UNIVERSITI TEKNOLOGI MARA

SMART SENSORY HOME TECHNOLOGY WITH BLUETOOTH MODULE

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ABSTRACT

Through these creative studies the conventional switches that have served us for decades are being reinterpreted in the constantly changing world of home automation. The main goal of this research is to design an effective automated switch system for home appliances that allows users to operate them with their cell phones by using the power of current technology, namely a Bluetooth module. With the integration of sensor-based processes into our houses, this initiative advances our understanding of everyday routines in a ground-breaking way. We have the potential to completely transform the way we interact with our appliances by creating a self-running smart home system that is built on Bluetooth and runs on the Thinker Cad and Proteus platforms. There are many benefits to this technology. Just think about how convenient it would be if your fans, TV, and lights in your house automatically turned on as you walked in the door and acted in unison with your movements. An array of sensors that can identify human presence inside a certain area is at the center of this system. When a sensor detects the presence of an individual, it quickly connects with a Bluetooth module, which then sends the information to your smartphone so that it can be easily accessed. This prototype is capable of detecting human movements with the use of Arduino programming. Thanks to this cutting-edge advancement in home automation, people may explore their houses without giving switching a second thought and can easily and comfortably integrate into their regular routines.

Traditional switches, which have been used for decades, are being reinterpreted in the ever-changing field of home automation thanks to creative studies. The goal of this study is to create an efficient automated switch system for home appliances that allows users to control them with their cellphones by using the capabilities of current technology, specifically a Bluetooth module. The incorporation of sensor-based processes into our houses represents a paradigm shift in our view of daily activities. The envisioned self-functioning smart home system, built on Bluetooth and running on the Thinker Cad and Proteus platforms, has the potential to transform our interactions with

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CHAPTER ONE

INTRODUCTION

This chapter will cover the project's inception, including what it is about and whether anyone can contribute. And what can be achieved by achieving the goal, and lastly about scope of work that needed to make this project.

1.1 Introduction

The concept of home holds a special place in our lives, offering refuge from life's weariness and shelter from the scorching heat and relentless rain. When we think of home, we envision a space where we can find solace and comfort. In every household, a fundamental element for making this haven function is the humble switch. From lamps that illuminate our spaces to fans that whisk away the sweltering air and television screens that offer us a window to the world, switches have been the conduits of control for our domestic environments. As technology advances, the idea of home automation emerges, transforming the way we interact with our living spaces. This innovative technology takes the essence of the common switch but infuses it with unprecedented ease and efficiency. Take, for example, the automatic fan that senses the ambient temperature and responds by spinning into action once it reaches a pre-set comfort level. Such developments represent just a glimpse of the future of home automation. In the days to come, we can expect a remarkable evolution in the field, with groundbreaking advancements that will revolutionize the way we experience and interact with our homes, making them not just shelters but intelligent, responsive environments that cater to our every need.

One of the many strategies for improving smart home technology, sensor system integration sticks out as a crucial one. We've already seen the application of sensor systems in a variety of contexts within the constantly changing field of smart homes; each setting has pros and cons of its own, a lot of that are entwined with the issue of device compatibility. The main