

ABSTRACT

Automation system is a system which always need the development of technology in order to make the system more flexible and easy to readjust. This final project is aiming for the application of automation system in a lift. Lift is a transportation equipment, usually moved by using the electrical motor, to elevate people or goods vertically.

The control system which used in this modelling of lift is using *Fuzzy Logic* Method. *Fuzzy Logic* is a logic dealing with the concept of partial truth. Controllers which used in this modelling of lift are Schneider Programmable Logic Control (PLC) and Arduino Uno. PLC is a controller that specially designed to replace the relay-based control system. By using PLC, the system is easier to do error-tracing. *Fuzzy Logic* method that being implemented inside the PLC is Sugeno's *Fuzzy Logic* Method to find the appropriate value for the comfort velocity when using the lift. Implementation of *Fuzzy Logic* method on the control system can control the motor speed in real time even with heavy loads and distance traveled varies the lift. Arduino Uno just use to convert value of Digital to Analog Converter (DAC) from PLC become value of PWM.

Key Word : *Modelling of Lift, PLC, Arduino Uno, Control Velocity, Fuzzy Logic, Distance Heavy Load, DAC, and PWM.*