitations in their daily activities, such as turning ON or OFF electronic appliances in the house.

In this final project, a prototype of home automation was designed using mobile phone with wireless technology. This system consists of Raspberry Pi 3 microcomputers. The application of this system is based on Android using wireless network. It has three features to enable the ON / OFF status of the electronic appliances, to set the brightness where HPL (High Power LED) was used as an indicator, and to check the state of the door in an open / closed status using reed switch sensor and door lock solenoid to lock / unlock the door. Overall, it could fortunately help people with disabilities to perform their daily activities more effectively and efficiently with less effort.

The results of this test indicates that the three features mentioned above has worked well as intended as the expected results. Based on the survey results, despite having internet network issues resulting in differential delay during the open / closed door status, disabled people are greatly assisted by this system.

Keywords: *Raspberry Pi 3, wireless, electronics appliances, HPL, Android.*