

**ADM : 20/03930**

**UNIT : FINAL YEAR PROJECT I**

**COURSE : BSD**

**UNIT CODE : BSD 3107**

## **SYSTEM IMPLEMENTATION**

### **INTRODUCTION**

The Kimathi Bus Reservation System aims to streamline and enhance the traveler experience by providing a user-friendly platform for travelers to manage their bookings of destination travels. This implementation document outlines the plan to develop, install and maintain the proposed system.

### **PURPOSE OF IMPLEMENTATION**

The purpose of implementing the Bus Reservation System is to improve operational efficiency, enhance traveler satisfaction and reduce the tedious work of going to a bus station to book for a bus.

### **PROPOSED SYSTEM**

The proposed system will consist of a web-application that allows travelers to:- book their travel destinations, provide contact information, supply payment details and also verify the order details generated.

### **INSTALLATION & CONVERSION PLAN**

The installation and conversion plan will consist of the following key phases:

1. Assessment: Evaluate the transport sector of Kimathi Bus Company, technology stack used & data security measures to ensure compatibility & compliance with new system.
2. System development: Develop the web-based application on the specified requirements.

3. Testing: Conduct rigorous testing, including functional usability and security testing, to identify and rectify any issues.
4. Data migration: Transfer existing traveler's data & booking records to the new system without data loss.
5. Training: Train administrators to manage the new system at hand.

## **IMPLEMENTATION REQUIREMENTS**

The implementation requirements include:

- Skilled software developers to build the web-application
- Database administrators to handle data migration and ensure data integrity
- Quality assurance team to conduct thorough testing
- Project managers to oversee the implementation process.
- Trainers to educate travelers and admins on using the system.

## **TOOLS USED**

The following tools will be used in the implementation:

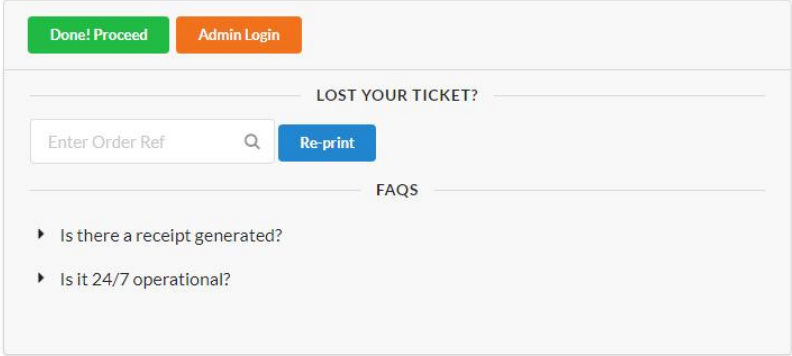
Programming language: PHP

Database: MYSQL

Version Control: Git for code management and collaboration

## **USER INTERFACE DESIGN IMPLEMENTATION**

### **1. Generating order reference**



Done! ProceedAdmin Login

LOST YOUR TICKET?






Enter Order RefRe-print

FAQS

Is there a receipt generated?

Is it 24/7 operational?

### **2. Travelling and booking info**

 <b>Booking Details</b> Travelling and booking info	 <b>Details</b> Contact information	 <b>Billing</b> Payment and verification	 <b>Confirm Details</b> Verify order details	 <b>Finish and Print</b> Printing Ticket
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**Booking Info**  
Order Ref: **BS64T72R690** [Cancel Order](#)  
Enter travelling booking info

**Destination**






**Traveling Class**

**Number of Seats**

**Date of Travel**

**Submit Details**

### 3. Contact info

 <b>Booking Details</b> Travelling and booking info	 <b>Details</b> Contact information	 <b>Billing</b> Payment and verification	 <b>Confirm Details</b> Verify order details	 <b>Finish and Print</b> Printing Ticket
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**Enter your Customer Details!**  
Order Ref: **BS64T72R690** [Cancel Order](#)  
Fill the required Fields






**Full name**

**Contact/Mobile or Email address**

**Gender**

**Submit Details**

### 4. Payment and verification

 <b>Booking Details</b> Travelling and booking info	 <b>Details</b> Contact information	 <b>Billing</b> Payment and verification	 <b>Confirm Details</b> Verify order details	 <b>Finish and Print</b> Printing Ticket
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**Validate Payment Information**  
Order Ref: **BS64T72R690** [Cancel Order](#)  
Enter Payment Details to Proceed

**Payment**

**Transaction ID**

**Confirm Amount(Ksh)**

**Proceed**

? Confirm the payment of the High Class number of seats

### 5. Confirm details

<b>Booking Details</b> Travelling and booking info	<b>Details</b> Contact information	<b>Billing</b> Payment and verification	<b>Confirm Details</b> Verify order details	<b>Finish and Print</b> Printing Ticket
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*Ticket might not be re-printed, hence details you provided should be valid*

**THE DETAILS PROVIDED**

- TICKET OWNER: james onyango
- DESTINATION: RUIRU to MOYALE
- DATE OF TRAVEL: April 05, 2024
- TRAVEL CLASS: Special Needs Travel
- NUMBER OF SEATS: 1
- AMOUNT PAYING: 1500 Via KCB\_BANK Transaction ID: 01222247789

**CONFIRM DETAILS**

[YES|Confirm](#)

## 6. Admin Access Panel

Admin Access Panel!

Username

Password

☐ Remember me

[Login!](#)

## OUTPUT OF THE SYSTEM

The expected outputs of the Kimathi Bus Reservation System include:

- Improved bus booking reservation management
- Efficient handling of traveler's info
- Enhanced traveler engagement through personal info

## HARDWARE AND SOFTWARE NEEDED

The hardware and software needed to run the Kimathi Bus Reservation System are as follows:

## **HARDWARE**

Web servers to host the web application

Network infrastructure to support data communication

## **SOFTWARE**

- Operating System (Windows) for web servers and database servers
- Web Server Software (XAMPP) for hosting the web application
- Database management System (e.g., MySQL) for data storage
- Security Software to protect the system from potential threats

## **SOFTWARE MAINTENANCE PLAN**

The software maintenance plan includes:

- Regular updates to fix bugs and security vulnerabilities
- Monitoring and performance optimization to ensure system stability
- Backup and data recovery procedures to prevent data loss
- Support for new operating system versions and devices.
- Periodic reviews and enhancements based on user feedback

## **TRAINING OF USERS**

The training of users will involve:

- Conducting training sessions for administrators on using the system to manage traveler information.
- Providing online tutorials and guides for travelers to familiarize themselves with the self service features.
- Offering a help desk or support team to address any questions or difficulties faced by users during their interactions with the system.

## **SYSTEM LIMITATIONS**

Despite the successful testing outcomes, a few limitations were identified during testing phase:

1. **Internet Connectivity:** The system requires a stable internet connection for real time updates and traveler's interactions. Offline capabilities should be considered for areas with limited connectivity.
2. **Device Compatibility:** The system was primarily tested on standard devices and compatibility issues may arise on certain older devices or less common platforms.

## **RECOMMENDATIONS**

So as to further enhance the Kimathi Bus Reservation System, the following recommendations are proposed:

1. **Offline Mode:** Implement an offline mode feature to allow travelers to perform essential tasks without an active internet connection.
2. **Device Testing:** Conduct extensive testing on a wide range of devices to ensure optimal performance and compatibility across various platforms.
3. **Regular Security audits:** Conduct regular security audits to identify and address any potential vulnerabilities, ensuring the protection of traveler's data.
4. **Continuous Improvement:** Encourage feedback from travelers to continuously improve the system's functionality and user experience.

## **REFERENCES**

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