



**SMART VACUUM FLASK WITH BEVERAGE IDENTIFIER AND
TEMPERATURE INDICATOR**

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ABSTRACT

Nowadays, vacuum flask is an important device that can fulfill the demand of convenient life and energy saving method. The users normally have difficulty to determine the temperature of drinks or food and likely to forgot what the keep in their thermos. Therefore, we came out with idea to add electronic features to the thermos with are temperature indicator and beverage identifier. For the temperature indicator, we use LM35 as our temperature sensor and Arduino Uno acts as microcontroller while for beverage identifier we use Light Dependent Resistor, LDR as sensor with the concept of tomography. Based on the result, we able to tackle the problems where thermos able to indicate temperature and able to identify the type of beverage in the thermos. In conclusion, we successfully solve the user difficulties using thermos with the additional electronic features.

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DECLARATION OF ORIGINAL WORK

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ABSTRACT

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CHAPTER 1

INTRODUCTION

1.1 BACKGROUND STUDY

Opening and closing of doors have been always a tedious job, especially in places like shopping malls, hotels, and theaters where a person is always required to open the door for visitors. Automatic opening and closing of a door by sensing any body movement near the door is achieved with the help of PIR (Passive Infrared) sensor. A motion detector is a device that detects moving objects, particularly people. A motion detector is often integrated as a component of a system that automatically performs.

Automatic doors are doors which open automatically when approached by someone rather than needing to be opened manually with a door handle or bar.