

HOME AUTOMATION SYSTEM USING RASPBERRY PI

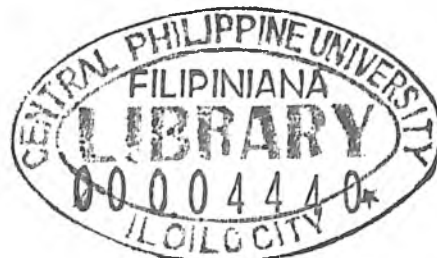
A Capstone Project
presented to
The College of Computer Studies
Central Philippine university
Iloilo City

In Partial Fulfillment
of the Requirements for the Degree of
Bachelor of Science in Information Technology

By

Ysmael J. Tabuada
Mark Jomel D. Bernardino
Paul Adrian M. Guillergan
Jian Patrick G. Segovia

November 2018



HOME AUTOMATION SYSTEM USING RASPBERRY PI

Tabuada, Y.J., Bernardino, M.J., Guillergan, P.A., Segovia, J.P.

ABSTRACT

Today, we are living in the world of technology wherein it is necessary for us to have access our home and appliances from any desired location. Several home automation systems use smartphones to communicate with micro-controllers. Thus, the proponents of this study came up with an idea that suits in controlling any home appliances that sometimes most of us forgot to turn off most especially when we are away from home. The proponents created and developed the Home Automation System using Raspberry Pi that systematically can help us to control our home appliances anywhere in the world using Internet of Things. This study found that the method of Evolutionary Prototyping can be done quickly and can be evaluated by its users and then apply their feedbacks to the proposed system. It requires a few iterations because several prototypes will be made and continues the cycle until it meets the user's need. A LAMP Server was installed on the raspberry pi because it acts as the Server and can be used as a Web Interface using PHP, MySQL and JavaScript. Through this system, the user can register a unique account and log in to access the website and the server. Any user that are registered can add and control all appliances, use the templates and set a preferred schedule. Moreover, the user can monitor their power usage and control the appliances using raspberry pi for the safety of the home and could inform the home owner about the energy consumes. All the objectives and purposes of this research about home automation system were met during the conduct of the study. The problems

that were identified were properly addressed through the system. The Home Automation System using Raspberry PI enabled users to control home appliances and was able to conserve energy by minimizing the electric usage of appliances that are left switched on or open.