

# ***ANALYSIS AND DESIGN OF OUTSEAL PLC-BASED AUTOMATIC CAR WASH SYSTEM PROTOTYPE***

*Name Of Student : Victoria Rebeca Gea*

*Student ID Number : 3204201339*

*Supervisor : Marzuarman, S.Si., M.T*

## ***ABSTRACT***

*Technology has a big role in human life, especially in transportation technology. The increasing use of private cars as a means of transportation is one of the roles of technology. Technology also has a big role, especially in jobs requiring a fast process and a control system. One example that uses control system technology is car washing. Car washes are needed because of their efficiency in terms of time and energy spent, especially for middle-class and upper-class people who tend to prefer washing their cars to car washes compared to washing themselves. In this study, the authors designed a prototype of the Outseal PLC. This tool uses a conveyor to transport cars, Outseal PLC as the main brain and proximity sensors as object detectors. The test results of the automatic car wash system operate in accordance with by 5 stages, The test results of the automatic car wash system operate in accordance with 5 stages. The sprinkler pump, saponifying pump, rinsing pump, brushing motor and darkening motor are 100% functional. The process time when washing the car at watering for 19.17 seconds, saponification at 19.87 seconds, brushing at 29,95 seconds, rinsing at 19.39 seconds and wiping at 24,97 seconds. The water requirement for 20 seconds for watering, soaping and rinsing is 180.86 ml, with a flow rate of 0.01 L/second.*

*Keywords: PLC Outseal, Car Wash, Automatic, Proximity Sensor, Conveyor*