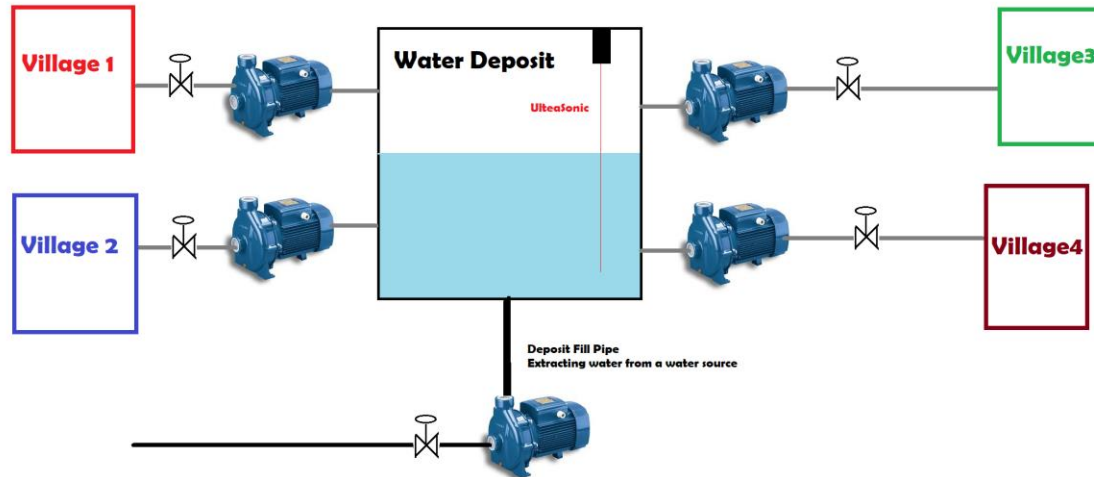


This is your first application , we will use whatever we learned so far to make you practice writing expandable PLC program.

Don't try to look at the solution , unless you tried coding it , and actually , succeeded:



You have a water distribution system consisting of :

- Water Deposit
- An Input Pump
- Multiple Output Pumps each having an Over Current fault feedback signal
- Multiple Valves
- An Ultra sonic sensor to measure the water level

Scenario:

- If the water level is above a certain user-defined threshold then pump, then all four pump should engage
- If the water level is below a certain user-defined threshold , then the four pumps should stop and the input pump should start filling the deposit.
- If any valve is closed no pump should be turned on
- If any pump failed to start , the PLC output should be turned Off

Using IF , FOR , And ARRAYS (Finite State Machine is optional)

Your main goal is to make this system expandable to more pumps with almost no code modification.

Expand the system:

- Expand to include 2 Input pumps and 8 Output Pumps with their valves and feedback signals

Solution is attached in this lecture , make an effort to be a good programmer . It's totally fine to not do it right.

The purpose of this exercise is not to build a large project , but to get you used jussst a bit to writing and expandable code.