WARMER THERMOS POWERED BY POWER BANK

WITH SELF-STIRRING

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A project report submitted to the Faculty of Electrical Engineering,

Universiti Teknologi Mara in partial fulfillment of the requirements for the award

of Diploma in Electrical Engineering

FACULTY OF ELECTRICAL ENGINEERING

UNIVERSITI TEKNOLOGI MARA

MALAYSIA

SEPTEMBER 2015

ACKNOWLEDGEMENT

Thanks to God, we are able to finish this final year project with successfully. Without patient we won't be able to finish up this project. First, really big thanks to the Coordinator Final Year Project 2, Miss Noor Fadzilah Binti Razali because approve our final year project. Through this Final Year Project we were able to show our talents and apply what we have learns before during the progress of the project. We would like to express our deepest appreciation to those who provided us the possibilities to complete this report.

We also would like to express our special gratitude especially to our supervisor, Mr. Amar Faiz Bin Zainal Abidin cause has given to many guidelines and also advise us to complete this final year project and also he also contribution in stimulating suggestions and encouragement, his helping hand to coordinate our project especially in writing this report and also in constructing the programming of our project. Without his help this final year project will not run smoothly.

We also like to thank our friends who supervise under Mr. Amar Faiz, who has help us and give support to us to complete this final year project. All of them have helps us either in direct or not. A very big thanked to our family that has support us on our financial to buy the prototype for this project.

ABSTRACT

The project that we have built is inspiration from what the important thing that human needed in this life and to improvise the existing thermos. The project that we build has better features that needed by most all of us. Besides, the motivation to learn the coding and programming of the arduino to the LM35, the motor, LED also boosted to design this project. In addition, to complete the diploma of electrical engineering also motivated us to pursue and finish this project.

The project title is "Warmer Thermos Powered by Power Bank with Self-Stirring". This thermos is design with warmer to warm the water and has stirring. The warmer will warm the water automatically when the actual temperature of water in the thermos is less than desired temperature. The led will display the water temperature from 0 to 50 degree Celsius. Push button is provided, so the user can set the water temperature. When the temperature of the water is set, the led will blink according to the temperature that users set.

The objectives of this project are to design a thermos that can be warm the water in the thermos by using power bank as the power source, to make thermos that has self-stirring and control the water in the thermos. The users can set the water temperature by themselves.

The problems that make us comes out with this ideas is when we observed that many of users is difficult to get warm water when go outside. Besides, the stirring is provided because the users are limited to do something by using hand. Lastly is to keep the water warm for long period of time or to always get warm water.

The scope of work for our project is to design the thermos that will be warmed by using rechargeable battery, also the self-stirring also provided to make user more easy to use this thermos. LED will display the water temperature by its range. Since, this thermos built-in rechargeable battery, so user not needs to warm water using kettle or water heater that using power supply. The user can bring the thermos anytime as long as the thermos has been charged. Then, it's also has self-stirring and it is very suitable for camping. So, the user can make a coffee or tea at any time or anywhere. Besides, the user doesn't have to bring or get spoon to stirring the coffee or tea because this thermos is automatic self-stirring. The LED will light up one by one for every 5°C increasing in the temperature to make us more alert with the temperature of the water.

In conclusion, after complete the hardware and the coding of the Arduino, we successfully achieved the objectives of this project to design a thermos that can warm the water in thermos by using power bank, to make a thermos that has self-stirring by using the dc motor to stir the water and to control the water temperature in the thermos by using Arduino as the controller, so the user can set the water temperature by themselves.

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