PRESENTATION
ON

"BOOLEAN ALGEBRA CALCULATOR"

By

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INTRODUCTION

*Boolean algebra is a mathematical expression which solves the logical operations and expressions.

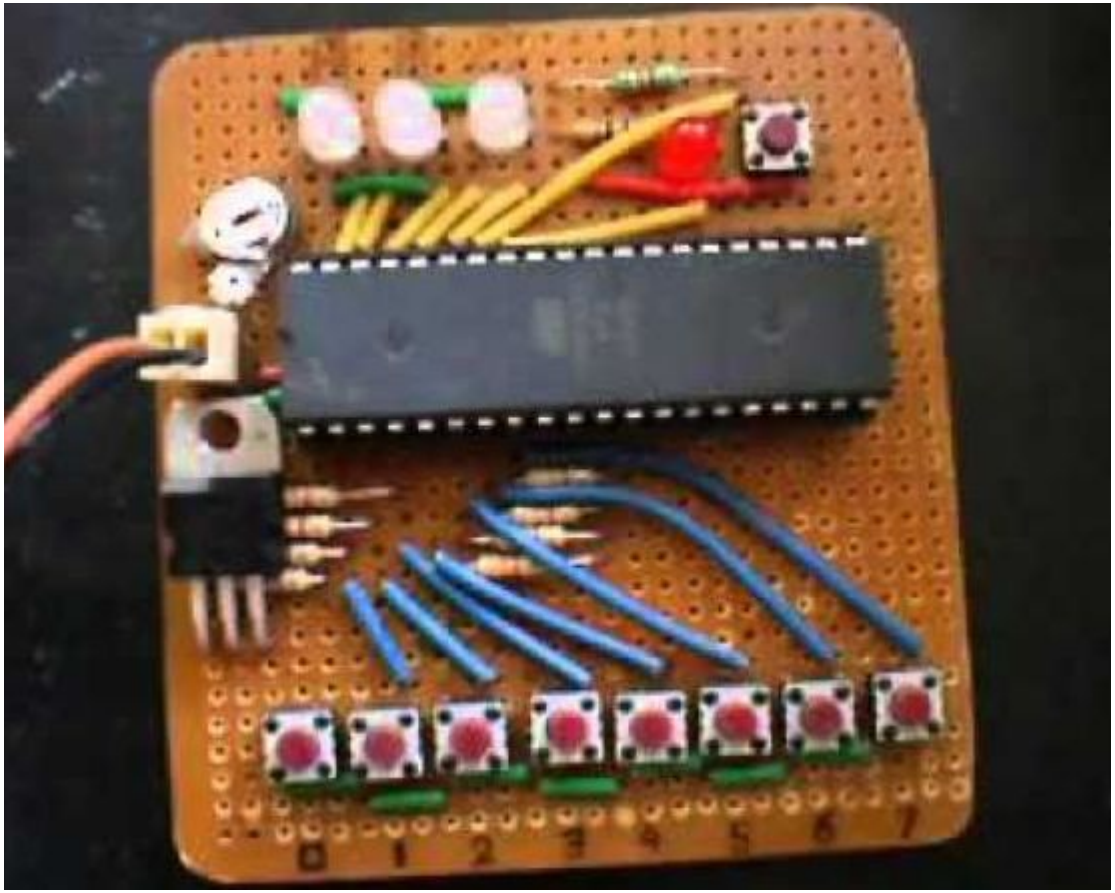
*we use Boolean Simplification methods like quine mc clusky algarithm.

*it works as portable calculator to simplify boolean algebra.

*Microcontroller ATMEGA 16L is used for the automation purpose.

*it is used as tge brain of the project.

*it controls output according to input.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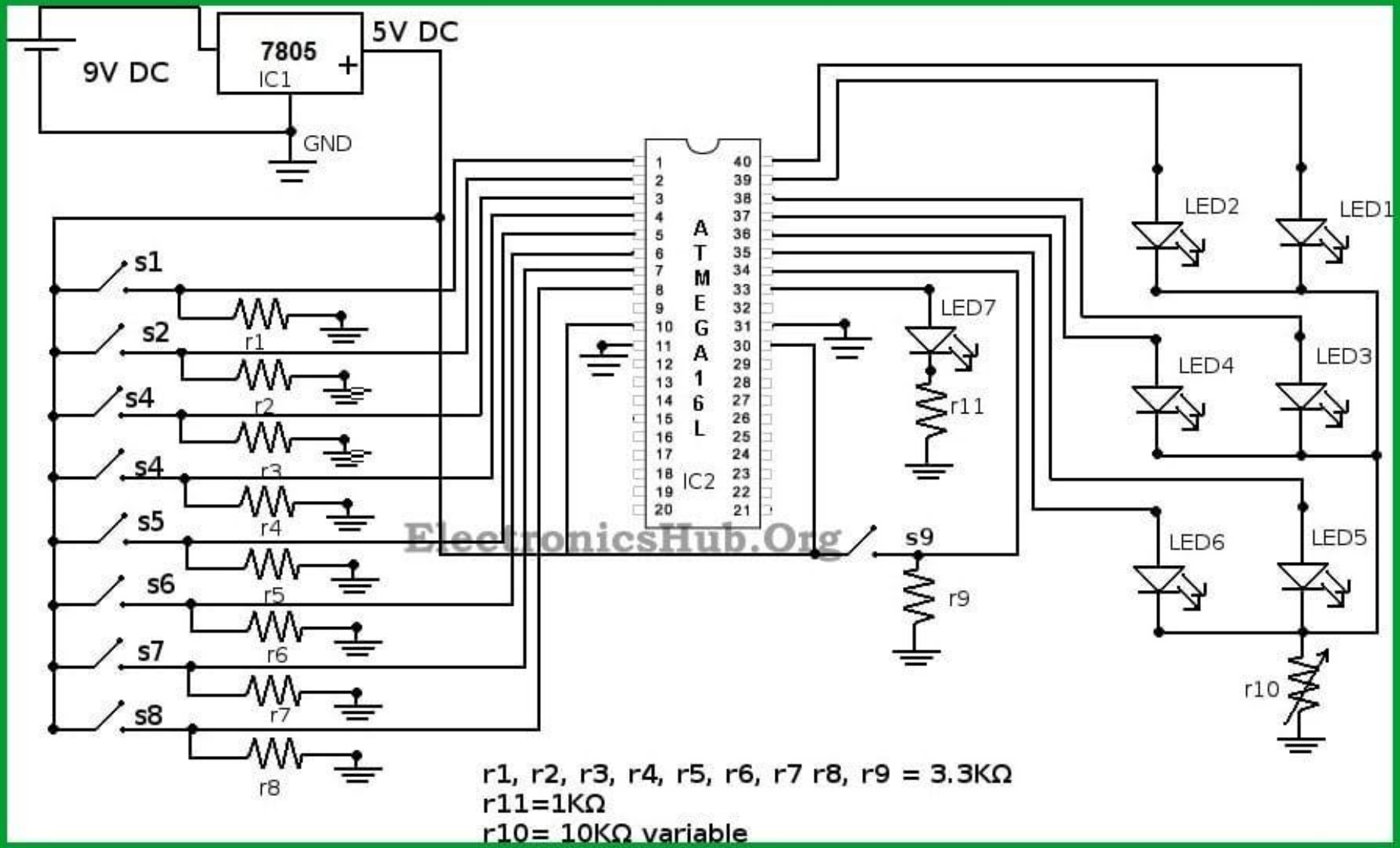
AIM and OBJECTIVE

AIM: To simplify Boolean expressions using Quine-Mc Cluskey algorithm

Objective:

1. Useful and clever way of solving digital circuits.
2. Reduce cost.
3. Raise speed.
4. Increase efficiency.
5. Optimization.

TOP LEVEL BLOCK DIAGRAM



PROJECT DESCRIPTION

The circuit is a simple three-variable minimizer that uses the Quine MC Cluskey algorithm and finds minimum sum of products by implementing Boolean functions. Boolean algebra calculator simplifies the logic functions and Boolean expressions by using the laws and theorems that are implemented on this algorithm. The microcontroller plays a major role in this project which is coded with this algorithm and controls the other components used in the circuit.

When the power is switched on, the LED glows indicating that the microcontroller is ready to take the inputs as min terms provided by the keypad, and these Boolean expressions are given in the SOP (Sum of Products) form.

PROGRESS WORK

We have researched about our project and collected the required information .We are also ready with our code . Required components have been bought. Therefore we are ready to build our circuit.

Milestones/Schedule

Table A - Milestones scheduled for achievement and performance against those milestones:

Milestone	Baseline Date	Target Date	Achievement
ABSTRACT	31-08-19	20-08-19	SUBMITTED
COMPONENTS	08-09-19	08-09-19	COMPONENTS WERE PURCHASED
PRESENTATION	13-09-19	14-09-19	PRESENTATION WAS MADE

Project Work Distribution

Name of Team Member	Work distributed
M.JAHNAVI	Abstract making and components connection
SAHANA.Y	Presentation making and coding
SUBHASHINI.S	Working of components and circuit connection
SWATHI.A	Working of components and circuit connection

OUTCOME OF PROJECT

Simplification of different Boolean expressions at a faster pace ,low cost ,and by using less power and energy.

REFERENCES

- ELECTRONICS HUB

  https://www.electronicshub.org/boolean-algebra-calculator/
- ACADEMIA.EDU for coding

  https://www.academia.edu/36304162/QUINE-MCCLUSKEY_C_CODE
- YOUTUBE
  https://www.youtube.com/watch?v=NZNeA3ED2MA

Thank You