FINAL YEAR PROJECT REPORT

# PLC BASED DUAL AXIS SOLAR TRACKING SYSTEM

**SUBMITTED BY**

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***In partial fulfillment of the requirements for the award of degree of***

**BACHELOR OF SCIENCE**

**IN**

**ELECTRICAL ENGINEERING**

APPROVED BY

PROJECT ADVISOR DIRECTOR PROJECTS

**DEPARTMENT OF ELECTRICAL ENGINEERING**

**SCHOOL OF ENGINEERING**

**UNIVERSITY OF MANAGEMENT AND TECHNOLOGY**

# ABSTRACT

Solar energy is rapidly becoming important mean of renewable energy resource. Because it is very important for engineers to make accepting the technologies related with this region. Our task included the intend and structure of a PLC based solar tracker. Using solar tracker we can produce additional power as the solar arrangement is capable to stay united toward the sun. This design construct upon article learned in this way. Our work will eventually be revealed to authenticate the system. Troubles and achievable progress will also be accessible.

In our task we designed 1 panel, solar tracker. Designed device is capable to rotate the panel in position of sun. Dual axis tracking is the technique that we used. 4 LDR's (light dependent resistors) are used for input. These inputs are provided to differential amplifier which then connected to op-amp comparator and then interface with PLC. SCHOOL OF ENGINEERING, UNIVERSITY OF MANAGEMENT AND TECHNOLOGY Page 4

# UNDERTAKING

We hereby declare that this submission is our own work. To the best of our knowledge it includes no material formerly published or written by another person or considerable proportions of material which have been accepted for the award of any other degree or any other educational institution apart from where due acknowledgement is made in the report. Any input made to the research by others with whom I have worked at University of Management and Technology or elsewhere, is explicitly acknowledged in the report. We also declare that the rational content of this report is the product of our own work except to the extents that help from others in the project design and beginning or in style, presentation and linguistic expression is acknowledged.

Group Mates' Signatures

Signature

Signature

Signature

Advisor Signature

Date

# ACKNOWLEGDEMENT

*We would like to bend over our head before ALLAH Almighty the most Gracious and the most kindhearted. He has been our actual supporter throughout our lives. We are enormously thankful to our families for their never ending support and encouragement, for spending their time, their resources for us and for providing us with a very comfortable and progressive work environment. Moreover we would like to thank our friends and staff who gave us the knowledge of our subjects which led us to achieve this goal of a great final year project that gave us extreme learning and experience of field work.*

*We want to thank our project advisor,* ***FAHAD USMAN KHAN*** *who gave us the enthusiasm for this project. He was extremely kind and supportive throughout the completion of our project. We consider ourselves extremely fortunate for having the opportunity to learn and work under his supervision over the entire period. After that, we would like to take this opportunity to express our gratitude and sincere thanks to* ***JAMEEL AHMAD*** *for his valuable support.* 

# TABLE OF CONTENTS

 

# LIST OF FIGURES:

 

# LIST OF TABLES:

# LIST OF GRAPHS: