# KABOOTAR

*A Project Report Submitted in partial fulfillment for the award of the degree of*

**BACHELOR OF ENGINEERING**

**IN**

**Computer Engineering and Application**

### *Submitted by*

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# BONAFIDE CERTIFICATE

Certified that this project report **"KABOOTAR"** is the bonafide work of
"Aviral Sivek Dixit, Dhruv Varshney , Naresh Sharma, Tushar Saha"
who carried out the project work under my supervision.

**SIGNATURE**                                **SIGNATURE**

Dr. Rohit Agrawal                            Mr. Abhishek Tiwari

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**HEAD OF THE DEPARTMENT**                   Technical Trainer

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Submitted for the project viva-voce examination held on

**INTERNAL EXAMINER**                        **EXTERNAL EXAMINER**

# ACKNOWLEDGEMENT

I extend my deepest appreciation to those who contributed to the success of the "KABOOTAR - Enhanced Parcel Tracking and Delivery Optimization System." Foremost, my gratitude goes to our dedicated project supervisor, Mr. Abhishek Tiwari, whose guidance and expertise were invaluable throughout the project journey. I would also like to acknowledge the collaborative efforts of my esteemed team members—Aviral Sivek Dixit, Dhruv Varshney, Tushar Saha, and Naresh Sharma. Their diverse skills and commitment played a pivotal role in shaping the project's outcomes.

Special thanks are due for the resources provided, including the GPS Tracking System and web development tools (HTML, CSS, JavaScript). The project's foundation was significantly influenced by references from industry leaders such as Delhivery, DTDC, DHL, FEDEX, and EKART.

This project has been an enriching experience, offering a platform to apply theoretical knowledge to real-world scenarios. The expected outcomes of KABOOTAR align with our commitment to revolutionizing logistics processes, enhancing customer experiences, and optimizing resource utilization through cutting-edge technology and intelligent algorithms.

In conclusion, this project represents a significant milestone in our academic and professional journey. The collective efforts of the team and the guidance received have been instrumental in achieving our goals. I am grateful for the opportunity to work on a project with such transformative potential, aiming to improve the logistics landscape.

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# ABSTRACT

Web Development is the ability to develop websites and user-friendly web applications. After learning Html, CSS and Javascript we made up a variety of small web applications to do various tasks. Here came the need of a website where we could display our applications and make them easily available for our users.

The primary objective is to enhance the efficiency of the delivery process, elevate customer satisfaction, and optimize resource utilization. The scope encompasses the entire logistics process, including real-time parcel tracking, route optimization, and delivery management. Utilizing GPS tracking, data analytics, and web technologies, the proposed system will enable real-time tracking, intelligent route optimization, and provide a user-friendly interface.

The implementation plan outlines key phases, and the project involves a skilled team utilizing resources such as GPS tracking systems and web development tools. The expected outcomes include a website that enhances parcel tracking, optimizes delivery routes, and provides a user-friendly interface for customers and logistics staff. The project, supervised by Mr. Abhishek Tiwari, strives to introduce cutting-edge technology and intelligent algorithms to improve the logistics process, ultimately streamlining operations and enhancing customer experiences.

# GRAPHICAL ABSTRACT
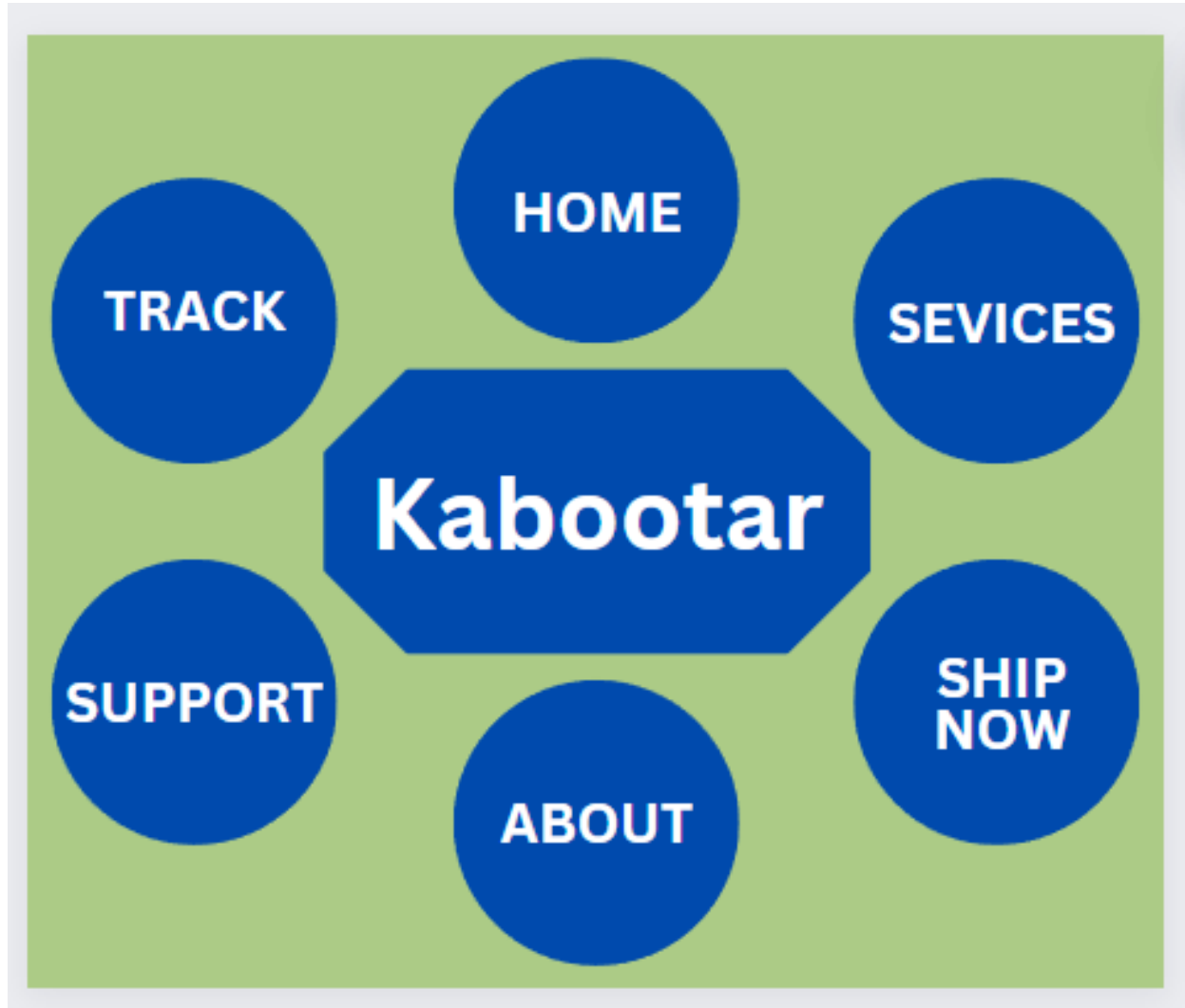
# ABBREVIATIONS

| | | |
|---|---|---|
| 1. HTML | | Hyper Text Markup Language |
| 2. CSS | | Cascading Style Sheets |
| 3. JS | | JavaScript |
| 4. IT | | Information Technology |
| 5. UI | | User Interface |
| 6. VS | | Visual Studio |
| 7. RAM | | Random Access Memory |
| 8. GPS | | Global Positioning System |
| 9. UID | | Unique Identification |
| 10. API | | Application Programming Interface |

# CHAPTER 1

## INTRODUCTION

### 1.1 Identification of relevant Contemporary issue

The contemporary issue addressed is the inefficiency in traditional parcel delivery systems, demanding real-time tracking and optimization. With the rise of e-commerce and heightened customer expectations, the need for a comprehensive solution to streamline logistics processes has become a pressing concern in today's dynamic market.

### 1.2 Identification of Problem

The project addresses challenges in the current delivery system, including delays, inadequate tracking, and inefficient route planning. These issues contribute to customer dissatisfaction and operational inefficiencies, highlighting the necessity for an optimized and technologically advanced solution.

### 1.3 Identification of Tasks

Key tasks involve thorough requirements gathering, design and architecture planning, development of the tracking system, and creating a user-friendly interface. The project team collaborates on these tasks over a structured timeline to ensure a systematic and successful project outcome.

### 1.4 Timeline

• Requirements Gathering (Week 1-2)

• Design and Architecture (Week 2-3)

• Development of Tracking System (Week 3-4)

• User Interface Development (Week4-5)

### 1.5 Organization of the Report

The report is organized comprehensively, presenting clear insights into the project's objectives, scope, methodology, proposed system, features, and implementation plan. It also highlights team members, required resources, references, and expected outcomes. This structured approach ensures a thorough and coherent presentation of the project details.

# CHAPTER 2

# GOALS AND OBJECTIVES

## 2.1 Problem Statement

The existing parcel delivery system faces significant challenges, leading to inefficiencies, customer dissatisfaction, and suboptimal resource utilization. Delays, lack of real-time tracking, and inefficient route planning contribute to operational bottlenecks. This demands a transformative solution to enhance the overall efficiency of the logistics process.

## 2.2 Goals and Objectives

- The primary goal of the "KABOOTAR - Enhanced Parcel Tracking and Delivery Optimization System" project is to develop a comprehensive solution addressing the identified challenges. The specific objectives include
- Real-Time Tracking: Implement a robust GPS-based tracking system to provide customers with accurate, real-time updates on the location and status of their parcels.
- Route Optimization: Develop intelligent algorithms for optimizing delivery routes, considering factors such as package size, priority, and location, to minimize delivery time and resource usage.
- User-Friendly Interface: Create an intuitive and user-friendly interface for both customers and logistics staff, enhancing the overall experience and facilitating efficient management of the delivery process.
- Automated Notifications: Implement automated notification systems to keep customers informed about the progress of their deliveries, ensuring transparency and timely updates.

- Analytics for Optimization: Integrate analytics tools to monitor and analyze performance data, enabling continuous optimization of the delivery process based on key metrics.

# CHAPTER 3

## DESIGN FLOW

### 3.1 Hardware & Software Requirements

- HTML, CSS and JAVASCRIPT
- VS CODE
- Version Control and Hosting: GitHub
- Processor: i5 or above
- Minimum 4GB RAM
- Windows Operating System

### 3.2 Project Design

The website has various section such as :-

- Home
- Services
- Track
- Support
- About
- Ship Now



Fig:-3.1 Home Page

Fig:-3.2 Services Page
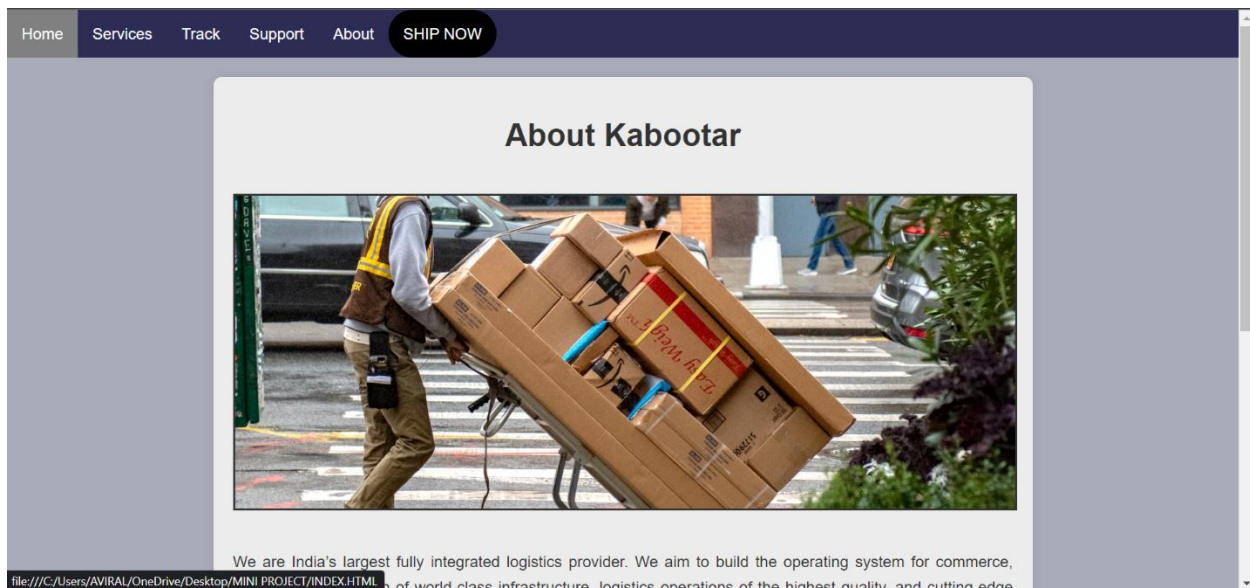


Fig:-3.3 Track Page

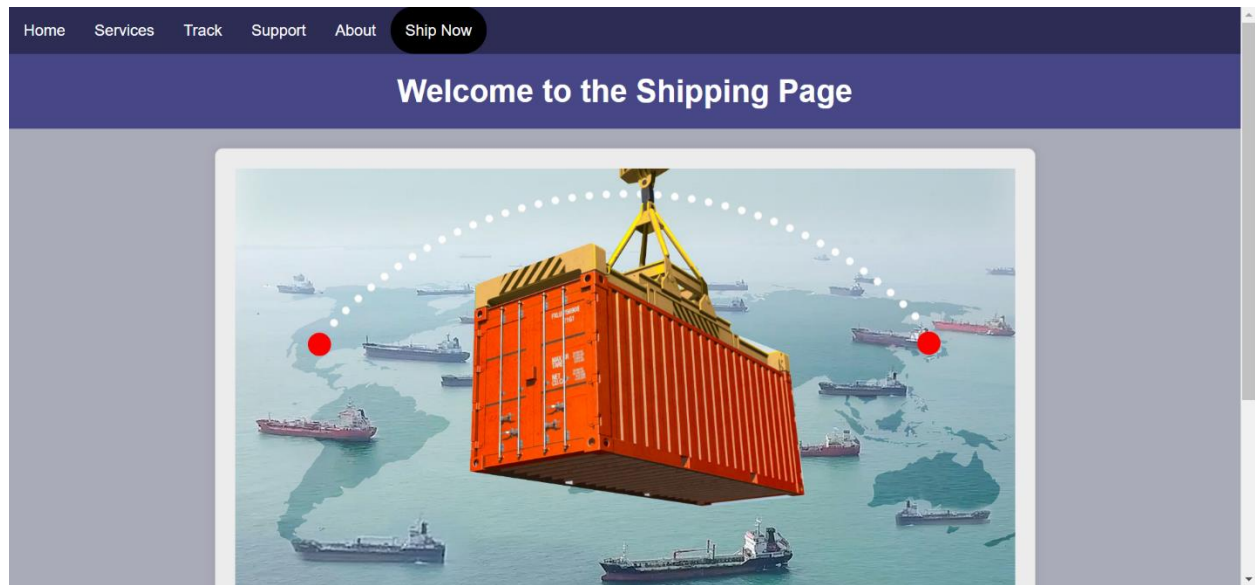Fig:-3.4 Support Page



Fig:-3.5 About Page

Fig:-3.6 Ship Now Page

# CHAPTER 4
# IMPLEMENTATION AND VALIDATION

## 4.1 Implementation

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- Frontend: The frontend development relies on HTML and CSS, supplemented by Bootstrap for styling. JavaScript is incorporated to enhance interactivity, ensuring a more responsive and engaging user experience

- API: The project utilizes an API to retrieve essential data such as latitude, longitude, and city names. This data is crucial for real-time tracking and location-based functionalities.

- HTML: Hyper-Text-Markup-Language (HTML) is fundamental for structuring web pages on the internet. It serves as the backbone for creating functional and visually appealing pages.

- CSS: Cascading-Style-Sheet (CSS) is employed as the styling language, defining the visual presentation of the website's content. It ensures a cohesive and aesthetically pleasing layout

- JavaScript: JavaScript, a versatile scripting language, plays a pivotal role in modern web development. It facilitates the creation of dynamic web applications that adapt to individual users and their data. Various JavaScript frameworks, such as React, Node, and Next, are utilized based on specific development requirements and objectives. These frameworks enhance the capabilities of web applications for diverse purposes.

# CONCLUSION AND FUTURE WORK

## 5.1. Conclusion

- Successfully implemented an optimized delivery service and an advanced tracking system. Overcame challenges in integration complexity, user experience design, and data security. Gained valuable experience in the fields of computer science and engineering.

- The project marks a significant achievement in improving the efficiency and reliability of delivery services through optimization and advanced tracking. The experience gained is crucial for future endeavors in the dynamic fields of computer science and engineering, providing a foundation for continued innovation and success.

## 5.2. Future work

**Enhanced Tracking Capabilities:** Implement real-time GPS tracking for more precise parcel location updates. Integrate geofencing for customizable delivery zones, providing customers with accurate arrival estimations.

**Mobile Application Development:** Develop a mobile application for both Android and iOS platforms, offering a more convenient and accessible way for users to track shipments, request services, and provide feedback.

# REFERENCES

- The project draws inspiration and industry insights from prominent parcel delivery companies, including Delhivery, DTDC, DHL, FEDEX, and EKART. These references encompass a comprehensive exploration of their official websites, where we sourced valuable information regarding logistics processes, parcel tracking systems, and delivery optimization strategies. By studying the practices of these industry leaders, our project aims to incorporate proven methodologies to enhance the efficiency and effectiveness of our proposed parcel tracking and delivery optimization system.
- **Books:- Black Book HTML5, CSS, JS**
- **Websites:- MDN Web Docs , W3school ,GeeksForGeeks, Javatpoint.**
- **Our Mentor:- Mr. Abhishek Tiwari**
- **GitHub Repository Link:- https://github.com/asdaviral/kabootar**