

**PLC AND HMI EXPERIMENT MODULE
AS TEACHING AID IN SWISS GERMAN UNIVERSITY**

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STATEMENT BY THE AUTHOR

I hereby declare that this submission is my own work and to the best of my knowledge, it contains no material previously published or written by another person, nor material which to a substantial extent has been accepted for the award of any other degree or diploma at any educational institution, except where due acknowledgement is made in the thesis.



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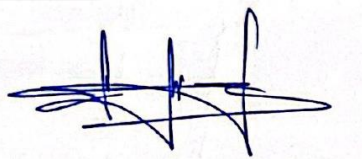


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ABSTRACT

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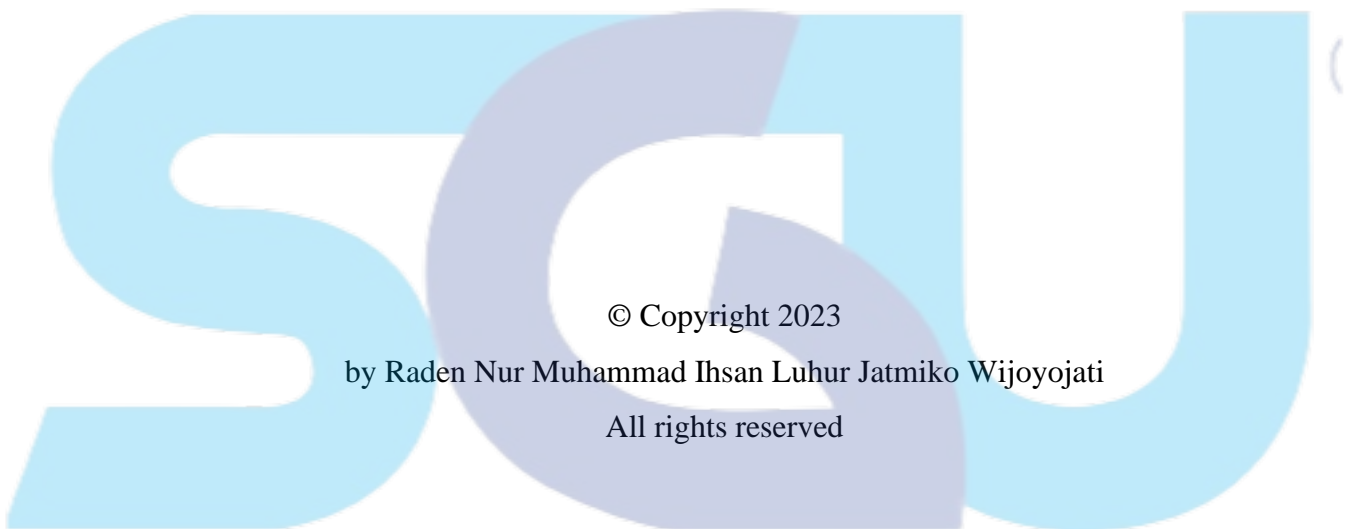
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Currently, SGU Laboratory does not have any equipment for demonstrations to understand Control Technique and Manufacturing Automation learning processes. The training module serves as an instrumentation device to demonstrate how a PLC-controlled closed loop control system (using PID) operates. The general idea of the training module is to control the water temperature and water level by using PID. By utilizing a PID controller, the system can maintain the water level and water temperature inside the container around the setpoint by utilizing information that has been gained by the sensors. This module is created to help students to understand how a close loop control works.

Keywords: PID Controller, Water Level Control, Water Temperature Control, PLC, HMI.



DEDICATION

This work is dedicated to the future of the Mechatronics students at Swiss German University, who I believe will contribute to Indonesia's future development.



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