

# ezSystem elab16m Project 6s: Temperature Controller

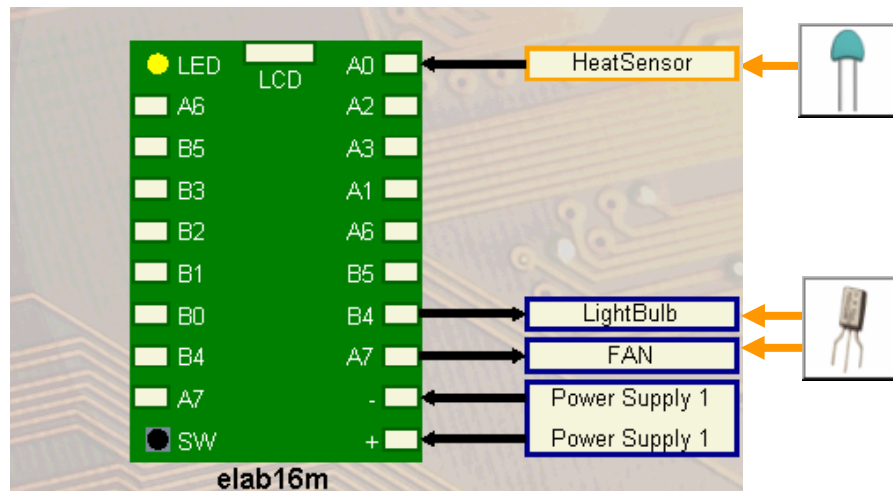
## Project description:

The project is a temperature controller that uses the elab16m, a dc motor electric fan, a thermistor temperature sensor and a mini light globe.

The temperature controller keeps the temperature of the thermistor close to the set point. When the temperature is above the set point, it turns on an electric fan to cool down the thermistor. When the temperature is below the set point, a light globe turns on to heat up the thermistor.

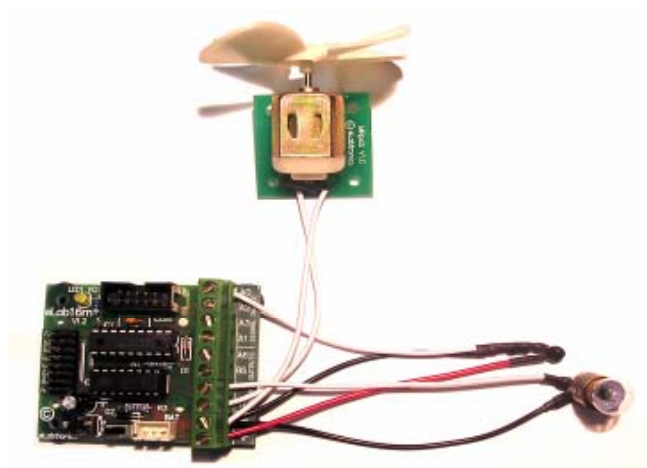
## 1. Design the Temperature Controller

Use ezCircuit Designer to construct an input/output (I/O) diagram



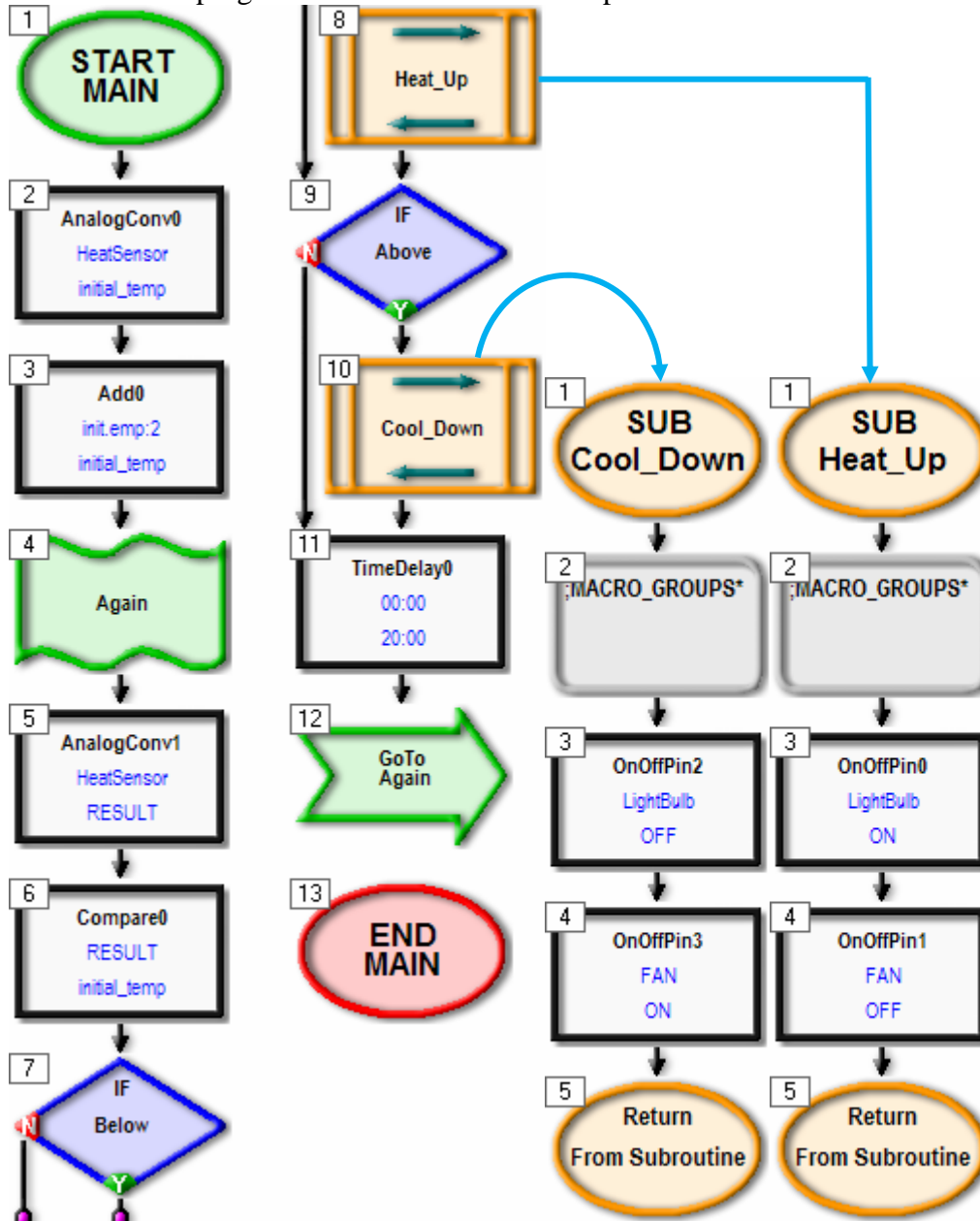
## 2. Build the Temperature Controller

Use ezCircuit Designer I/O diagram to connect the hardware



### 3. Program the Temperature Controller

Use ezCoreChart to program the functions of the temperature controller.



#### Extension:

Currently the temperature controller has only one single set point. It means that either the globe heater or the fan cooler is on at any one time which is wasteful of energy. Less energy will be used if the controller has upper and lower temperature set points.

1. Modify the program so that the heater is only on when the temperature is below the lower temperature set point and the fan cooler is only on when the temperature is above the upper temperature set point.