

**UNIVERSITI TEKNOLOGI MARA
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**THE ENERGY CONSUMPTION
MONITORING DEVICE VIA IOT
AND ANALYTICS ON UBIDOTS**

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ABSTRACT

Electricity is one of the useful energy in this world. Nowadays, the rating of uses of the electricity increase from year to year because most of the component needs the electricity to run [1]. The effective management of energy consumption of electricity can assist community to use the electricity in efficient path. Thus it can prevent the global warming. There are many ways to minimize the rating of the power consumption of electricity. In this project, an Internet of Things (IoT) system has been introduce to monitor the power consumption in the home. The Intel Edison devices was used to monitored about the power consumption usage in the home by sending alerts, suggestions, statics, graph which shall informed to their owner about the power consumption. This device connecting to the internet and transferring the data collected by them and store to the server [2]. By using Internet of Things (IoT) system, energy consumption of the home have been sent to the cloud to be analyze by using graph, pie chart and so on. With the huge number of things and sensors connected to the Internet, a massive and in some cases real-time data flow were automatically produced by connected things and sensors [3]. The data that have been collected were analyze everyplace as there is an internet connection [4].

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CHAPTER 1

INTRODUCTION

1.0 BACKGROUND OF THE STUDY

In the new era, the production of the electrical appliances increasing continuously by time. It's because of the increasing of the technology. As known, every house are using the most of the electrical appliances to easily their works. The user can only know the total of the energy consumption that has been use only once in a month. This framework disaggregates information from total power load and analysis the energy consumption of an appliance with the goal that user can monitor the energy usage for their home.[5]. To overcome this problem, using concept of IoT (Internet of Things)[2], the user can know the energy consumption that has been used. In addition, the user also can be alerted if there are over limit of the energy usage in their homes. In this manner, the management of the energy consumption is imperative in our life. There are already many technology that has been used to solve this problem. But, the system only have been installed at certain place because of costly and difficult to deal with the system. By carry out this IoT system, the energy consumption can be monitored. The information can be put in the cloud and can be utilizing by using software to decide the energy consumption.

1.1 PROBLEM STATEMENT

Currently, there are many system that have been used to manage the energy consumption, but the result for the energy measurements showed that the system does not always give good energy consumption estimation[6].

For the household appliances, there is no complete Nonintrusive Appliance Load Monitoring (NIALM) solution that suitable for it[7]. Unsuitable appliances can increased the energy consumption that also can increasing the electric bill.