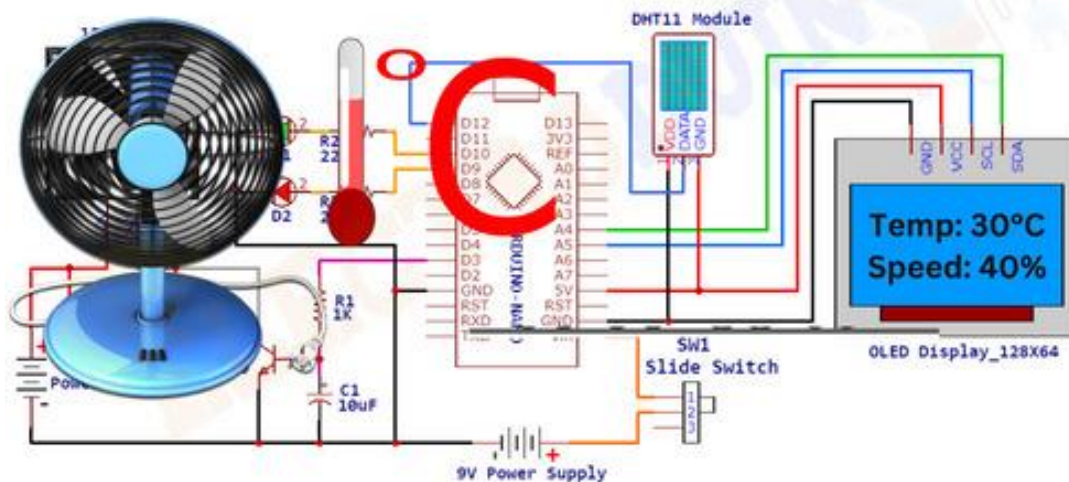


- 1. Temperature Monitoring:** The implemented system successfully measures the room temperature using a temperature sensor, such as the LM35. The LM35 sensor provides accurate temperature readings, allowing the system to monitor the temperature effectively.
- 2. Fan Speed Control:** The fan speed is controlled based on the temperature readings. By utilizing pulse width modulation (PWM) technique, the Arduino adjusts the fan speed to maintain the desired temperature range. This ensures efficient cooling while reducing power consumption.
- 3. Display:** The system incorporates an LCD display to show the current temperature and fan speed levels. The LCD display provides real-time feedback, allowing users to monitor the temperature and fan speed easily.
- 4. Power Consumption:** One of the objectives of the project is to reduce power consumption by adjusting the fan speed based on temperature. By dynamically controlling the fan speed, the system optimizes energy usage and improves overall efficiency.
- 5. Hardware Components:** The hardware components used in the project include Arduino Uno, LM35 temperature sensor, LCD display, LED 16x2 display, DC motor, battery, resistors, potentiometer, capacitor, transistor, and diode.
- 6. Conclusion:** The implemented temperature-based fan controller and monitoring system using Arduino successfully achieves the desired objectives of temperature control, fan speed adjustment, and power consumption optimization. By dynamically adjusting the fan speed based on temperature, the system provides efficient cooling while reducing energy consumption.

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IV. CONCLUSION

The conclusion of the project "Temperature Based Fan Controller And Monitoring With Arduino" is that the system successfully controls the fan speed based on temperature readings and monitors the temperature in real-time. It effectively measures the room temperature using a temperature sensor like the LM35 and adjusts the fan speed using PWM. The system optimizes energy usage, improves cooling efficiency, and provides real-time feedback through an LCD display. Overall, the temperature-based fan controller and monitoring system using Arduino offer an efficient solution for temperature control and fan speed adjustment in various applications.

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