CHAPTER 5

CONCLUSION

5.1 Summary

Water monitoring system is a project that can be applied in agriculture sector. This project is the solution to help the user to pump water from well reservoir or river into the water tank using the automatic pumping system and monitor the water level on the dump monitoring system. As agriculture is been focused nowadays, it is important to apply this project in a wide farm.

Knowledge about selecting the transducer as a detector to detect the water level is very important. The detector is a great addition to the suite of detectors available to detect distance of the object. They are quite inexpensive, use very little power, fit in small spaces, and have a unique range that is ideally suited to small robots in human spaces such as hallways, rooms, and the occasional maze.

A pump system in this project is using an ac pump. Transistor driven relay circuit is integrate together to make it can operate in dc condition because it is able to control an output circuit. If the coil is energized with DC voltage, a diode is frequently installed across the coil, to dissipate the energy from the collapsing magnetic field at deactivation, which would otherwise generate a spike of voltage and might cause damage to circuit components. If the coil is designed to be energized with AC voltage, a small copper ring can be crimped

to the end of the solenoid. This "shading ring" creates a small out-of-phase current, which increases the minimum pull on the armature during the AC cycle

Upon completion of this project, understandable in the basic and fundamentals of data acquisition theories is very important. ADC is used to convert analog signal to digital signal. The simplest digital signals have only two states, and are called binary. All whole numbers can be represented in binary form as strings of ones and zeros. Digital signals propagate more efficiently than analog signals, because digital impulses, which are well-defined and are easier for electronic circuits to distinguish from noise, which is chaotic. This is the chief advantage of digital modes in communications. Computers "talk" and "think" in terms of binary digital data; while a microprocessor can analyze analog data, it must be converted into digital form for the computer to make sense of it.

This project was successful, where it achieves the goal and main objective that is to contribute to the society use. It can be concluded that the theories learned are proven true indeed. During developing this project, there are some difficulties that occur such as misconnection and unsynchronized programming with hardware. This contribute problem to the project flow and need very determine trouble shooting.

5.2 Recommendation For Future Project

Water monitoring system has a good potential to implement in future especially for agriculture sector. This system is connected in serial connection between microcontroller and PC interfacing. This project will be more effective if it can be replaced with wireless connection which is accomplished without the use of a "hard wired" connection. With wireless communication, the information or data can be transfer more efficiently between monitor system and pump system for any distances involved.

This project can be expanded by using 2 pumps instead of using 1 pump. The first pump will be used to allow the amount of water from sources that will be flow into the tank and the other pump will be used to flow the water out from tank which controlled by using the other type of sensor. More sensors will be suggested to be more application for future project such as temperature sensor or humidity sensor. The temperature sensor will be suggested to control the water flow from tank to farm by detecting the temperature's environment changes.

The other recommendation to improve this project is by adding new features at interfacing system. The interfacing system can add 'print' and 'save data' features so that users can print or save the present data for documentation and references.