

## INTISARI

### **PURWARUPA PENGENDALIAN DAN PEMANTAUAN SUHU RUANGAN INKUBATOR BAYI BERBASIS MIKROKONTROLER ATMEGA32**

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Didalam perkuliahan dipelajari berbagai macam *software*, termasuk IDE (*Intergrated Development Environment*) Arduino. Dengan mengaplikasikan ilmu tentang IDE (*Intergrated Development Environment*) Arduino diharapkan mampu membuat pengendali dan pemantauan suhu ruangan inkubator bayi yang dapat memudahkan pemakai dapat mengendalikan suhu ruangan inkubator.

Purwarupa pengendali dan pemantauan suhu ruangan inkubator bayi berbasis mikrokontroler ATmega32 yang dirancang menggunakan IDE (*Intergrated Development Environment*) Arduino, sensor DHT11, *pushbutton*, dan LCD (*Liquid Crystal Display*). Dan hasil pengukuran suhu ditampilkan melalui LCD (*Liquid Crystal Display*).

Sistem pengendali suhu dan kelembaban diimplementasikan menggunakan board mikrokontroler ATmega32 dan IDE (*Intergrated Development Environment*) Arduino. Sensor DHT11 yang diletakkan pada salah satu bagian ruangan. Sensor akan mendeteksi perubahan suhu pada ruangan dan langsung menghasilkan nilai suhu. Pengendali suhu akan mengendalikan aktif dan tidak aktifnya aktuator sesuai dengan kondisi suhu yang di setting.

Kata Kunci: inkubator, IDE (*Intergrated Development Environment*) Arduino, *pushbutton*, *relay*, sensor DHT11

## **ABSTRACT**

### **THE PROTOTYPE CONTROLLERS AND MONITORS THE ROOM TEMPERATURE INFANT INCUBATOR MICROCONTROLLER BASED ATMEGA32**

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In the course studied a variety of software, including the IDE (Integrated Development Environment) Arduino. By applying the science of IDE (Integrated Development Environment) Arduino expected to make controlling and monitoring the temperature of the room baby incubator to enable the user to control the temperature of the incubator room.

The prototype controller and room temperature monitoring infant incubator based mikrokontroler ATmega32 designed using an IDE (Integrated Development Environment) Arduino, DHT11 sensor, pushbutton, and LCD (Liquid Crystal Display). And the temperature is displayed via an LCD (Liquid Crystal Display).

Temperature and humidity control systems are implemented using the ATmega32 microcontroller board and IDE (Integrated Development Environment) Arduino. DHT11 sensor is placed on one side of the room. The sensors will detect changes in temperature in the room and instantly generate temperature values. Temperature controllers will control the active and inactive actuator in accordance with the temperature conditions in the setting.

Keywords: incubator, IDE (Integrated Development Environment) Arduino, pushbutton, relay, sensor DHT1