VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI

A PROJECT REPORT ON

"PROGRAMMABLE LOGICAL CONTROL EMULATOR HARDWARE"

Submitted in partial fulfillment for the award of Degree of

BACHELOR OF ENGINEERING

IN

COMPUTER SCIENCE & ENGINEERING

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CERTIFICATE

This is to certify that the project entitled **"PROGRAMMABLE LOGICAL CONTROL EMULATOR HARDWARE"** has been successfully completed by

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the bonafide students of **DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING, ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2023–24. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the Bachelor of Engineering Degree.

18/5/24

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ABSTRACT

This project introduces a novel use of Programmable Logic Controllers (PLCs) in industrial automation, aiming for precise control of various machines with minimal human intervention. It includes practical exercises and computer-based simulations to enhance student learning about PLC applications. The project covers model design, simulation, and stability analysis, offering a comprehensive approach to exploring and validating industrial automation models. The proposed PLC emulator is cost-effective and versatile, aiding in testing and validating warehouse control systems for increased efficiency and reliability. The insights presented contribute significantly to the discourse on simulation and emulation methodologies in warehouse automation, paving the way for advancements in the field.