Bachelors in Electrical Engineering

Final Year Project

PLC (programmable logic controller) based Automatic color mixing and Bottle filling plant and also attach camera through Matlab (by user defined)

August 28, 2015

Project Supervisor:

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Chairman:

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Dean:

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School Of ENGINEERING

UNIVERSITY OF Management & TECHNOLOGY Lahore

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SESSION 2011-2015

SUBMITTED BY

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SCHOOL Of ENGINEERING

UNIVERSITY OF MANAGEMENT& TECHNOLOGY

LAHORE

AUGUST, 2015

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Certificate

This is to certify that M Abrar Amin, Ajlal Haider and Afzal Razahave successfully completed their final year project. This project“PLC (programmable logic controller) based Automatic color mixing and Bottle filling plant and also attach camera (by user defined)” had been assigned to them to fulfill the partial requirements for the bachelor degree of **Electrical Engineering**.

Engr. Ahmad Malik

Project Supervisor

Professor Jamel Ahmad

Chairman

Undertaking

We certify that project work titled “PLC (programmable logic controller) based Automatic color mixing and Bottle filling plant and also attach camera (by user defined)” is our own work. The work has not, in whole or in part, been presented elsewhere for assessment. Where material has been used from other sources it has been properly acknowledged / referred.

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Acknowledgements

We would like our total submission and eternal gratitude to **ALLAH ALMIGHTY**, The Most Gracious, without whose mercy and grace this endeavor could not been possible. We bow before our compassionate endowments. Peace be Upon **HOLY PROPHET MUHAMMAD** (PBUH) who is ever a torch of guidance and knowledge for humanity as a whole.

We would to like to acknowledge with appreciation the contribution of new sections problems and numerous valuable comments, suggestions, constructive criticisms and praise from the elevators and reviewers.

Their suggestions have greatly helped to improve the quality of text. We also would like to thank instructors who provided plenty of feedback from students and users perspectives and to our teachers who support us throughout the preparation of the project.

Special Thanks to:

Engr. Ahmad Malik

Engr. Muhammad Atif

Engr. Salman Khalid

Engr. Fahad Usman

Abstract

The objective of the project is to design and implementation of color mixing and automatic bottle filling plant using Programmable Logic Controller (PLC) using camera through mat-Lab by (user defined). This system is suitable for liquid product that required exact amount of liquid and have 2 different flavor of liquid to be filled in the bottle such as drinking water (syrup and orange). This is a batch operation where a set amount of inputs to be process is received as a group, and an operation produces the finish product. Generally, the function of the machine is to fill the desired color automatically into bottle passing beneath a conveyor. This project is the combination of Camera, Mat-Lab, Microcontroller, PLC, solenoid valvesand electrical DC motor system sensors and conveyer gare motor.

This project is divided into 3 sections:

The color detect section loading section, and filling section, where the first section detect color through mat-lab while the other two sections is controlled color ratio through microcontroller by PLC.