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INDEX: 3597

PROJECT TITLE: MOVERS TRANSPORT SYSTEM

YEAR OF EXAMINATION: 2021

SCHOOL: LONDIANI GIRLS HIGHSCHOOL

SUBMITTED TO: THE KENYA NATIONAL EXAMINATION COUNCIL (K.N.E.C) IN FULFILMENT OF THE REQUIRED FOR THE AWARD OF KENYA CERTIFICATE OF SECONDARY EDUCATION (K.C.S.E)

DECLARATION

I declare that this work has not been previously submitted to the Kenya National Examination Council or any other examination body. To the best of my knowledge and belief, the dissertation contains no material previously published or written by another person except where due reference is made in the dissertation itself.

MARION CHEPKEMOI

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Sign: …… Date: ……...

DEDICATION

I would like to dedicate this project to my friends who gave me moral support and also prayed for me and my success in my project. I would also like to dedicate this project to the principal Londiani Girls High school for ensuring that the computer lab was fully equipped with the devices needed for this project.

I hope that they will benefit from this new system and that their operations will be efficiently improved.

ACKNOWLEDGEMENT

I acknowledge GOD, my creator, who has always been my pilot. I would like to offer my utmost gratitude to all those who have been supporting me throughout the development of this project especially Mr. DON GICHAI, my family members and my fellow heavenly friends: thanks all for believing in me.

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ANALYSIS

Problem Definition

Movers Company has yet to fully embrace ICT in its day to day operations despite having appropriate ICT infrastructure in place. A manual record keeping system currently exists. A lot of time is used in retrieval of records, it's hard to maintain and update information in this system too.

Existing System

Overview

Movers Company has currently been using manual system which isn't efficient. The system does not properly maintain crucial information such as membership information, vehicle information and also does not offer an easy way to compute payments, penalties, revenue, tax and profit made by the company. The whole process of record keeping is tiresome since a lot of time is used to keep track of information. Integrity of the company's information isn't guaranteed since it is hard to track flow of data as no proper relationships of the information are established.

System structure

Proposed System

The new system is computer automated which will require lesser energy and time to process data. It will consist of tables where records will be entered and complex calculations will take place and will be displayed in forms

Objectives

- To store the database of the system
- To perform complex calculations in a faster way
- To improve accuracy in processing data
- To enable easy portability of the data
- To enable easy editing of data and information

Scope of the system

The development of the new computerized system to replace the current manual system will help phase out the problems faced by the manual system through the following functions that will be performed by the computerized system:

1. Maintaining records of membership
2. Maintaining records of vehicles
3. Maintaining records of loaders and drivers
4. Maintaining records of goods transported
5. Maintaining records of farmers who are in groups
6. Maintaining records of orders for transport
7. Maintaining records of offences committed by drivers
8. Maintaining records of expenses for each vehicle
9. Compute:
    - Payment for a loader and a driver.
    - Penalties surcharged on drivers.
    - Loading fee per vehicle per trip.
    - Revenue per vehicle per trip.
    - Expenses for each vehicle.
    - Tax payable.
    - Total company expenses.
    - Total revenue for the company: Overall company profit.
    - Generating reports.

Benefits

Storing, tracking, modifying and maintenance of company records will be simple.

Feasibility

Movers conducted a feasibility test. The study mainly involved review of the current organisation chart, observation and informal discussion with the stakeholders and Costs and benefits of developing the new computerized system were established.

Schedule Feasibility

Here, the time frame within which the new computerized system is to be developed and implemented is outlined and it is determined whether the proposed system will be completed within the set time limits. The system analyst will design and develop the computerized system in six months which is broken down in form of weeks as shown in the table below:

WEEK	**TASK**
1-4	Problem Identification and Definition
5-8	Fact Finding
9-16	System Design
17-18	Testing and Debugging
19-20	System Implementation
21-22	System Review and Maintenance
23-24	Staff Training

Table 1 - Schedule Feasibility

The system analyst is committed to developing the new computerized system in the time stipulated above.

Operational Feasibility

Operational feasibility study involves investigating whether the users are comfortable with the new system. As it is, the members are indeed happy with the proposal of developing a new computerized system. This is because operations in the organisation will be made faster and more efficient. The system analyst is willing to train the members on how to use and interact with the new computerized system. That will enhance operations and improve on efficiency by simplifying processing of data. Due to the development of the new computerized system, the organisation will run smoothly and efficiently.

Technical Feasibility

This is a study that aims at establishing whether the technology available at Fedha youth group System organization is sufficient or whether it can be upgraded in order to be synchronized with the new computerized system's requirements.

The old system is manual in its operations; therefore, there is need for acquisition of new resources which will facilitate development and implementation of the new computerized system.

SYSTEM DESIGN

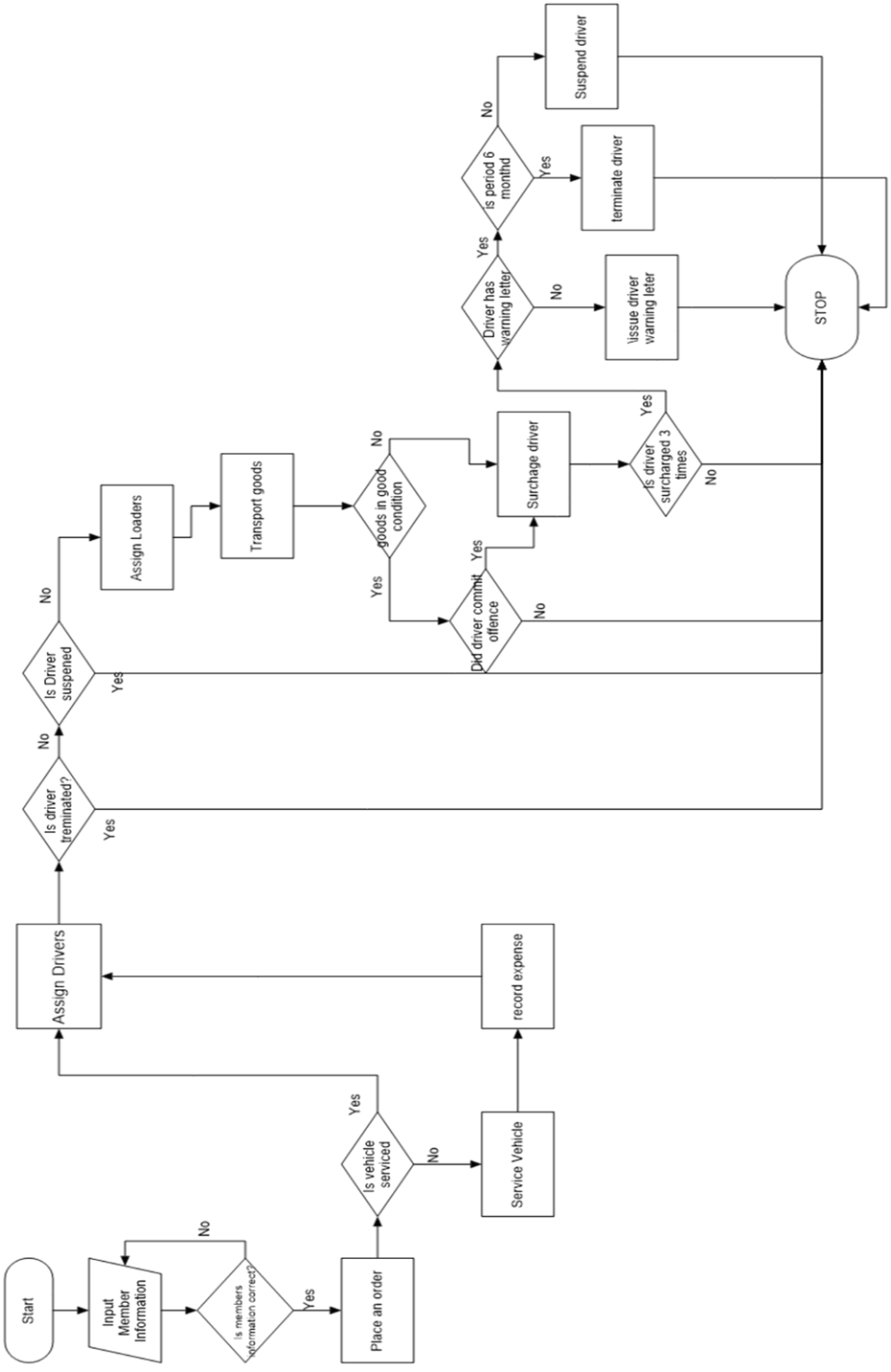

Figure 1 - System flowchart

The figure above is a flow diagram for the system. A user inputs member's information in the application, then goes ahead to place an order. The application checks if a vehicle is serviced, then assigns a driver if unassigned. The system then checks if a driver is terminated or suspended, then assigns loaders then transports goods. After the transportation of goods, the system operator verifies that the goods are in good condition, and also, if the driver has committed an offence.

Tables

Members Table

Field Name	Data Type
Membership Number	AutoNumber
Membership Type	Short Text
Members Name	Short Text
Location	Short Text
Nature of farm produce	Short Text
Phone Number	Number
Email Address	Hyperlink
Home address	Short Text

Table 2- Members Table

Group Members Table

Field Name	Data Type
ID	AutoNumber
National ID Number	Number
Members Name	Short Text

Date Of Birth	Date/Time
Gender	Short Text
Phone Number	Number
Group Membership Number	Number

Table 3 - Group Members Table

Drivers Table

Field Name	**Data Type**
National ID	Number
First Name	Short Text
Last Name	Short Text
Gender	Short Text
Date Of Birth	Short Text
Phone Number	Number
Address	Short Text
City	Short Text
Town	Short Text
Email	Hyperlink
Add to mailing list	Yes/No
Next of Kin Contacts	Short Text

Table 4 - Drivers Table

Loaders Table

Field Name	**Data Type**
National ID	Number
First Name	Short Text
Last Name	Short Text

Gender	Short Text
Date Of Birth	Short Text
Phone Number	Number
Address	Short Text
City	Short Text
Town	Short Text
Email	Hyperlink
Add to mailing list	Yes/No
Next of Kin Contacts	Short Text

Table 5 - Loaders Table

Orders Table

Field Name	**Data Type**
Order ID	AutoNumber
Order Date	Date/Time
Driver ID	Short Text
Destination Distance	Number
Vehicle Registration Number	Short Text
Membership Number	Number

Table 6 - Orders Table

Goods Transported Table

Field Name	**Data Type**
ID	AutoNumber

Type of Goods	Short Text
Date Transported	Short Text
Order ID	Number
Condition of Goods	Short Text
Driver ID	Number
Vehicle Registration Number	Short Text

Table 7 - Goods Transported Table

Vehicle Loaders Table

Field Name	**Data Type**
ID	AutoNumber
National ID Number	Number
Order ID	Short Text
Order Date	Date/Time
Vehicle Registration Number	Short Text

Table 8 - Vehicle Loaders Table

Vehicles Table

Field Name	**Data Type**
Vehicle Registration Number	Short Text
Vehicle Type	Number
Vehicle Color	Short Text

Table 9 - Vehicles Table

Vehicle Types Table

Field Name	Data Type
ID	AutoNumber
Type Description	Short Text
Number of Loaders	Number
Amount paid to loader	Currency
Amount paid to driver	Currency
Load Capacity in tonnes	Number
Cost in Ksh per Kilometer	Currency
Cost of servicing	Currency
Cost of fuel	Currency

Table 10 - Vehicle Types Table

Offences Table

Field Name	Data Type
ID	AutoNumber
Driver ID	Number
Order ID	Number
Vehicle Registration Number	Short Text
Type of Offences	Short Text

Table 11 - Offences Table

Input Design

Drivers form

Allows user to input driver's details

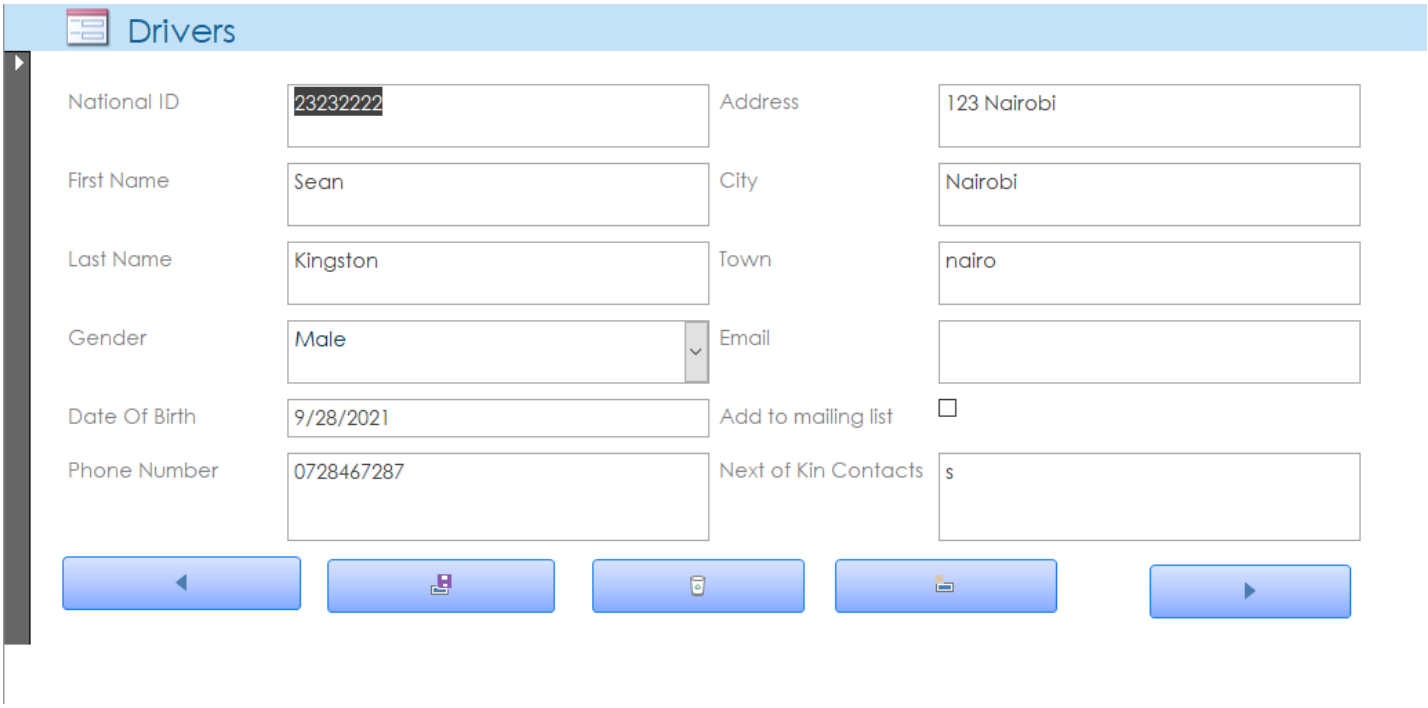

Figure 2 - Driver's form

Expenses form

Allows user to input expense information

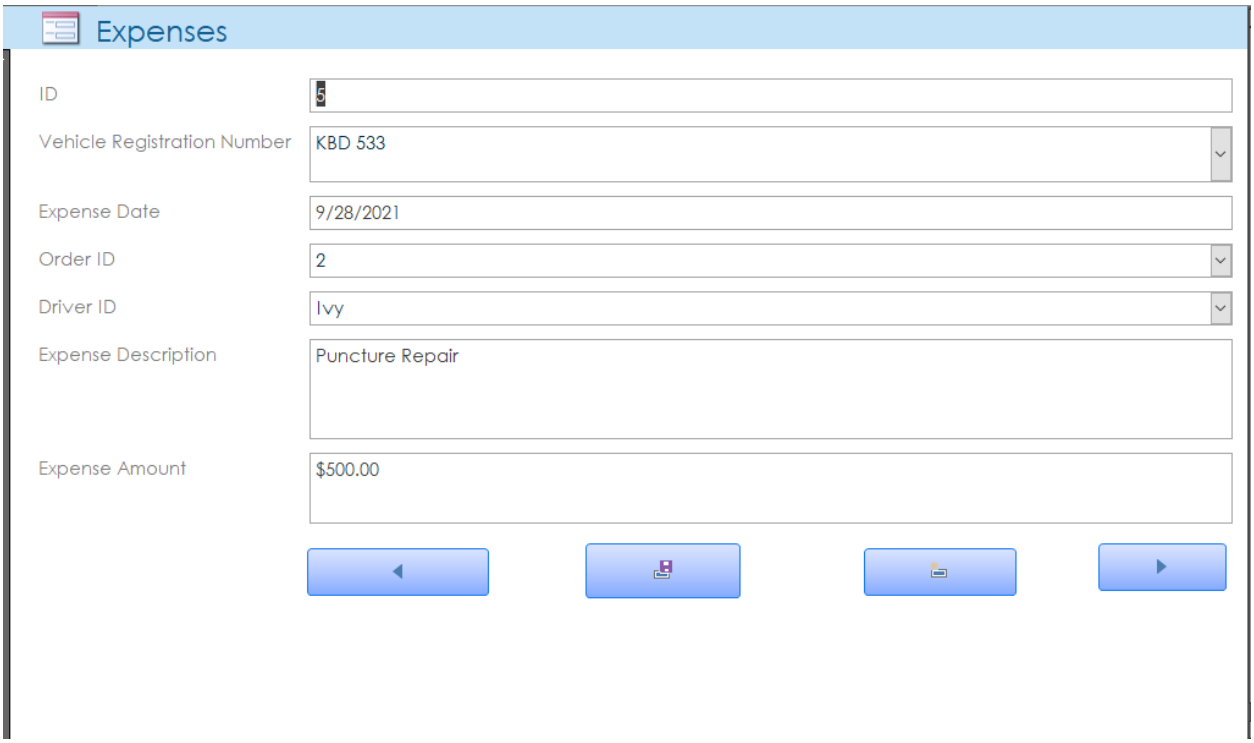

Figure 3 - Expenses form

Loaders form

Allows user to input loader's information

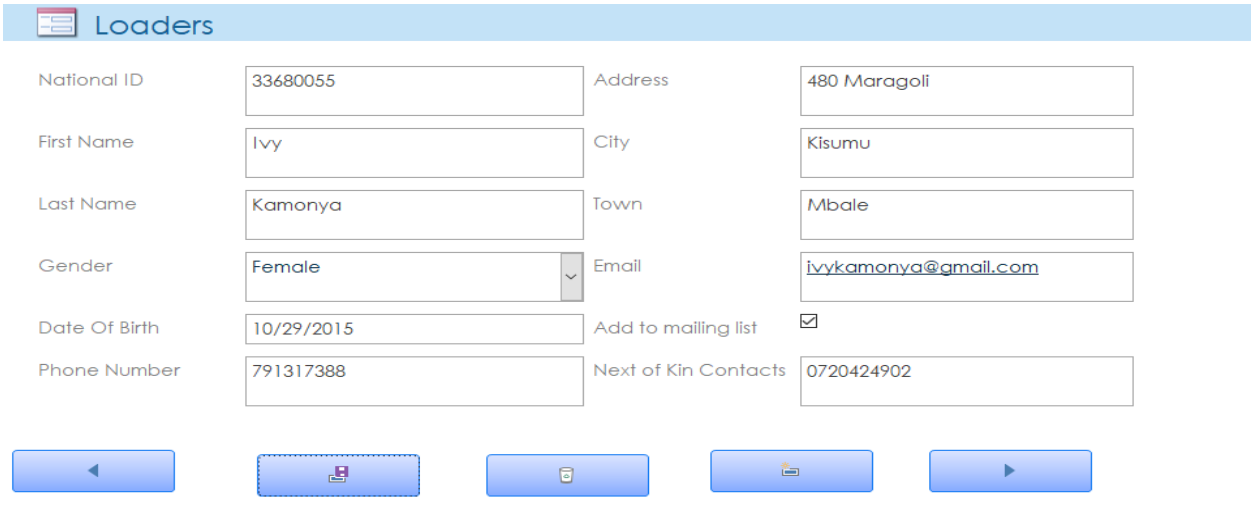

Figure 4 - Loaders form

Output Design

Expenses for vehicle Report

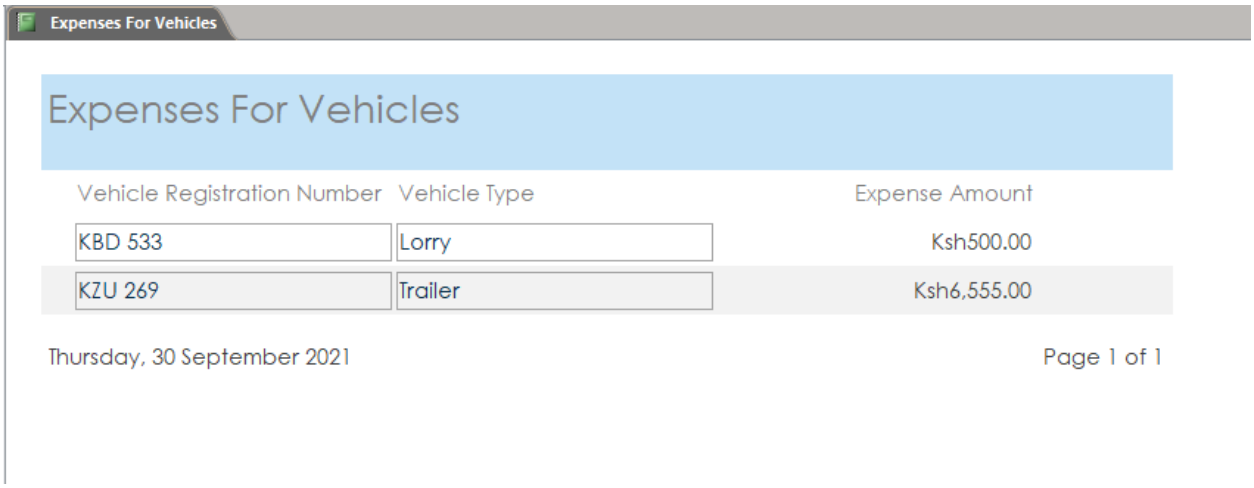

Figure 5 - Expenses for vehicle report

Amounts paid to drivers

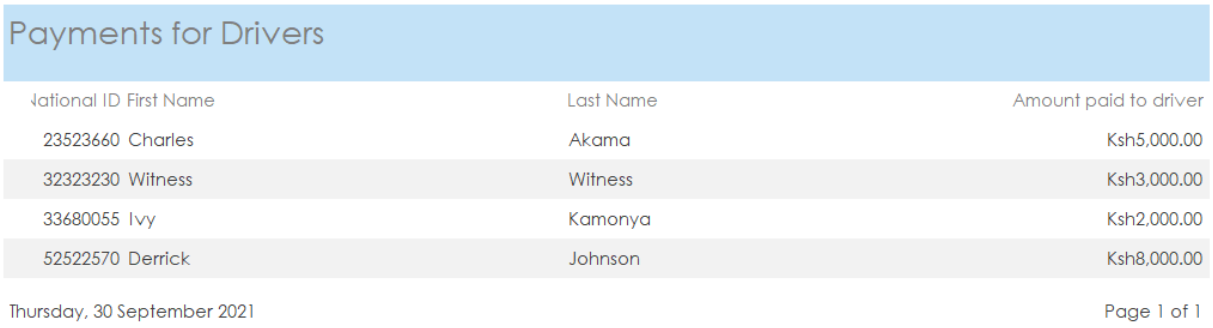

Figure 6 - Amounts paid to drivers

Amount Paid to loader

Payments for Loaders

National ID Number	First Name	Last Name	Amount paid to loader
Ivy	Ivy	Kamonya	Ksh450.00

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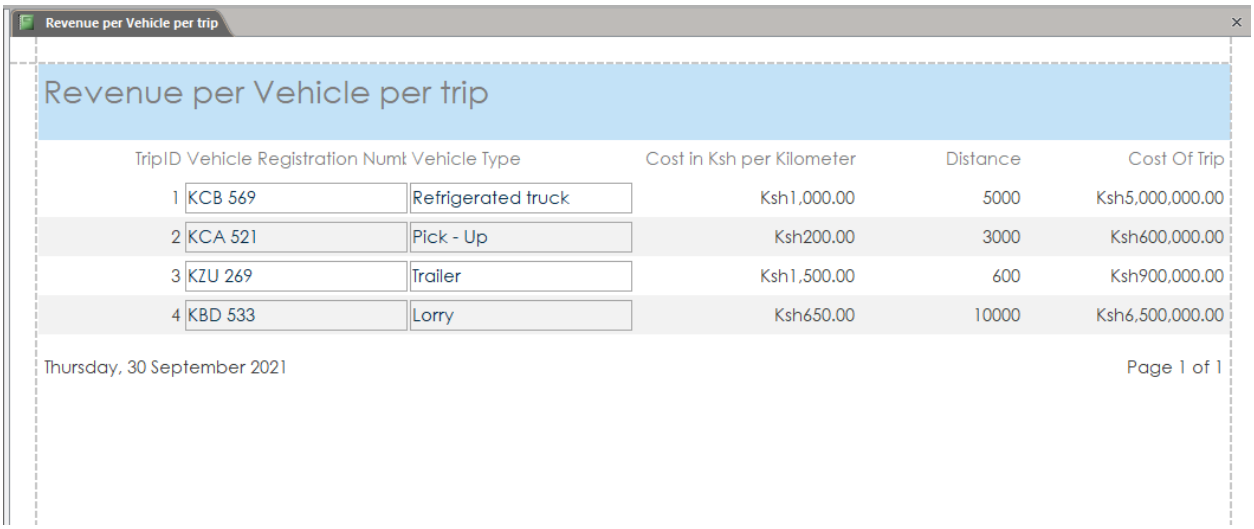
Figure 7 - Amount Paid to loader

Revenue per vehicle per trip



Revenue per Vehicle per trip

Revenue per Vehicle per trip

TripID	Vehicle Registration Numt	Vehicle Type	Cost in Ksh per Kilometer	Distance	Cost Of Trip
1	KCB 569	Refrigerated truck	Ksh1,000.00	5000	Ksh5,000,000.00
2	KCA 521	Pick - Up	Ksh200.00	3000	Ksh600,000.00
3	KZU 269	Trailer	Ksh1,500.00	600	Ksh900,000.00
4	KBD 533	Lorry	Ksh650.00	10000	Ksh6,500,000.00

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Figure 8 - Revenue per vehicle per trip

SYSTEM CONSTRUCTION

Tables

Members

Members

Field Name	Data Type
Membership Number	AutoNumber
Memebrship Type	Short Text
Members Name	Short Text
Location	Short Text
Nature of farm produce	Short Text
Phone Number	Number
Email Address	Hyperlink
Home address	Short Text

Figure 9 - Members Table

Group Members

Group Members

Field Name	Data Type
ID	AutoNumber
National ID Number	Number
Members Name	Short Text
Date Of Birth	Date/Time
Gender	Short Text
Phone Number	Number
Group Membership Number	Number

Figure 10 - Group Members Table

Drivers

Drivers

Field Name	Data Type
National ID	Number
First Name	Short Text
Last Name	Short Text
Gender	Short Text
Date Of Birth	Short Text
Phone Number	Number
Address	Short Text
City	Short Text
Town	Short Text
Email	Hyperlink
Add to mailing list	Yes/No
Next of Kin Contacts	Short Text

Figure 11 - Drivers Table

Loaders

Loaders

Field Name	Data Type
National ID	Number
First Name	Short Text
Last Name	Short Text
Gender	Short Text
Date Of Birth	Date/Time
Phone Number	Number
Address	Short Text
City	Short Text
Town	Short Text
Email	Hyperlink
Add to mailing list	Yes/No
Next of Kin Contacts	Short Text

Figure 12 - Loaders Table

Orders

Orders

Field Name	Data Type
Order ID	AutoNumber
Order Date	Date/Time
Driver ID	Short Text
Destination Distance	Number
Vehicle Registration Number	Short Text
Membership Number	Number

Figure 13 - Orders Table

Goods Transported

Goods Transported

Field Name	Data Type
ID	AutoNumber
Type of Goods	Short Text
Date Transported	Short Text
Order ID	Number
Condition of Goods	Short Text
Driver ID	Number
Vehicle Registration Number	Short Text

Figure 14 - Goods Transported Table

Vehicle Loaders

Vehicle Loaders

Field Name	Data Type
ID	AutoNumber
National ID Number	Number
Order ID	Short Text

Figure 15 - Vehicle Loaders Table

Vehicles

Vehicles

Field Name	Data Type
Vehicle Registration Number	Short Text
Vehicle Type	Number
Vehicle Color	Short Text

Figure 16 - Vehicles Table

Vehicle Types

Vehicle Types

Field Name	Data Type
ID	AutoNumber
Type Description	Short Text
Number of Loaders	Number
Amount paid to loader	Currency
Amount paid to driver	Currency
Load Capacity in tonnes	Number
Cost in Ksh per Kilometer	Currency
Cost of servicing	Currency
Cost of fuel	Currency

Figure 17 - Vehicle Types Table

Offences

Offences

Field Name	Data Type
ID	AutoNumber
Driver ID	Number
Order ID	Number
Vehicle Registration Number	Short Text
Type of Offences	Short Text

Figure 18 - Offences Table

Relationships

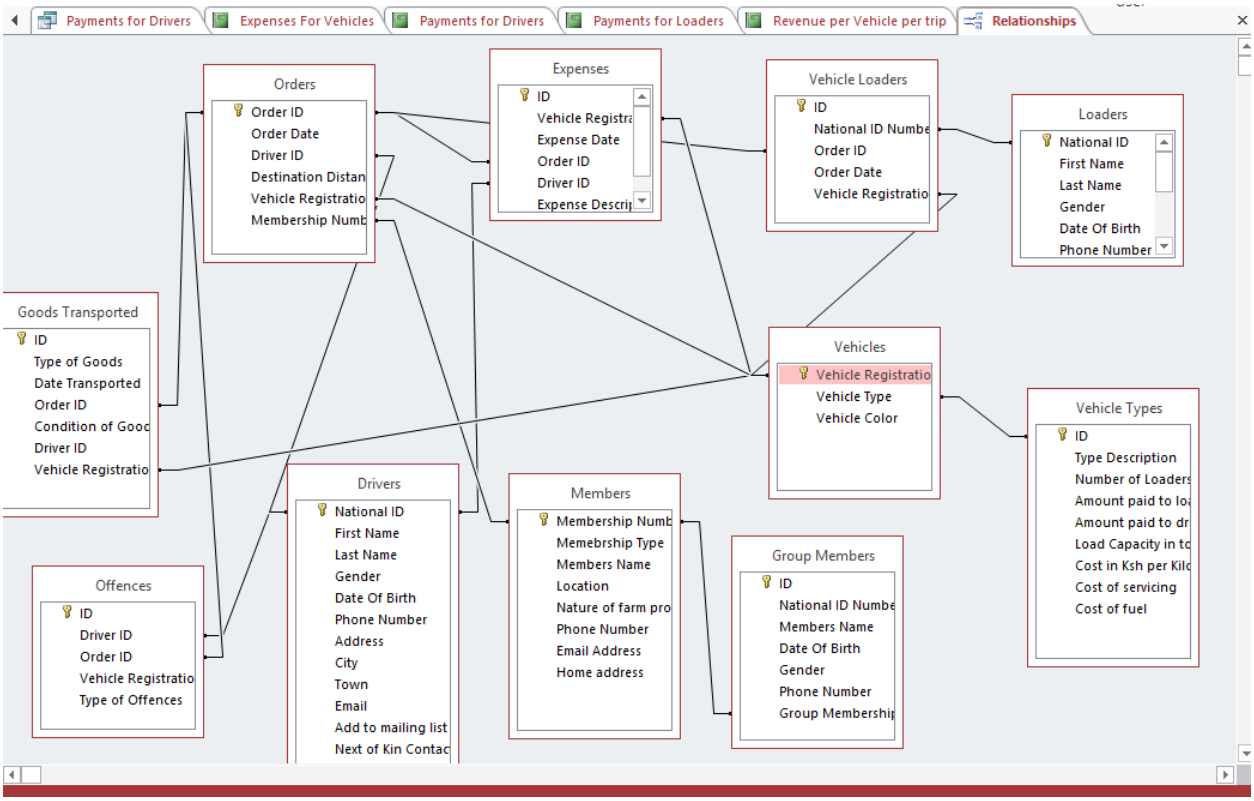


Figure 19 - Database Table Relationships

Input Forms

Group Members

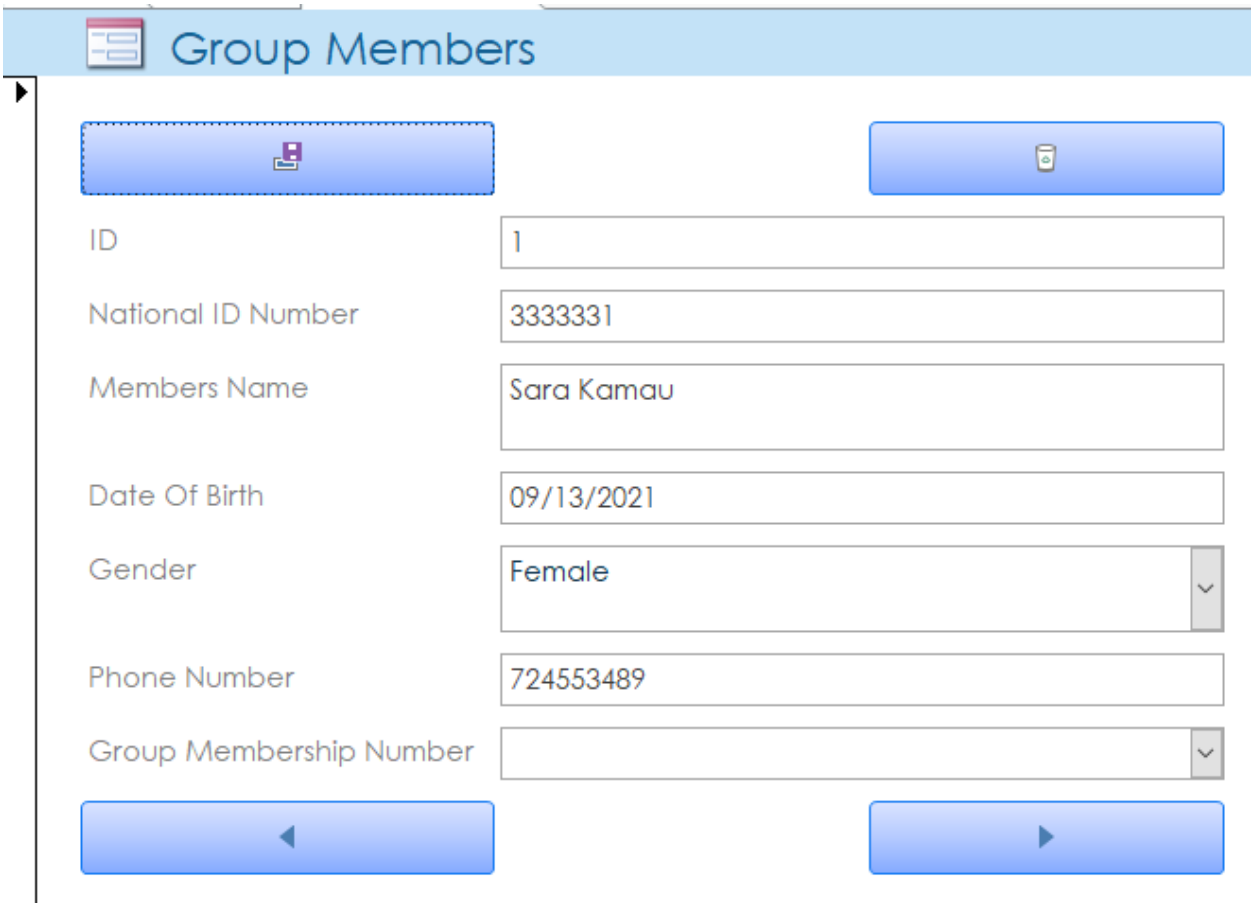


Figure 20 – Group Members Input Form

Drivers

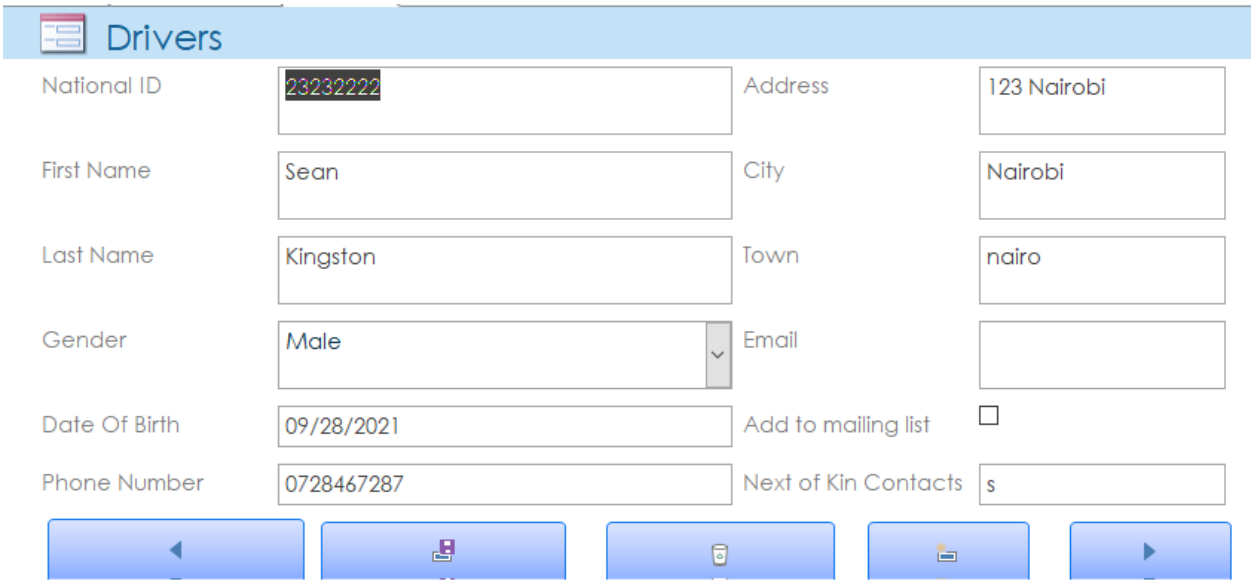


Figure 21 – Drivers Input Form

Loaders

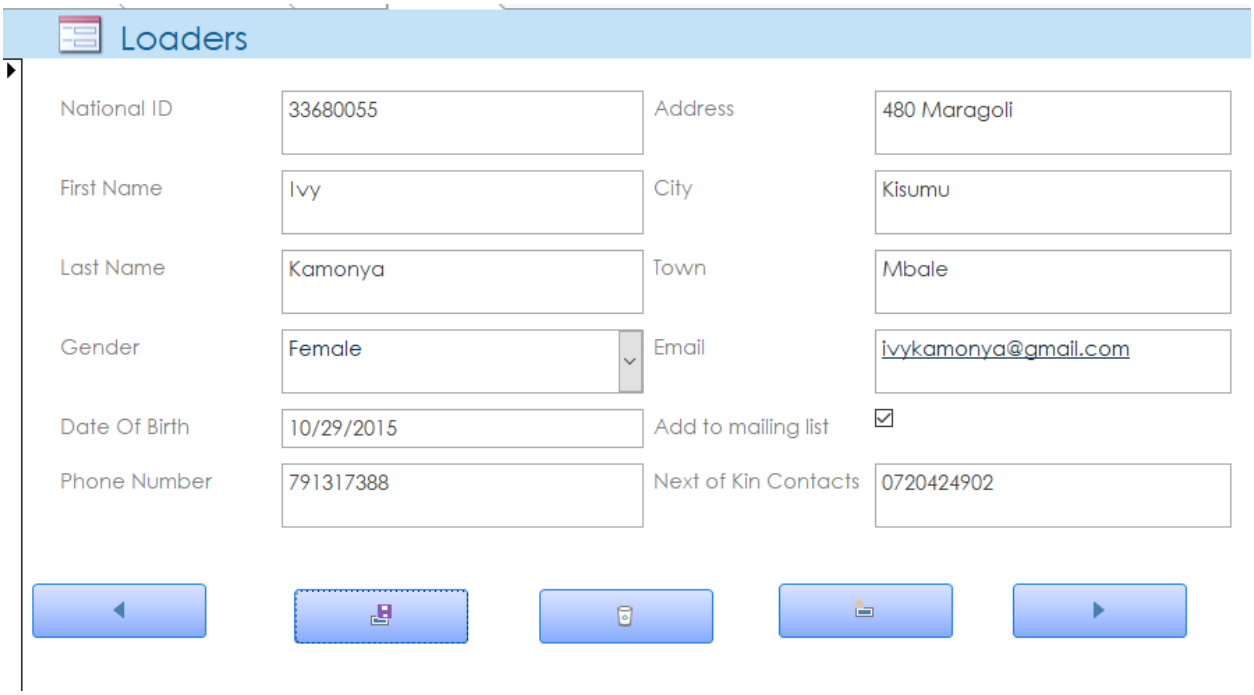


Figure 22 – Loaders Input Form

Orders

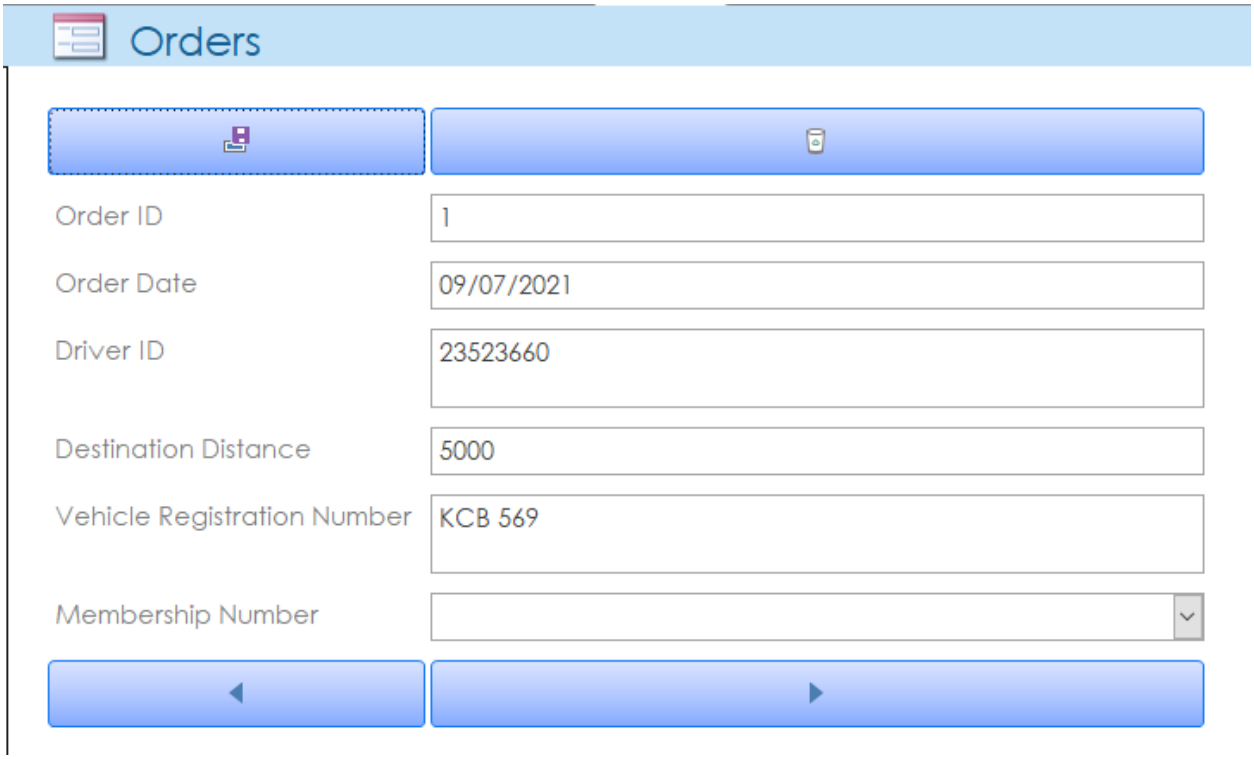


Figure 23 – Orders Input Form

Goods Transported

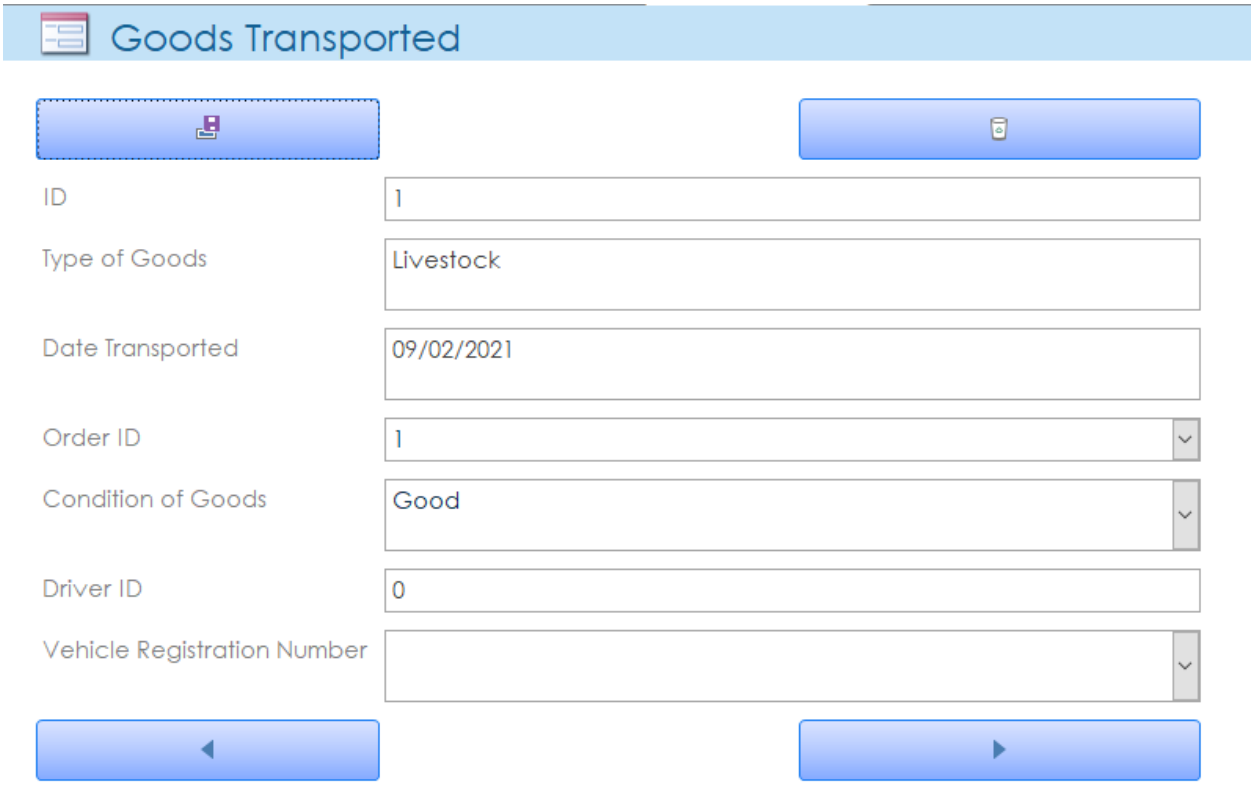


Figure 24 – Goods Transported Input Form

Vehicle Loaders

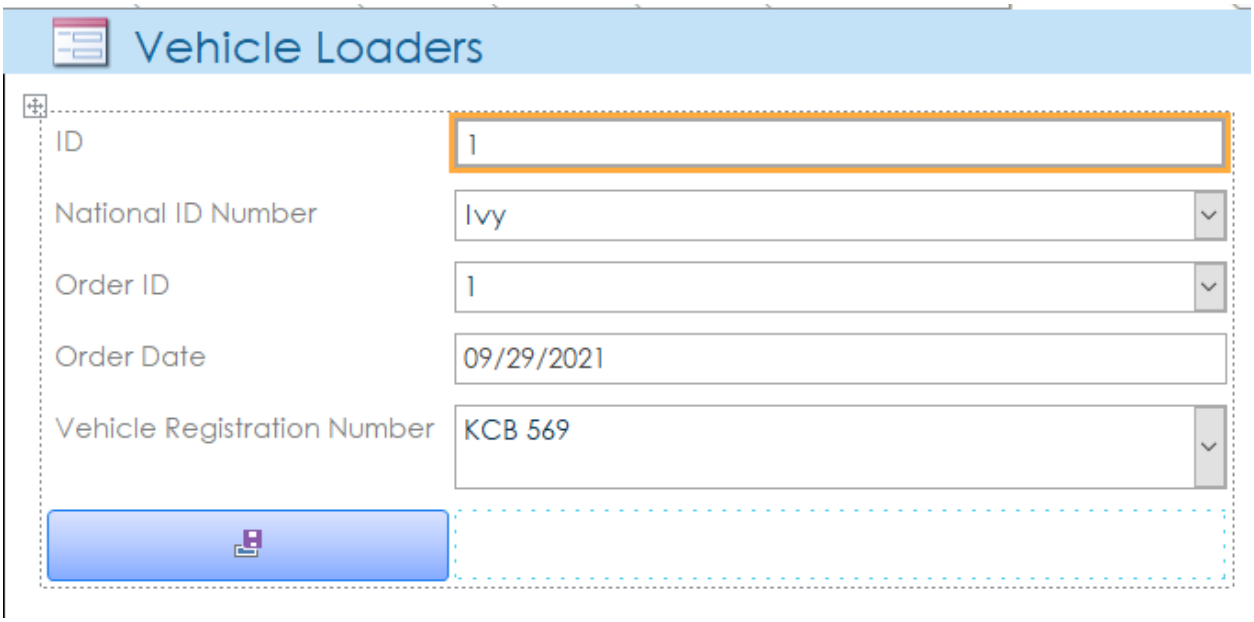


Figure 25 – Vehicle Loaders Input Form

Vehicle Types

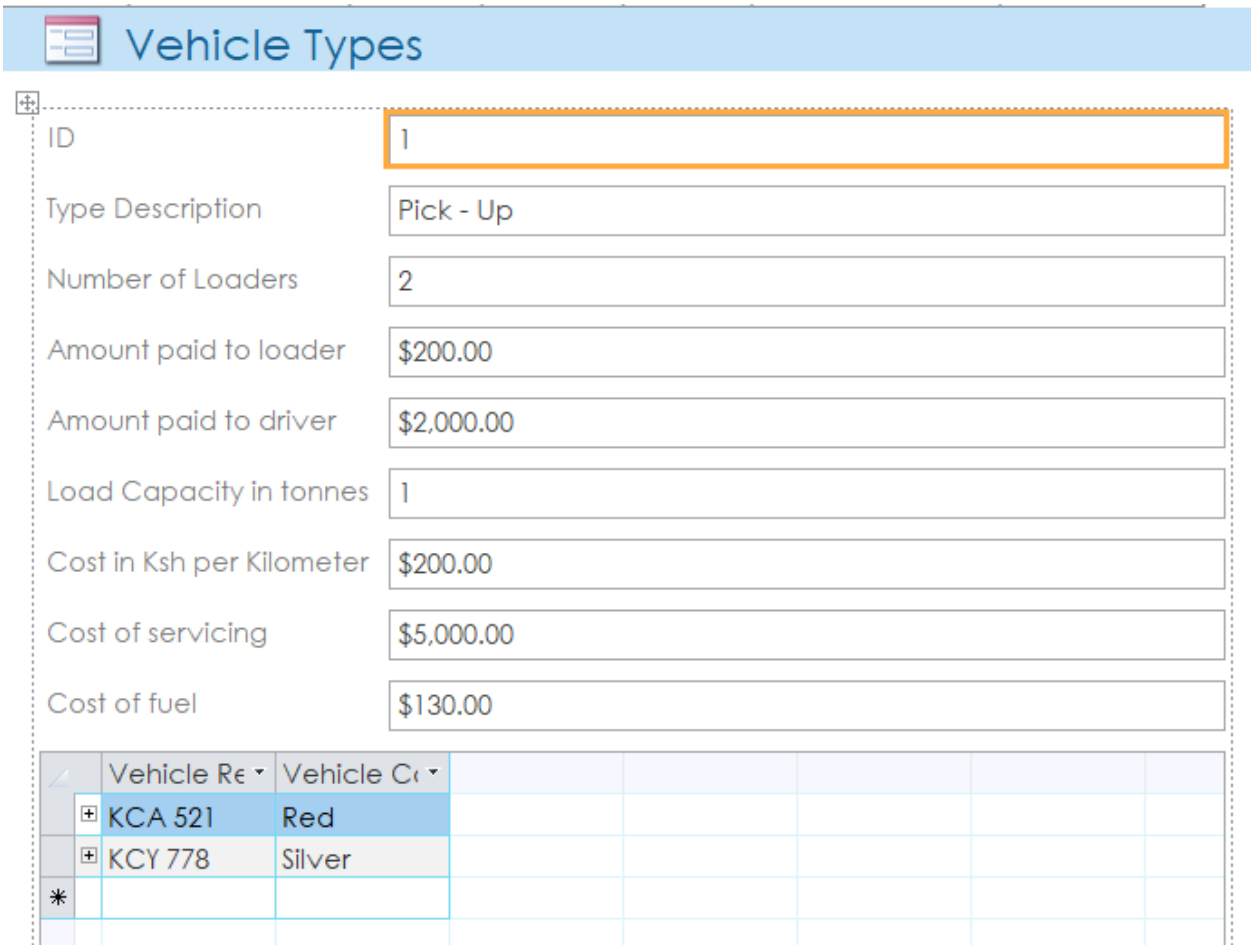


Figure 26 – Vehicle Types Input Form

Offences

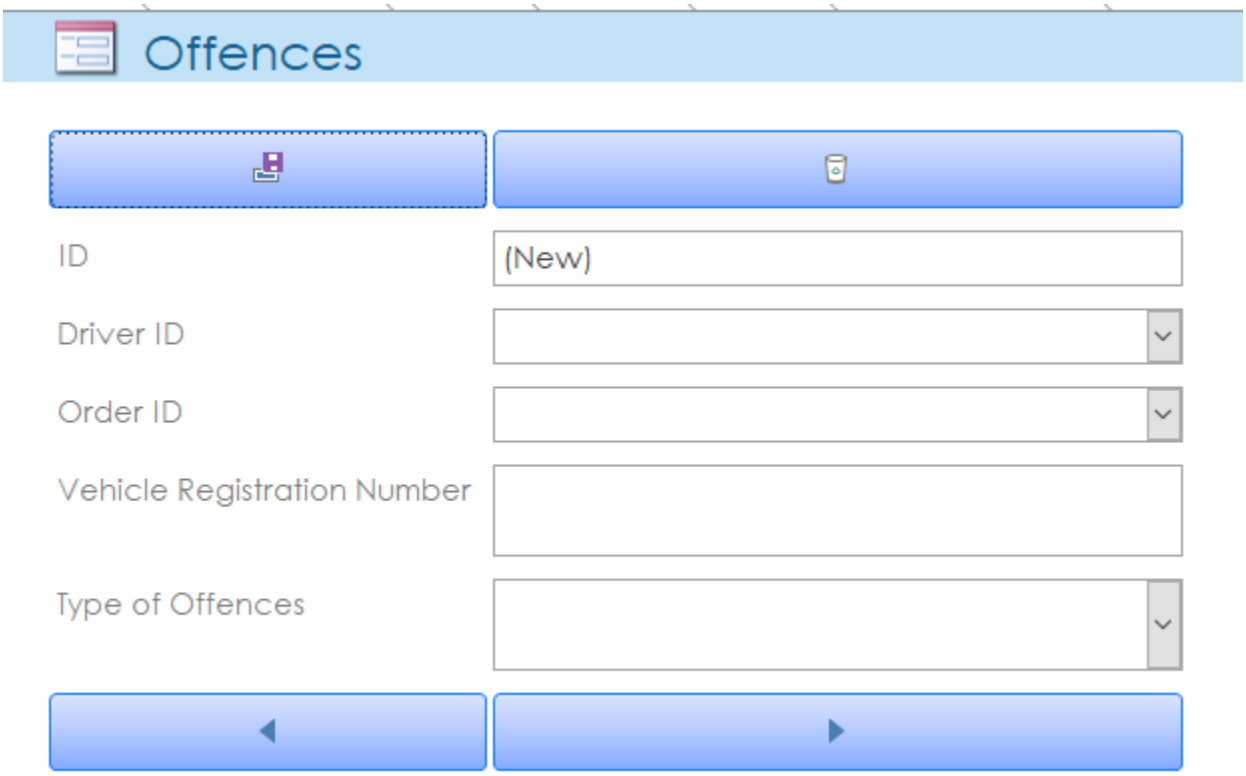


Figure 27 – Offences Input Form

Expenses

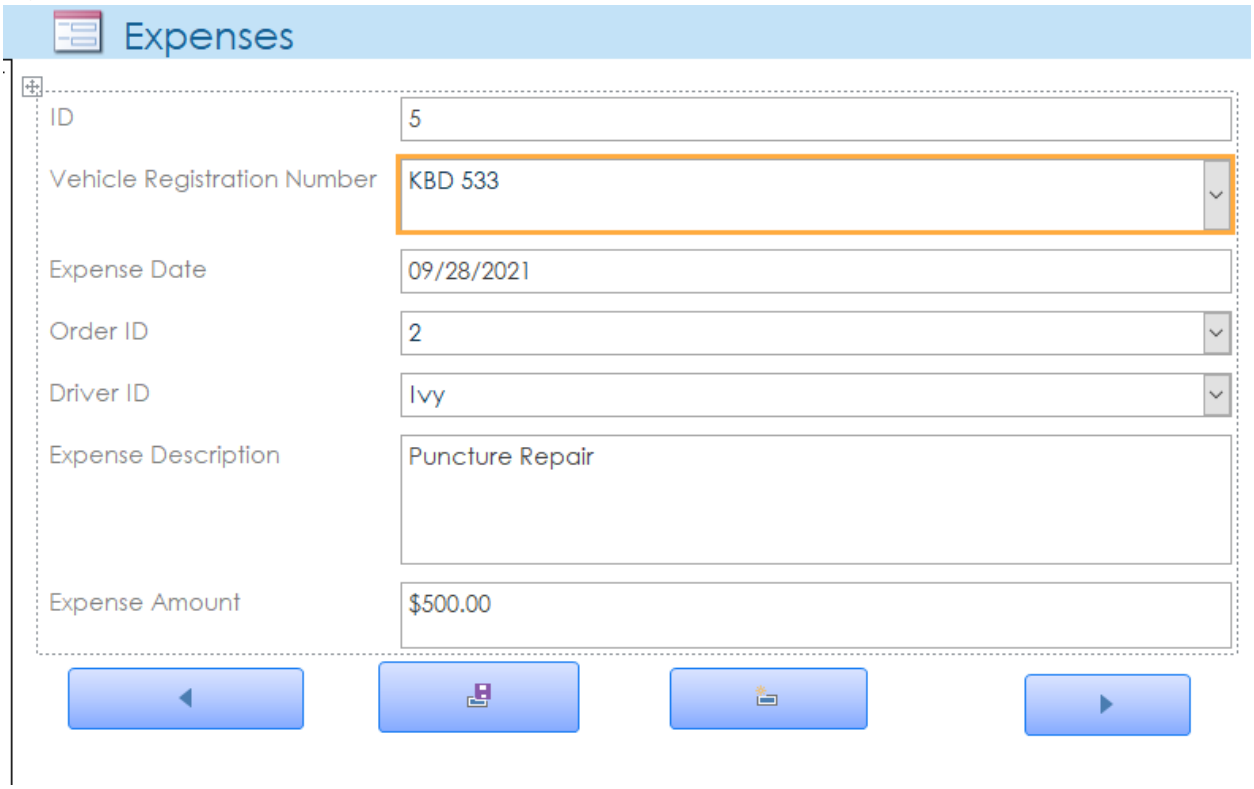
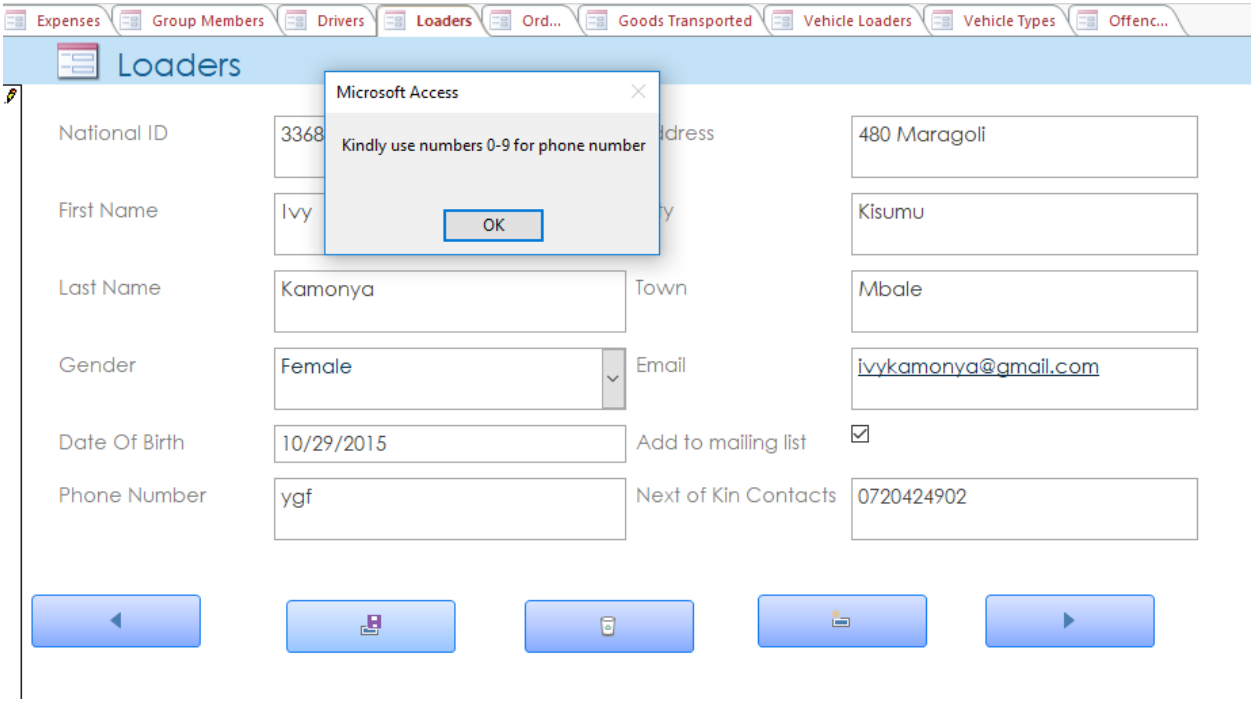


Figure 28 – Expenses Input Form

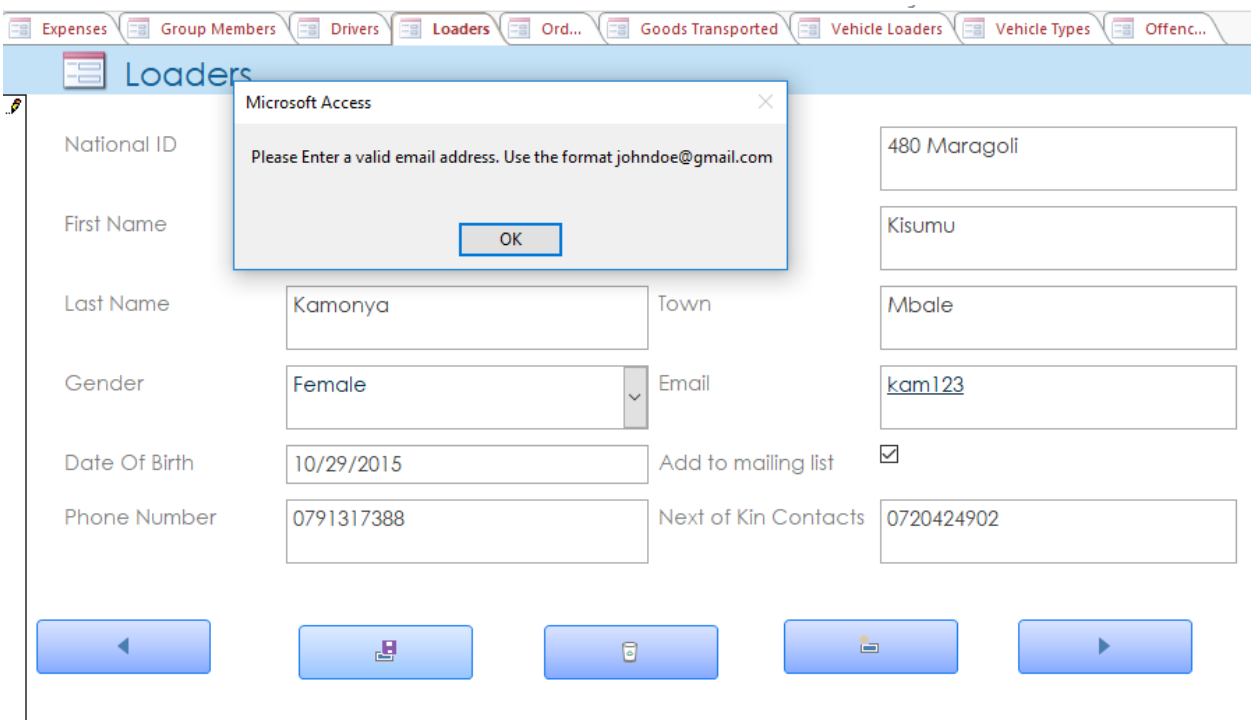
Validation

User Input Form Validation

The system restricts users to using a given format when feeding data to the database. For instance, to input phone numbers, users are restricted to numeric numbers, between 0 and 9. If a user tries to input alphabets or special characters, the user gets a pop up instructing them to only use numeric data.



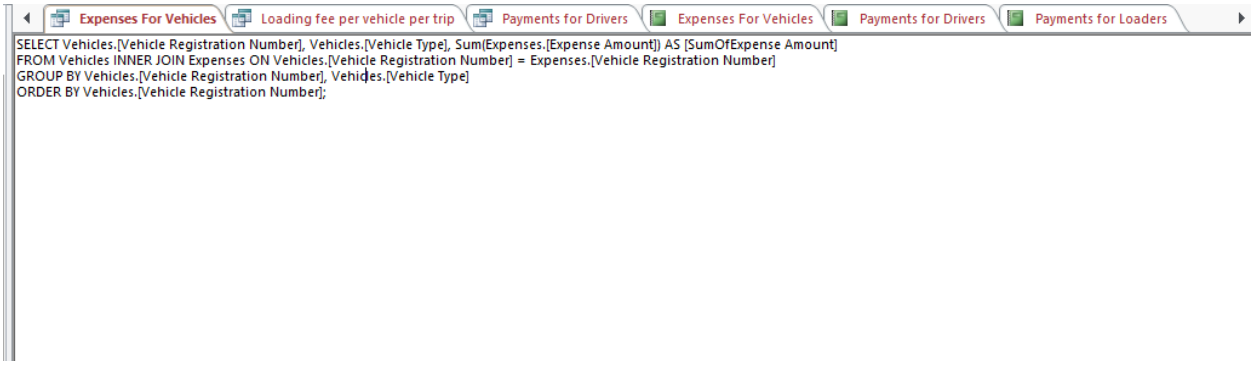
Users have to input emails in a specific format. The system prompts the user to input emails in the format: johndoe@gmail.com.



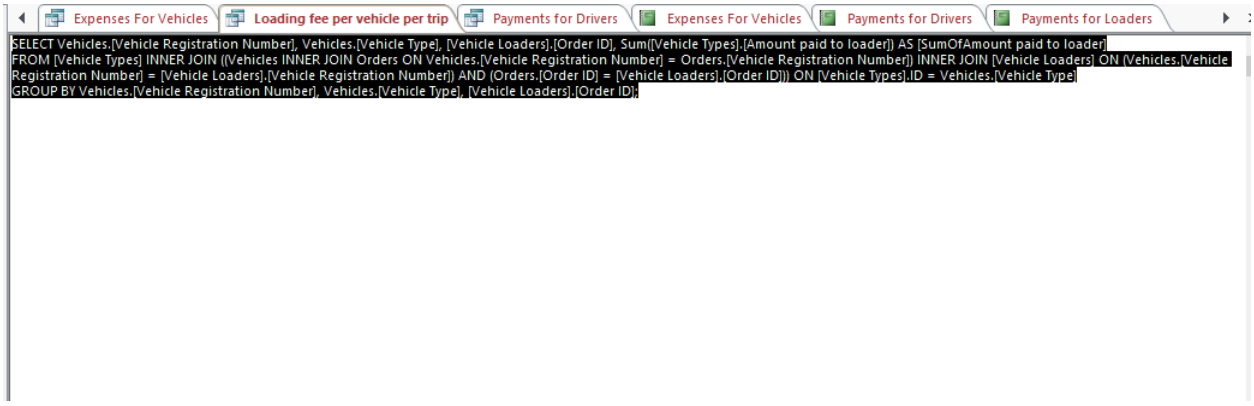
DATA MANIPULATION

Queries

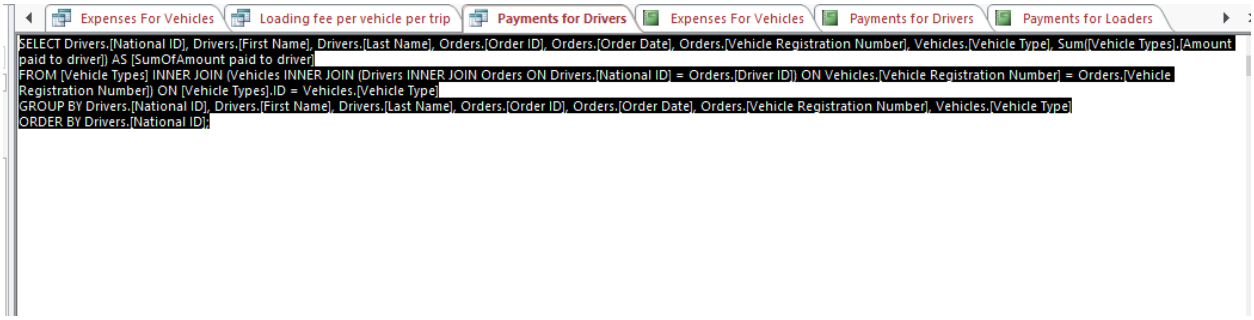
Expenses For Vehicles



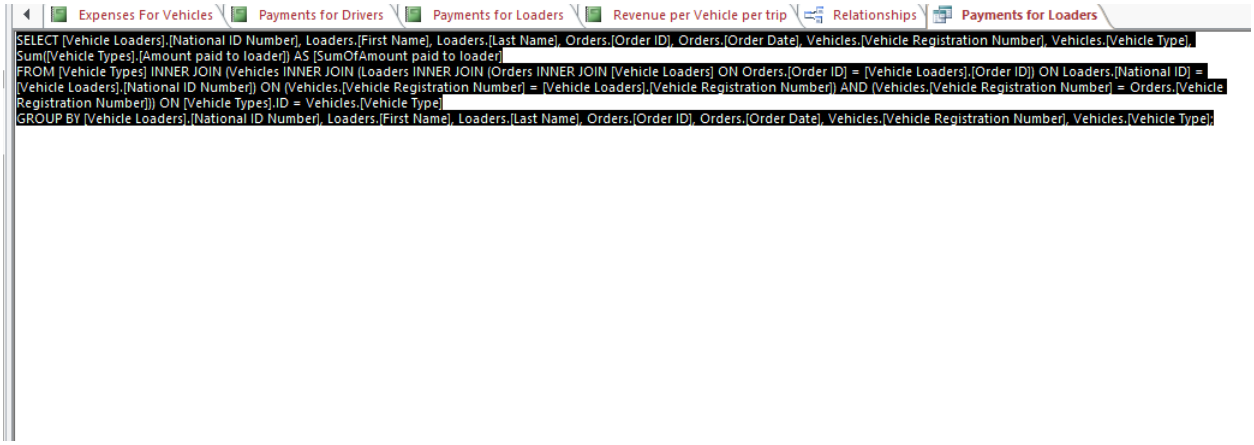
Loading Fee per Vehicle per trip



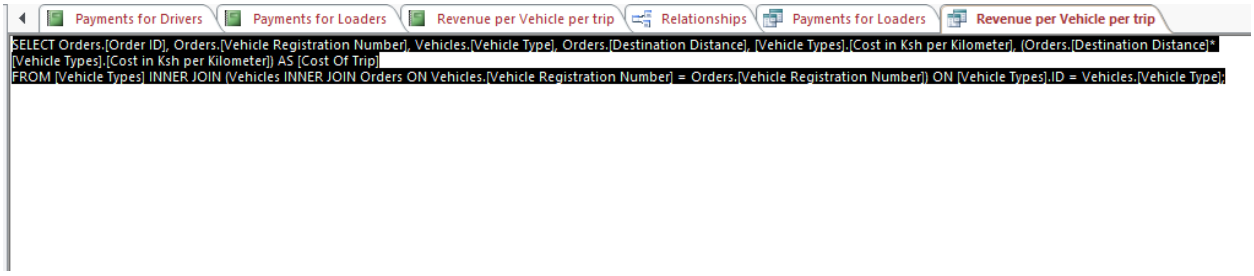
Payments For Drivers



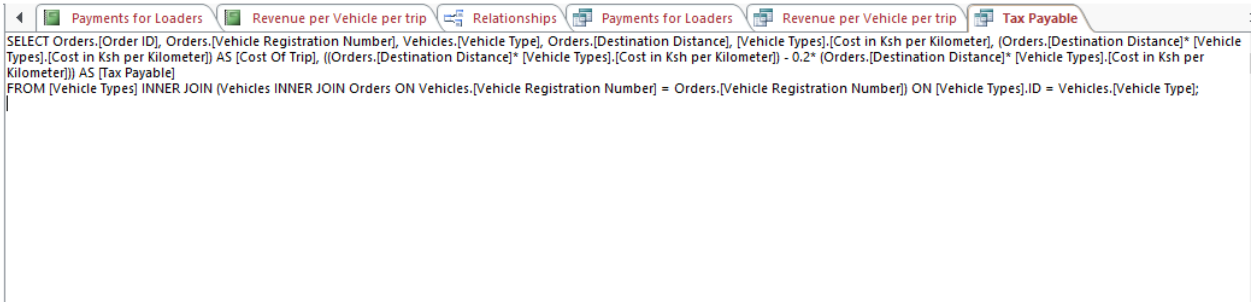
Payments For Loaders



Revenue per vehicle per trip

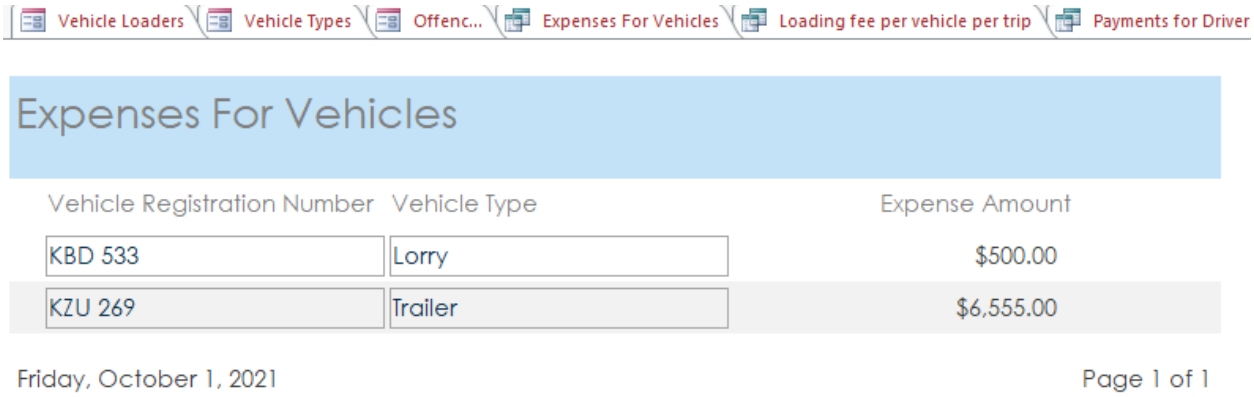


Tax payable

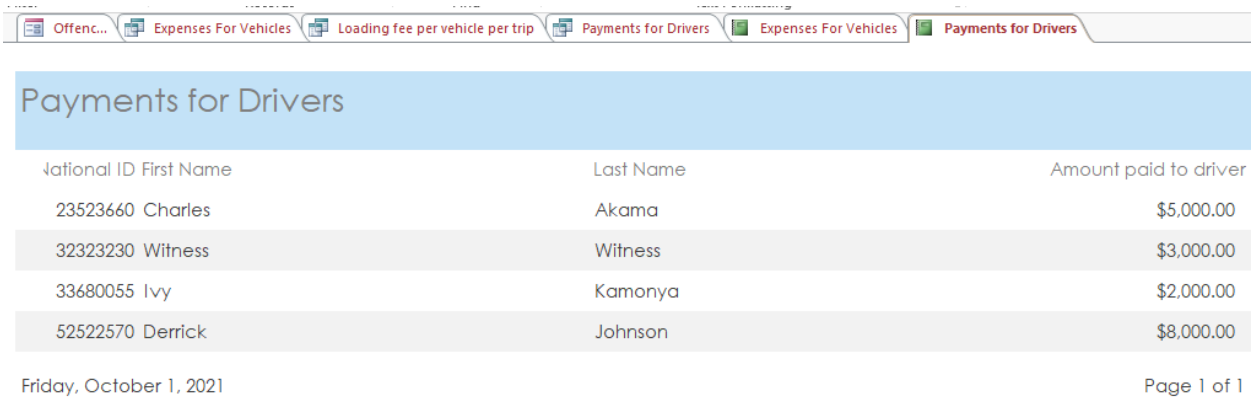


Reports output

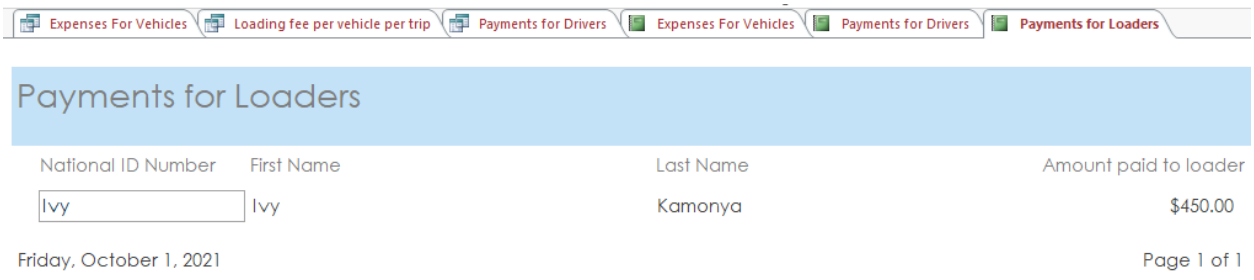
Expenses for vehicles



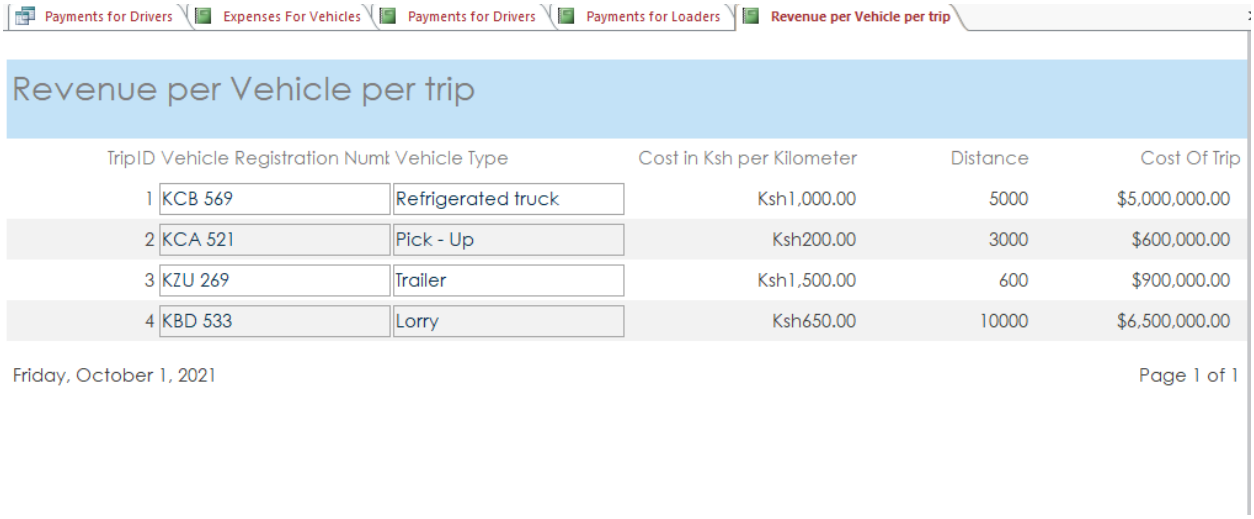
Payments for drivers



Payments for loaders



Revenue per vehicle per trip



USER MANUAL

This is the help material that will help the users of the system to use the system with as little guidance and need for clarification regularly in case of difficulties.

Hardware and Software Requirements

Hardware Requirements:

- Pentium 4
- 2 GB RAM
- Printer
- Monitor

Software Requirements:

- Application Software
  - Microsoft Access
  - Microsoft Word

- Operating System
  - Windows 7 and later

Installation guide

1. Insert an External Storage Media with the System
2. Open the Movers Transport System Folder
3. Close the Folder.
4. Copy the Folder
5. Paste on the Desktop
6. Open The folder and view the contents

Loading Process

1. Click the Start button. Select the Microsoft Access button
2. Double Click the Movers Transport system Icon
3. A form appears.

Navigation Guide

Procedure of Generating output

MISCELLANEOUS

Conclusion

The developed system has been able to achieve all the objectives which include:

i. Maintain membership records.
ii. Maintain Vehicle records
iii. Maintain loaders and drivers records
iv. Maintain records of goods transported
v. Maintain records of farmers who are in groups
vi. Maintain records of orders for transport
vii. Maintain records of offences committed by drivers
viii. Maintain records of expenses for each vehicle
ix. Compute:
    - Payment for a loader and driver
    - Penalties surcharged on drivers
    - Loading fee per vehicle per trip
    - Revenue per vehicle per trip
    - Expenses for each vehicle
    - Tax Payable
    - Total Company expense
    - Total revenue for the company
    - Overall company profit
x. Generating reports

Recommendation

I recommend that the company should put the following into consideration for the database system to be efficient.

i. The company should install anti-virus software for all the computer systems. So as to prevent them from data loss due to virus attacks.
ii. The company should enforce passwords to restrict access to the system

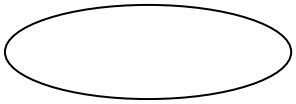
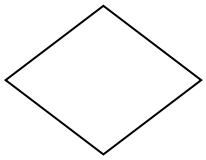
Bibliography

This shows a list of books and references that were used by the system analyst to refer during development of the new system for Movers transport System.

They include:

- Computer Studies, Book 2 Longhorn Publishers -Stephen Mburu and Geoffrey Chemwa 2005
- Computer Studies, Book 2 Mariwa Publishers – Dr. John Onunga & Renu Shah (Revised Edition)
- Computer Studies, Book 3 Longhorn Publishers - Stephen Mburu and Geoffrey Chemwa 2005
- Computer Studies, Book 4 Longhorn Publishers-Stephen Mburu and Geoffrey Chemwa 2005
- Onunga, J., & Shah, R. Computer studies book 2. Nairobi: Mariwa Publishers
- Mburu, S., & Chemwa, G**.** Computer studies Book 2

Appendices

	Start/stop
	Process
	Decision
	Flow Direction
	Input /Output