SDC I (IoT) Project Report

On

Laser Security Alram System

BACHELOR OF ENGINEERING

in

COMPUTER SCIENCE AND ENGINEERING

By

Mohammed Abdul Hafeez (160723733091)

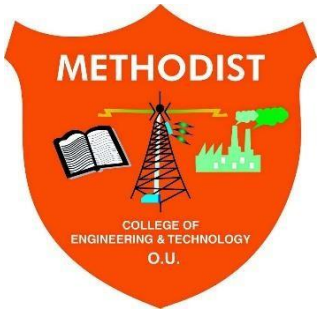
Mohammed Kashif Minhaj (160723733081)

Mohammed Raheemuddin Adeeb (160723733076)

Under the Guidance of

Mrs. Unnati Khanapurkar

Assistant Professor, Dept. of CSE



Department of Computer Science and Engineering

Methodist College of Engineering and Technology,King Koti, Abids, Hyderabad-500001

Methodist College of Engineering and Technology,
King Koti, Abids, Hyderabad-500001,

Department of Computer Science and Engineering

DECLARATION BY THE CANDIDATES

We, Mohammed Abdul Hafeez (160723733091),Mohammed Kashif MInhaj(160723733081)and Mohammed Raheemuddin Adeeb **(160723733076)** students of Methodist College of Engineering and Technology,pursuing Bachelor's degree in Computer Science and Engineering, hereby declare that this SDC I(IoT) Project report entitled "**LASER SECURITY ALARM SYSTEM ",** carried out under the guidance of **Mrs. Unnati Khanapurkar** submitted in partial fulfilment of the requirements for the degree of Bachelor ofEngineering in Computer Science and Engineering. This is a record work carried out by us and the results embodied in this report have not been reproduced/copied from any source.

Mohammed Abdul Hafeez (160723733091)

Mohammed Kashif Minhaj (160723733081)

Mohammed Raheemuddin Adeeb (160723733076)

Methodist College of Engineering and Technology,
King Koti, Abids, Hyderabad-500001.

Department of Computer Science and Engineering

CERTIFICATE BY THE SUPERVISOR

This is to certify that this SDC I (IoT) Project work entitled "**LASER SECURITY ALARM SYSTEM**" by **Mohammed Abdul Hafeez (160723733091), Mohammed Kashif Minhaj (160723733081)**and **Mohammed Raheemuddin Adeeb (160723733076)** submitted in partial fulfilment of the requirements for the degree of Bachelor of Engineering in Computer Science and Engineering, during the academic year2024-2025, is a bonafide record of work carried out by them.

Mrs. Unnati Khanapurkar

Date: Assistant Professor, Dept. of CSE.

Methodist College of Engineering and Technology,
King Koti, Abids, Hyderabad-500001.

Department of Computer Science and Engineering

CERTIFICATE BY HEAD OF THE DEPARTMENT

This is to certify that this SDC I (IoT) Project work entitled "**LASER SECURITY ALARM SYSTEM**" by **Mohammed Abdul hafeez (160723733091),Mohammed Kashif Minhaj (160723733081)**and **Mohammed Raheemuddin Adeeb (160723733076)** submitted in partial fulfilment of the requirements for the degree of Bachelor of Engineering in Computer Science and Engineering, during the academic year 2023-2024, is a bonafide record of work carried out by them.

Dr. P. LAVANYA,
Professor & Head of the Department.

Date:

Methodist College of Engineering and Technology,
King Koti, Abids, Hyderabad-500001.

Department of Computer Science and Engineering

PROJECT APPROVAL CERTIFICATE

This is to certify that this SDC I (IoT) Project work entitled "**LASER SECURITY ALARM SYSTEM**" by **Mohammed Abdul Hafeez (160723733091),Mohammed Kashif Minhaj (160723733081)** and **Mohammed Raheemuddin Adeeb (160723733076)** submitted in partial fulfilment of the requirements for the degree of Bachelor of Engineering in Computer Science and Engineering during the academic year2024-2025, is a bonafide record of work carried out by them.

INTERNAL **EXTERNAL** **HOD**

ACKNOWLEDGEMENT

We would like to express a deep sense of gratitude towards the **Dr. Prabhu G. Benakop, Principal, Methodist College of Engineering and Technology,** for always being an inspirationand for always encouraging us in every possible way.

We would like to express a deep sense of gratitude towards the **Dr. Lakshmipathi Rao, Director, Methodist College of Engineering and Technology,** for always being an inspiration and for always encouraging us in every possible way.

Our sincere thanks to **Dr. P. Lavanya, Professor** and **Head of the Department of Computer Science and Engineering,** for her valuable guidance and encouragement which has played a major role in the completion of the project, and for helping us by being an example of high vision and pushing towards greater limits of achievement.

We would like to express our sincere gratitude to our project guide and coordinator **Mrs.Unnati Khanapurkar**, Assistant Professor, CSE, for giving us the opportunity to work on this topic. It would never be possible for us to take this project to this level without his innovative ideas and his relentless support and encouragement.

We are indebted to the Department of Computer Science & Engineering and Methodist College of Engineering and Technology for providing us with all the required facility to carry ourwork in a congenial environment. We extend our gratitude to the CSE Department staff for providing us to the needful time to time whenever requested.

We would like to thank our parents for allowing us to realize our potential, all the supportthey have provided us over the years was the greatest gift anyone has ever given us and also for teaching us the value of hard work and education. Our parents have offered us with tremendous support and encouragement, thanks to our parents for all the moral support and the amazing opportunities they have given us over the years.

METHODIST
COLLEGE OF ENGINEERING & TECHNOLOGY
[Autonomous Institution]
Accredited by NBA & NAAC with A+ Grade
Estd:2008 Approved by AICTE New-Delhi & Affiliated to Osmania University
COMPUTER SCIENCE & ENGINEERING DEPARTMENT

Vision & Mission

VISION

To become a leader in providing Computer Science & Engineering education with emphasis on knowledge and innovation.

MISSION

M1: To offer flexible programs of study with collaborations to suit industry needs

M2: To provide quality education and training through novel pedagogical practices

M3: To Expedite high performance of excellence in teaching, research and innovations.

M4: To impart moral, ethical valued education with social responsibility.

Program Educational Objectives

Graduates of Compute Science and Engineering at Methodist College of Engineering andTechnology will be able to:

PEO1: Apply technical concepts, Analyze, synthesize data to Design and create novel products and solutions for the real-life problems.

PEO2: Apply the knowledge of Computer Science Engineering to pursue higher education with due consideration to environment and society.

PEO3: Promote collaborative learning and spirit of team work through multidisciplinary projects

PEO4: Engage in life-long learning and develop entrepreneurial skills.

Program Specific Outcomes

At the end of 4 years, Compute Science and Engineering graduates at MCET will be able to:

PSO1: Apply the knowledge of Computer Science and Engineering in various domains like networking and data mining to manage projects in multidisciplinary environments.

PSO2: Develop software applications with open-ended programming environments**.**

PSO3: Design and develop solutions by following standard software engineering principles and implement by using suitable programming languages and platforms

PROGRAM OUTCOMES

PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2: Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3: Design/development of solutions: Design solutions for complex engineering problems anddesign system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

PO6: The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO7: Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need forsustainable development.

PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities andnorms of the engineering practice.

PO9: Individual and team work: Function effectively as an individual, and as a member or leaderin diverse teams, and in multidisciplinary settings.

PO10: Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO11: Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO12: Life-long learning: Recognize the need for, and have the preparation and ability to engagein independent and life-long learning in the broadest context of technological change

TABLE OF CONTENTS

LIST OF FIGURES

ABSTRACT

LASER SECURITY ALARM SYSTEM

A Laser Security Alarm System using IoT is a smart security project designed to detect unauthorized access through a laser beam. The system consists of a laser emitter and an LDR (Light Dependent Resistor) sensor. when the laser beam directed at the LDR is interrupted,the sensor detects the change, triggering an alarm. the Laser Security Alarm System is to provide a reliable and cost-effective security solution that ensures the safety of residential, commercial, and industrial spaces. It aims to enhance security by utilizing laser technology for precise detection and immediate alerting of unauthorized access or breaches.