# CUSTOMCORE

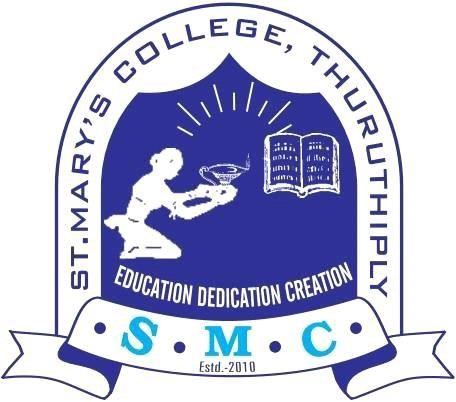
**MAIN PROJECT**

**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

ALLAPRA, VALAYANCHIRANGARA, PERUMBAVOOR-683556

*(AFFILIATED TO MAHATMA GANDHI UNIVERSITY, KOTTAYAM)*

**MARCH 2025**

# CUSTOMCORE

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

## BACHELOR OF COMPUTER APPLICATION

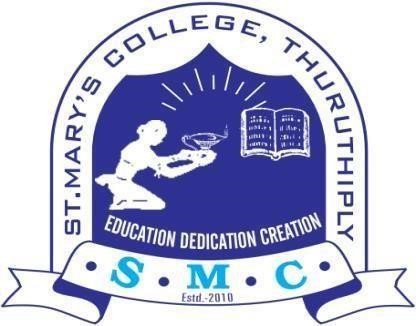
**Submitted By**

**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,

THURUTHIPLY

*(AFFILIATED TO MAHATMA GANDHI UNIVERSITY, KOTTAYAM)*

**MARCH 2025**

### DECLARATION

I **VAISHAK RAJESH,** hereby declare that the project entitled **CUSTOMCORE,** 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 project work done by me under the supervision and guidance of **Ms. AISWARYA RAMACHANDRAN**, Assistant Professor in Department of Computer Science St. Mary’s College of Commerce and Management Studies, Thuruthiply.

Signature of the Candidate

**VAISHAK RAJESH**

Place: Thuruthiply

#### Date:

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

THURUTHIPLY



### CERTIFICATE

This is to certify that the project report, entitled **CUSTOMCORE** 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 Signature of the HOD  **Ms. AISWARYA RAMACHANDRAN Mrs. JISHA JOHN**

(Asst. Professor, (Head of Department,

Department of Computer Science, Department of Computer Science,

St. Mary’s College, Thuruthiply) 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 project work successfully.

I wish to express our thanks to **Mrs. JISHA JOHN**, Head of the Department of 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 project.

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 project work.

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

## ABSTRACT

**CUSTOMCORE**

This project aims to develop an advanced web-based platform designed to simplify the process of building and customizing personal computers. The system provides users with an intuitive interface to select and configure PC components effortlessly, ensuring compatibility and optimizing performance. By offering a structured and comprehensive database of PC parts, including processors, motherboards, memory, storage, and graphic cards, the platform eliminates the need for manual research and reduces the complexity of assembling a custom PC.

The platform enables users to explore both individual components and pre-built PC configurations based on their specific needs, whether for gaming, professional work, or general use. It ensures real-time tracking of component prices, specifications, and availability, allowing users to make informed decisions. A key feature of the system is its ability to verify component compatibility, preventing mismatches and ensuring a seamless building process. Users can also save, manage, and modify their builds, making upgrades and future enhancements easier.

The project leverages the MERN (MongoDB, Express, React, Node.js) stack for efficient data handling, user interaction, and seamless performance. The front-end, built using React, provides an interactive user experience, while Node.js and Express handle server-side operations and database management. MongoDB is used to dynamically store and manage component details, user preferences, and build configurations.

|  |  |  |
| --- | --- | --- |
| **TABLE OF CONTENTS** | | |
| **Chapter** **No** | **Title** | **Page** **No** |
|  | **ABSTRACT** | **I** |
|  | **LIST OF FIGURES** | **II** |
|  | **LIST OF TABLES** | **III** |
| **1** | **INTRODUCTION** |  |
|  | 1.1 Introduction | 1 |
|  | 1.2 About the Technology | 1 |
|  | 1.3 About the Project | 4 |
| **2** | **SYSTEM STUDY** |  |
|  | 2.1 Introduction | 5 |
|  | 2.2 System Study | 5 |
|  | 2.3 Requirement Gathering and Analysis | 6 |
|  | 2.4 Existing System | 7 |
|  | 2.5 Proposed System | 8 |
|  | 2.6 Feasibility Study | 8 |
| **3** | **SOFTWARE REQUIREMENT**  **SPECIFICATIONS** |  |
|  | 3.1 Introduction | 13 |
|  | 3.2 Operating System | 13 |
|  | 3.3 Front End | 14 |
|  | 3.4 Back End | 16 |
|  | 3.5 Hardware and Software Requirements | 22 |
| **4** | **SYSTEM DESIGN** |  |
|  | 4.1 Introduction | 24 |
|  | 4.2 Basic Modules | 25 |
|  | 4.3 Design | 26 |
|  | 4.4 Table Design | 27 |
|  | 4.5 Data Flow Diagram | 31 |
| **5** | **CODING & TESTING** |  |
|  | 5.1 Coding | 36 |
|  | 5.2 Testing | 36 |
|  | 5.3 Testing Methods | 37 |
|  | 5.4 Sample Test Cases | 40 |
| **6** | **IMPLEMENTATION & MAINTENANCE** |  |
|  | 6.1 Introduction | 41 |
|  | 6.2 Implementation | 41 |
|  | 6.3 Maintenance | 42 |
| **7** | **CONCLUSION** | 43 |
| **8** | **FUTURE ENHANCEMENT** | 44 |
| **9** | **BIBLIOGRAPHY** | 45 |
| **10** | **APPENDIX** | 46 |
|  | 10.1 Screenshots | 46 |
|  | 10.2 Sample Code | 57 |

|  |  |  |
| --- | --- | --- |
|  | **LIST OF FIGURES** |  |
| **Figure**  **No** | **Title** | **Page**  **No** |
| 4.5.3 | Level 0 - Context Level | 33 |
| 4.5.4 | Level – 1 Admin Module | 34 |
| 4.5.5 | Level – 1 User Module | 35 |
| 4.6.6 | Level – 1 Pc Bulider Module |  |
| 10.1.1 | Landing Page | 46 |
| 10.1.2 | User Registration Page | 46 |
| 10.1.3 | Login Page | 47 |
| 10.1.4 | Forgot Password Page | 47 |
| 10.1.5 | Admin Homepage | 48 |
| 10.1.6 | Manage User | 48 |
| 10.1.7 | Manage Projects | 49 |
| 10.1.8 | Manage Complaints | 49 |
| 10.1.9 | Manage Webtype | 50 |
| 10.1.10 | Manage Business | 50 |
| 10.1.11 | Manage Objective | 51 |
| 10.1.12 | User Need Entry Page | 51 |
| 10.1.13 | Add Subpages | 52 |
| 10.1.14 | Color Pallete | 52 |
| 10.1.15 | Design Selection Page | 53 |
| 10.1.16 | Page Designing Live Preview | 53 |
| 10.1.17 | Page Builder Sidebar | 54 |
| 10.1.18 | Page Builder Sidebar Image | 54 |
| 10.1.19 | Choose Subpages | 55 |
| 10.1.20 | WebPage Builder Subpages | 55 |
| 10.1.21 | Exported Website | 56 |
| 10.1.22 | User Complaint Page | 56 |
| 10.1.23 | User Rating Page | 57 |

|  |  |  |
| --- | --- | --- |
|  | **LIST OF TABLES** |  |
| **Table**  **No** | **Title** | **Page**  **No** |
| 4.4.1 | collectionadmins | 28 |
| 4.4.2 | collectionCase | 28 |
| 4.4.3 | collectionCompany | 28 |
| 4.4.4 | collectionComplaint | 29 |
| 4.4.5 | collectionCooler | 29 |
| 4.4.6 | collectioncustom | 29 |
| 4.4.7 | collectioncpus | 30 |
| 4.4.8 | collectiondistrict | 30 |
| 4.4.9 | collectionfeedback | 30 |
| 4.4.10 | collectiongraphiccard | 30 |
| 4.4.11 | collectionmotherboard |  |
| 4.4.12 | collectionpcbulider |  |
| 4.4.13 | collectionplace |  |
| 4.4.14 | collectionprebulid |  |
| 4.4.15 | collectionram |  |
| 4.4.16 | collectionSmps |  |
| 4.4.17 | collectionstorage |  |
| 4.4.18 | collectiontype |  |
| 4.4.19 | collectionUser |  |
| 4.4.20 | collectionenquiry |  |

**INTRODUCTION**

**DECLARATION**

**CERTIFICATE**

**ACKNOWLEDGEMENT**

**ABSTRACT**

**TABLE OF CONTENTS**

**LIST OF FIGURES**

**SYSTEM STUDY**

**SYSTEM REQUIREMENT**

**SPECIFICATION**

**SYSTEM DESIGN**

**CODING & TESTING**

**IMPLEMENTATION & MAINTENANCE**

**CONCLUSION**

**FUTURE ENHANCEMENT**

**BIBILOGRAPHY**

**APPENDIX**