

# ezSystem elab6 Project 4s: Washing Machine control

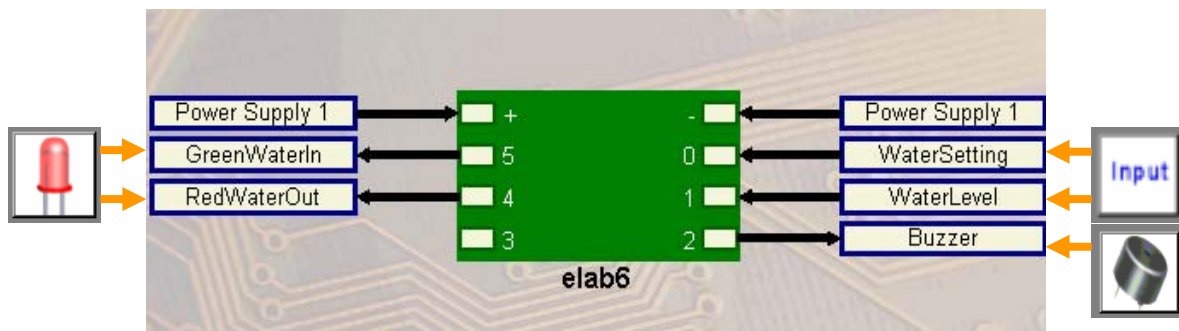
## Project Description:

The project is a washing machine cycle controller that uses the elab6, a green LED, a red LED, 2 potentiometers and a buzzer.

The washing machine controller will start a wash cycle by pumping water into the washing machine (green LED on) until the water level is greater than the water level set point. The motor will then turn on for two seconds to “wash” the clothes. After that the water will be pumped out until the water level is below the set point.

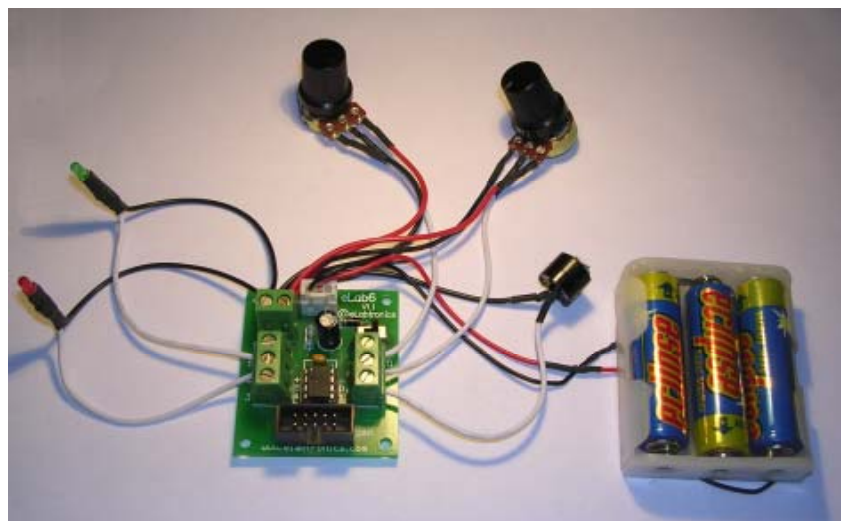
### 1. Design the Washing Machine Control

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



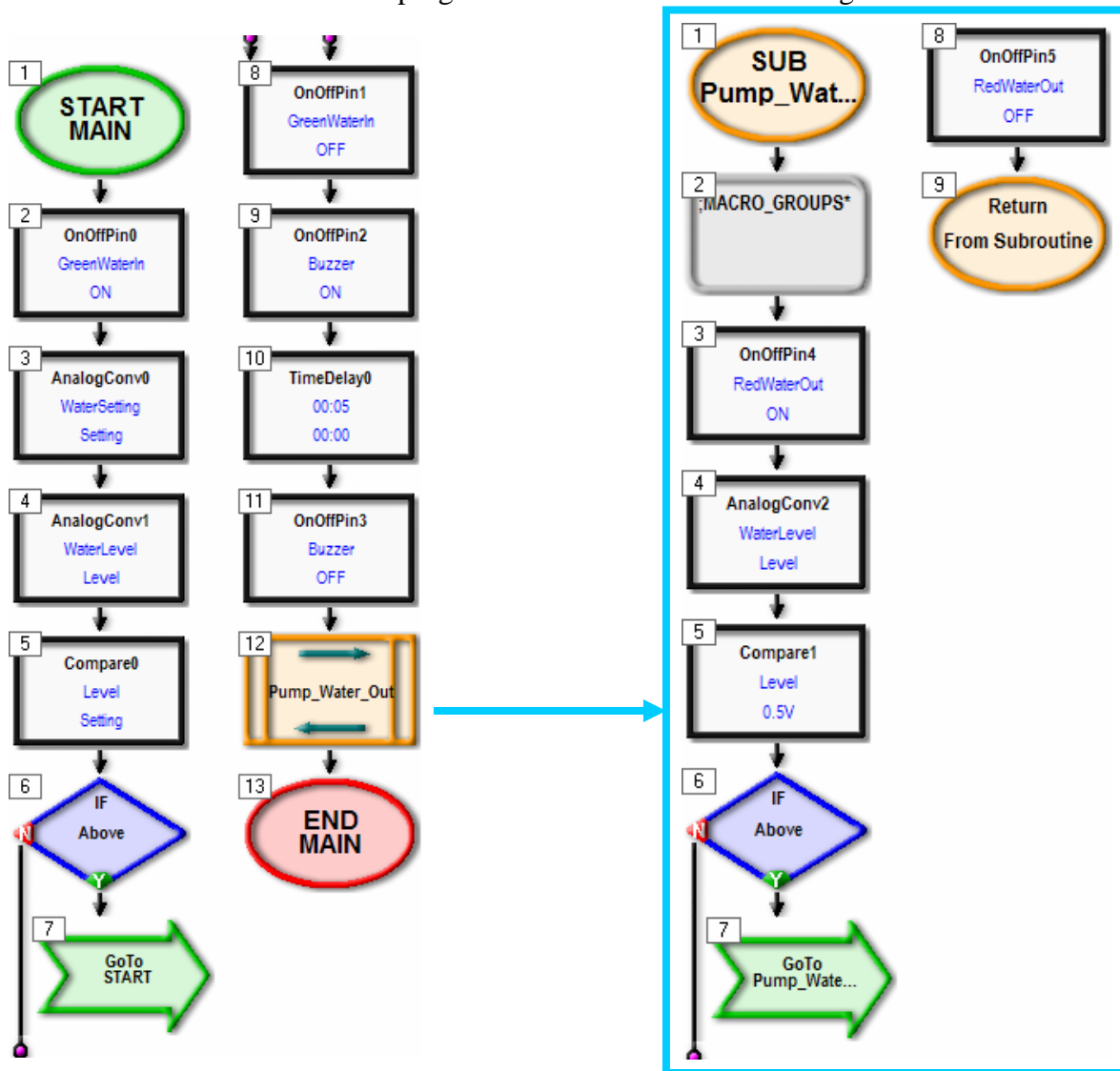
### 2. Build the Washing Machine Control

Use ezCircuit Designer I/O diagram to connect the hardware



### 3. Program the Washing Machine Control

Use ezCoreChart to program the functions of the washing machine



#### Extension:

1. Add a rinse cycle to the program. Pump water into the washing machine until the water level is greater than the water level set point. Start the motor (use the buzzer as the motor in this project) for two seconds and pump the water out until the water level is below the set point used in the wash cycle.

**Hint:** Create a subroutine group called “Pump\_Water\_In” of all the icons used to pump the water into the washing machine. This group will be similar to the “Pump\_Water\_Out” group created earlier. This will enable you to reuse the group in the rinse cycle.

2. Add a spin cycle to the program. Start the motor for fifteen seconds to remove excess water from the clothes.

Suggestion: If an eLabtronics MDriver board is available, the buzzer in the project can be replaced with a motor to operate the washing machine.

3. Replace the buzzer used in this project with an MDriver board and a motor.