BLOCKCHAIN

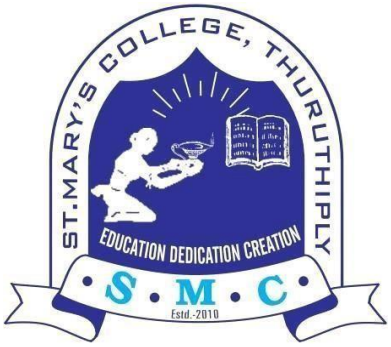
SEMINAR

Submitted by

VAISHAK RAJESH

Register No:220021086141

BACHELOR OF COMPUTER APPLICATION



DEPARTMENT OF COMPUTER SCIENCE

ST. MARY'S COLLEGE OF COMMERCE AND MANAGEMENT STUDIES

THURUTHIPLY

(AFFILIATED TO MAHATMA GANDHI UNIVERSITY, KOTTAYAM)

ALLAPRA, VALAYANCHIRANGARA, PERUMBAVOOR-683556

MARCH 2025

BLOCKCHAIN

The seminar report submitted to Mahatma Gandhi University, Kottayam in partial fulfilment of the requirements for the award of the degree of

BACHELOR OF COMPUTER APPLICATION

Submitted By

VAISHAK RAJESH

Register No:220021086141

Under the Guidance of

Ms. Aiswarya Ramachandran

(Assistant Professor, Department of Computer Science)

DEPARTMENT OF COMPUTER SCIENCE

ST. MARY'S COLLEGE OF COMMERCE AND MANAGEMENT STUDIES,

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(AFFILIATED TO MAHATMA GANDHI UNIVERSITY, KOTTAYAM)

MARCH 2025

DECLARATION

I **VAISHAK RAJESH,** hereby declare that the seminar entitled **BLOCKCHAIN,** submitted to Mahatma Gandhi University, Kottayam in partial fulfilment of the requirements for the award of the degree of **BACHELOR OF COMPUTER APPLICATION** is a record of seminar work done by me under the supervision and guidance of **Ms. Aiswarya Ramachandran**, Assistant Professor, Department of Computer Science. St. Mary's College of Commerce and Management Studies, Thuruthiply.

Place: Thuruthiply

Date**:**

Signature of the Candidate

VAISHAK RAJESH

ST. MARY'S COLLEGE OF COMMERCE AND MANAGEMENT STUDIES,

THURUTHIPLY

CERTIFICATE

This is to certify that the seminar report, entitled **BLOCKCHAIN** submitted to the Mahatma Gandhi University, Kottayam, in partial fulfilment of the requirement for the award of the degree of **BACHELOR OF COMPUTER APPLICATION** is a record of work done by **VAISHAK RAJESH,(Register No:220021086141)**under my supervision and guidance.

Signature of the Guide
Ms. AISWARYA RAMACHANDRAN
(Asst. Professor,
Department of Computer Science,
St. Mary's College, Thuruthiply)

Signature of the HOD
Mrs. JISHA JOHN
(HOD,
Department of Computer Science,
St. Mary's College, Thuruthiply)

Signature of the Principal
DR. SURESH A
(Principal, St. Mary's College, Thuruthiply)

Submitted for viva-voce examination held on…….

INTERNAL EXAMINER **EXTERNAL EXAMINER**

ACKNOWLEDGEMENT

First of all I express our heartfelt thanks to **ALMIGHTY GOD** for blessings of complete my work successfully.

I take immense pleasure in expressing my heartfelt gratitude to **ST. MARY'S CHURCH, THURUTHIPLY** for providing abundant facilities to successfully complete the course.

I record our sincere gratitude to **Dr. SURESH A**, respected Principal, St. Mary's College of Commerce and Management Studies, Thuruthiply for providing abundant facilities to carry out our seminar work successfully.

I wish to express our thanks to **Mrs. JISHA JOHN**, Head of the Department Computer Science, to give a moral support and guidance to complete the work.

I take this golden opportunity to express our deep sense of gratitude and heartfelt thanks to our guide **Ms. Aiswarya Ramachandran**, Assistant Professor, Department of Computer Science for exemplary guidance, valuable suggestions and constant encouragement for the successful completion of the seminar.

I wish to extend our thanks to all teaching and non-teaching faculties of the St. Mary's College of commerce and Management Studies, Thuruthiply for timely help at every stage of our seminar work.

I express our heartfelt gratefulness and special thanks to our families who have acted as a backbone throughout the seminar work.

ABSTRACT

BLOCKCHAIN

This seminar offers a comprehensive exploration of **blockchain technology**, delving into its core principles, architecture, and revolutionary potential across various industries. Designed for both beginners and professionals, the seminar aims to equip attendees with a solid understanding of blockchain's transformative capabilities and practical applications in the modern digital world.

Throughout the program, participants will embark on a structured learning journey, starting with the fundamental concepts and historical evolution of blockchain. We will examine its defining characteristics, such as decentralization, transparency, and security, and explore the diverse types of blockchain networks, including public, private, and consortium models.

The seminar will further deepen knowledge through essential topics such as **cryptography, consensus mechanisms**, and **smart contracts**, providing insight into the technological backbone of blockchain systems. Real-world use cases will be highlighted, from **supply chain optimization** and **financial services** to **healthcare management** and **digital governance**, demonstrating the wide-reaching impact of blockchain innovations.

In addition, the seminar will address the critical **challenges and limitations** facing blockchain adoption, including scalability, regulatory hurdles, and environmental concerns. Finally, we will look ahead to the future of blockchain, exploring cutting-edge trends such as **Blockchain 3.0**, **AI integration**, and its synergy with the **Internet of Things (IoT)**.

TABLE OF CONTENTS

INTRODUCTION

DECLARATION

CERTIFICATE

ACKNOWLEDGEMENT

ABSTRACT

TABLE OF CONTENTS