



One Page Report of Students Activities

Dept. Name: Electronics and Communication Engineering

Title of the Activity: Technical Poster making on “PLC and SCADA Mini project”

Name of the Faculty Coordinator: Prof.A.A.Anjekar

Date Of Activity:08/09/2023

Brief Description of Activity: The technical poster-making activity on PLC and SCADA proved to be an enriching experience, allowing students to delve into the complexities of industrial automation technologies. Through visually engaging representations and clear information dissemination, students effectively conveyed the critical roles PLC and SCADA systems play in streamlining industrial processes, enhancing efficiency, and ensuring operational reliability. students were provided with comprehensive resources encompassing PLC and SCADA, including reference materials, online tools for graphic design, and guidelines for structuring content effectively. They were encouraged to explore various facets such as PLC programming, SCADA interfaces, communication protocols, and real-world applications in industrial automation. This exercise not only expanded their technical knowledge but also honed their skills in visual communication and presentation of intricate technical subjects to a broader audience.

Number of Students Involved: 20

Outcome:

1) The activity resulted in the creation of visually compelling posters demonstrating participants' comprehension of PLC and SCADA systems. Evaluation criteria included content clarity, visual appeal, technical accuracy, demonstration of integration possibilities, and the ability to effectively convey the importance of these systems in industrial automation.

Sample Copies of poster attach here with

“A Rung base Logic based Automatic Colour Mixing Plant”												
NAME OF STUDENTS: 1. PAYAL PADGHAN 2. PRITI RAMTEKE NAME OF THE GUIDE: PROF. ASHWINI ANJIKAR, PROF. PRACHI PENDKE												
Session 2023-2024												
Abstract: colour plays an important role in our regular lives. There are multiple shades of a single colour which varies their basic concentration. The mixing process in any industry. The main objective of industries is to improve efficiency, increase the productivity rate, reduce errors and eliminate human efforts. In past industries used to change the combination by colour by changing their concentration manually, minor adjustments in colour combination change the entire shades of colour which causes complication in industrial sectors. To overcome this problem s. We have designed a prototype that will automate the mixing process.												
<p>Introduction: In today's world, the necessity of greater efficiency and high quality. The mixing of liquid is the most significant and demanded process in any industry. This process has vast application in different areas of industrial sectors. Various types of mixing can be done, it can be either colour mixing or any other liquid mixing. Colour mixing is the process of developing a new colour by using the combination of primary colours. It is either done manually or performed by machine with a lot of human effort and intervention. We developed a ladder logic design in programmable logic controller PLC. PLC is a device which is widely used in industries to control the system. The primary colours that are used in this proposed system are red, green and blue (RGB). The main reason for choosing this colour is because RGB are primary colours and more output colours as possible with this combination. We have developed 4 colours that are yellow, white, magenta and cyan as an output of the system. At the specific point the specific amount of red and green joints the developed colour is yellow, when red and blue join the consequence is magenta. When green and blue join the consequence is cyan.</p> <p>Conclusion and Future Scope: In any industry the main objective is to improve efficiency, reduce errors, reduce costs and eliminate human efforts. Be in the food industry, pharmaceutical industry or paint and coating industry etc. Mixing of liquid plays a vital role and has a wide range of application in an industrial as well as commercial purpose, however with the advancement in technology, many industries are updating themselves towards the use of these machines such as dyeing industries, painting industries, food and moulding industries. Our system is limited to a few output colours and limited calculations; however, it can be a combination of input colours every time when we need a variety of colours on output. This system could be upgraded to many input chambers. Having a variety of colours and there could be multiple output chambers. After every combination. Furthermore, a washing mechanism can also be added to wash up the output chamber after every batch product and taking care of density of water that also can make it more efficient and effective.</p>	<p>Block Diagram:</p>	<p>Obtained Result:</p>										
<p>References:</p> <p>[1] Ezell, Berry. "scenario one and Two; source to No IPS to No 1 Tank to NO2 PS to No 2 tank for a master slave SCADA system ". SCADA consultants, SCADA mail list, SCADA @ gospel IITN Av (August 1997).</p> <p>[2] Rockwell automation SCADA system selection guide Allen – Bradley; publication AG – 2.1.1998.</p> <p>[3] Erickson, K.T. (1996) programmable logic controller IEEE potential, 15(1), 14-17.</p> <p>[4] Muslim, m. A., Goegoes Dwi, N., & Mahkros, A zelio PLC – based Automation of coffee Roasting process.</p>												
<table border="1" style="width: 100%;"> <tr> <th colspan="2" style="text-align: center;">Name & Signature of Students</th> </tr> <tr> <td style="width: 50px; text-align: center;">1</td> <td>Payal Padghan</td> </tr> <tr> <td style="width: 50px; text-align: center;">2</td> <td>Priti Ramteke</td> </tr> <tr> <th colspan="2" style="text-align: center;">Name & Signature of Guide:</th> </tr> <tr> <td colspan="2" style="text-align: center;">Prof. Ashwini Anjekar</td> </tr> </table>			Name & Signature of Students		1	Payal Padghan	2	Priti Ramteke	Name & Signature of Guide:		Prof. Ashwini Anjekar	
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