The Whole process has to be done in two module, Temperature and water level.

First work on temp module

1. Temperature module

Step 1 = As shown in the figure attached with this copy, we see two tank setups,

A water heater powered with external source is placed in a tank so that its temp rises.

Step2 = A sensor will read temperature data of the water(sensor has been provided) and will send to microcontroller(AVR).

Step3 = This microcontroller will perform these task.

1. Display temp data of water on lcd
2. Send data to pc using serial comm, after reaching on pc , data will be acquire by matlab and graph of data is plotted.
3. A cutoff min and max temp is to be set by user at run time.

Step 4 = as we reach min temp value, heater must be put on and if temp reaches max temp , heater must be put off, using relay or any other devices.

Step 5 = this controlling of temp must be done through matlab.

Step 6 = last a gsm module is attached with the controller so that whenever temp exceeds max value, it must send a message to the concerned person.

1. Water Level module

Step 1 = three sensor on tank 1 and three sensor on tank 2 is placed as shown in figure

Step2 = top sensors will sense over flow and if over flow occurs a msg has to be send to concerned person using gsm module.

Step 3 = as shown in figure , both tanks has two inputs(not manual)

Step 4= level of both the tanks is to be measured using these sensor and level has to be send to pc serially and monitored on matlab.

Step5 = in figure we see two outlets which are manual, if we open valve 1 for some time and close it , level of tank 1 will decrease making both level uneven.

Step6 = we have to rotate the pump in such a way such that the level of both tanks must remain same.

**Note: Microcontroller used must be AVR.**