ABSTRACT

In dams that already exist there dam gate are used to adjust the amount of water in the dam. Sluice gates controlled by guardian of the gate so that the water in the dam remained stable. In this case the water is no less and no higher than the existing ones. Therefore, guardian of the gate must be alert at all times. But it is highly unlikely that any current officer is there to keep the dam gate. This tool is useful as a substitute for some or all of the work of an operator. Chosen by the author of this idea is still widely used for controlling gate of the dam using manual techniques using strength of people to open and close the dam gate. In addition to avoid overtopping which could damage the dam. For example a dam urugan Batu Central Java. Therefore created this tool to ease the job as well as facilitate the supervision of the water that is in the dam.

In this final project will be design control system and monitoring of the water level at the dam using an ultrasonic sensor as an *input* to be connect to a certain microcontroller. Data will be process with the intelligent control system fuzzy logic control. From the data in though will be use to drive a DC motor that is connecting to the dam gate to regulate the opening of the dam gate. Then the results of the control system will be displayed on a *web* page.

The results obtained from this research is data obtained from the sensor readings are error ± 0.1 cm, high opening the dam gate with error ± 0.3 cm, the sensor can measure altitude and discharge water as well as automatic door system can work well. For monitoring the state of the dam by using a web server generates display data on the web well.

Keywords : water level, ultrasonic, microcontroller, fuzzy logic controller, DC motor.