

If humidity required is higher, Arduino will tell fan to rotate at higher speed, so more and more water vapors are spread in the incubator chamber and in other it will do the opposite, which is slowing the fan down.

### **APPLICATIONS:**

Providing a control environment have numerous applications, some application of autonomous incubator are;

1. Control environment for an infant.
2. Keeping chemical regents in a laboratory.
3. Control environment for medicines and edibles.
4. Hatching chicks form eggs uses same control environment technique.

### **FUTURE WORK:**

To take this model to advance level following areas of research are important, first implementation of oxygen source and its flowrate control system into the incubator. Multiple body temperature sensors should be used for accuracy; third the control unit can be made more versatile.

### **COST DETAIL:**

<b>COMPONENT</b>	<b>MODEL</b>	<b>PRICE (PKR)</b>
Acryl Casing (3mm)	18inches x 18inches x 12inches	2300 x 1
Arduino	Mega 2570	1100 x 1
H-Bridge	L298N	450 x 1
Power Supply	110/220V AC to 24V DC 2.4 Watt	400 x 1
Temperature & Humidity Sensor	DHT11	80 x 2
Pushbutton	-----	95 x 6
Relay	220V AC with 5V DC Control	40 x 1
LCD	Dot Matrix 20x67 LCD	250 x 1
Fan	12V DC fan via Brushless Motor	200 x 1
Heater	Coiled Heating Element	70 x 2
Ultrasonic Mist Maker	1A 24V DC	1000 x 1
Travel	Economic Class	400
Silicon glue	-----	80 x 2
Tape	-----	100 x 1
	<b>TOTAL</b>	<b>6450</b>