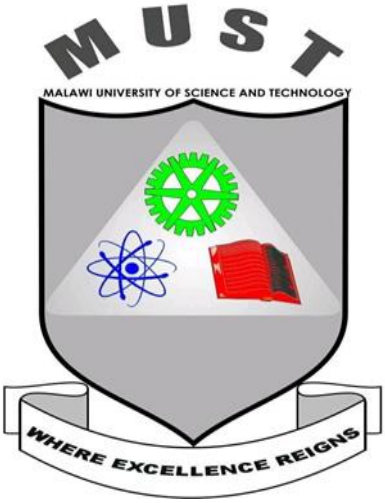

Malawi University of Science and Technology

Malawi Institute of Technology

Department: Malawi Institute of Technology

Course: Web Development

Course Code: WEBD-2200

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Transport Booking Information System (TBIS) Documentation

1. Introduction:

The Transport Booking Information System (TBIS) is a software application designed to facilitate the booking and scheduling of transportation services for students and staff at the Malawi

University of Science and Technology (MUST). The system aims to address common challenges faced by the university's transportation department, including manual booking processes, inefficient resource allocation, and lack of centralized information management.

2. Features:

User Interface:
The TBIS has a user-friendly interface, ensuring ease of use for both staff and students. The intuitive design allows users to seamlessly book and schedule transportation services with minimal effort.

Booking and Scheduling Management:
The system includes a powerful module for managing bookings and scheduling transportation services. Users can schedule pickup and drop-off times and locations, and track the progress of their bookings within the system.

Fleet Management:
TBIS includes a comprehensive fleet management module, allowing the university to efficiently manage its transportation fleet. This module includes vehicle information, maintenance schedules, fuel usage tracking, and performance reports. The system also provides alerts for vehicle servicing, ensuring timely maintenance.

Driver Management:
TBIS features a driver management module to track driver information, including licenses, certifications, and performance metrics. The system generates reports on driver performance and safety records. Additionally, it enforces disciplinary actions, such as suspending drivers involved in multiple accidents within a specified period.

External Hiring:
The system facilitates external hiring of university transportation services, with clear pricing guidelines. External entities can book services online through the Transport Officer, with rates based on distance and duration. Staff members receive a discount for non-MUST activities.

Reporting and Analytics:
TBIS generates various reports and analytics, including booking reports, fleet reports, and financial reports for external bookings. These insights help the university make informed decisions regarding transportation management.

User Authentication and Authorization:
The system prioritizes security with robust authentication and authorization mechanisms. Only authorized personnel can access the system, preventing unauthorized access. External entities can book services online through the Transport Officer, ensuring controlled access.

3. System Architecture:

TBIS is built on a scalable and secure architecture, leveraging modern technologies to ensure reliability and performance. The system comprises frontend and backend components, including a user interface, database, and server-side logic. Integration with external systems and APIs facilitates seamless communication and data exchange.

4. Implementation:

TBIS is implemented using industry-standard development practices, with a focus on modularity, scalability, and maintainability. The system is developed using a combination of programming languages, frameworks, and tools best suited to meet the project requirements.

5. Conclusion:

The Transport Booking Information System (TBIS) revolutionizes transportation management at MUST, offering a comprehensive solution for booking, scheduling, fleet management, and reporting. With its user-friendly interface and advanced features, TBIS sets a new standard for transportation management systems, ensuring efficiency, transparency, and security.