# DECLARATION

I, **Zaninka Ange,** I declare that this dissertation is my own work. I acknowledged all authors or sources from where I got information. I further declare that this work has not been submitted in any other university or institution for the award of a degree or any of its equivalents.

**Student names**: ZANINKA Ange

**Student ID** : 1810222

Signature : ……………………….

Date ……/….... /2019

# APPROVAL

This is to acknowledge that this dissertation has been submitted with my approval.

**Dr.MBANZABUGABO Jean Baptiste**

Signature …………………………………….

Date …………/……………/2019

# DEDICATION

To the Almighty God our guide,

To my beloved parents,

To my brothers and sister

To my supervisors,

To lecturers in UTB

To Friends and classmates may the God bless you all.

# 

# ACKNOWLEDGMENTS

I offer my special thanks to Almighty God who protected me till now and from whom knowledge comes. I heartedly thank to the parents who accorded me the financial support. I cannot forget to thank UTB administration, management and the whole UTB community for their uncountable supports during my studies.

I would also like to thank my supervisor **Dr.MBANZABUGABO Jean Baptiste**, for his guidance and support during my project analysis and design. Finally, I also give thanks to my families, friends and classmates to be near to me during my studies.

**TABLE OF CONTENT**

[DECLARATION i](#_Toc4135060)

[APPROVAL ii](#_Toc4135061)

[DEDICATION iii](#_Toc4135062)

[ACKNOWLEDGMENTS iv](#_Toc4135063)

[List of Tables vii](#_Toc4135064)

[LIST OF FIGURES viii](#_Toc4135065)

[ABSTRACT ix](#_Toc4135066)

[CHAPTER1: GENERAL INTRODUCTION AND BACKGROUND 1](#_Toc4135068)

[1.0 INTRODUCTION 1](#_Toc4135069)

[1.1 BACKGROUND OF STUDY 1](#_Toc4135070)

[1.2 PROBLEM STATEMENT 5](#_Toc4135071)

[1.3OBJECTIVE OF THE STUDY 6](#_Toc4135072)

[1.3.1General objectives 6](#_Toc4135073)

[1.3.2Specific objectives 6](#_Toc4135074)

[1.4 RESEARCH QUESTIONS 6](#_Toc4135075)

[1.5 SIGNIFICANCE OF THE STUDY 6](#_Toc4135076)

[1.5.1 To the researcher 6](#_Toc4135077)

[1.5.2 ToRFTC 6](#_Toc4135078)

[1.5.3 To the University of Tourism, Technology and Business Studies (UTB) 7](#_Toc4135079)

[1.6 SCOPE OF THE STUDY 7](#_Toc4135080)

[1.6.0 Time Scope 7](#_Toc4135081)

[1.6.1 Geographical scope 7](#_Toc4135082)

[1.7 Limitations 7](#_Toc4135083)

[CHAPTER TWO: LITERATURE REVIEW 8](#_Toc4135084)

[2.1. Definition of key terms 8](#_Toc4135085)

[2.2 RELATED WORKS 9](#_Toc4135091)

[Summary 10](#_Toc4135092)

[CHAPTER THREE: RESEACH METHODOLOGIES 11](#_Toc4135093)

[3.0 Introduction 11](#_Toc4135094)

[3.1 research design 11](#_Toc4135095)

[3.2 Population and selection of the sampling 13](#_Toc4135096)

[3.2.1 Population 13](#_Toc4135097)

[3.2.2 Sample Techniques 13](#_Toc4135098)

[3.3Tools for Data collection /instrumentation 13](#_Toc4135099)

[3.4 Collection of data 14](#_Toc4135100)

[3.5 Analysis of data 14](#_Toc4135101)

[3.6Validity and Reliability 14](#_Toc4135102)

[**Reliability** 15](#_Toc4135103)

[3.7 Ethical considerations 15](#_Toc4135104)

[3.8 SUMMARY 16](#_Toc4135105)

[CHAPTER 4: SYSTEM ANALYSIS AND DESIGN 17](#_Toc4135106)

[4.1 Introduction 17](#_Toc4135107)

[4.2 Data analysis and presentation 17](#_Toc4135108)

[4.3 Interpretation of findings 17](#_Toc4135109)

[4.5 Description of existing system 22](#_Toc4135111)

[4.6 Description of the new system 22](#_Toc4135112)

[4. 6 System configuration requirements and platform 23](#_Toc4135113)

[4. 6. 1System configuration 23](#_Toc4135114)

[4. 6.2 Software development methodology 24](#_Toc4135115)

[4.7.2 Use case 27](#_Toc4135116)

[4.7.3 Normalization 28](#_Toc4135117)

[4.7.4 Data Dictionary 29](#_Toc4135119)

[4.7.5 Entity Relationship Diagram 31](#_Toc4135120)

[CHAPTER 5: IMPLEMENTATION, CODING AND TESTING 32](#_Toc4135121)

[5.1 Implementation and coding 32](#_Toc4135122)

[5.1.1 Introduction 32](#_Toc4135123)

[5.1.2 Description of implementation Tools and technology 33](#_Toc4135124)

[5.1.3 Screen shots and Source Codes 35](#_Toc4135125)

[CONCLUSIONS AND RECOMMANDATIONS 61](#_Toc4135126)

[Introduction 61](#_Toc4135127)

[**Conclusion (s)** 61](#_Toc4135128)

[Recommendations 62](#_Toc4135129)

[ **Future Researchers** 62](#_Toc4135130)

[References 63](#_Toc4135131)

[APPENDICES 63](#_Toc4135132)

LIST OF ABREVIATIONS

**BIT:** Business Information Technology

**DBMS**: Database Management System

**ERD**: Entity Relationship Diagram

**MIS**: Management information system

**PHP**: Hypertext preprocessor

**UML**: Unified Model Language

**URL**: Uniform Resource Locator

**UTB**: University of Tourism Technology and Business Studies

**RURA:** Rwanda Utilities Regulatory Agency

**RFTC:** Rwanda Federation of Transport cooperative

## 

## List of Tables

[Table 1 Response about gender 17](#_Toc4135044)

[Table 2 Response of how information are recorded 18](#_Toc4135045)

[Table 3 Response of how report is being provided 19](#_Toc4135046)

[Table 4 Response about how to know working place 20](#_Toc4135047)

[Table 5 Response about car checking time 20](#_Toc4135048)

[Table 6 Response about how driver know car to be used 22](#_Toc4135049)

[Table 7 Normalization rules 28](#_Toc4135050)

## 

## LIST OF FIGURES

[Figure 1 water fall 24](#_Toc3913759)

[Figure 2 DFD 27](#_Toc3913760)

[Figure 3 USE CASE 27](#_Toc3913761)

[Figure 4 ENTITY RELATIONSHIP DIAGRAM 31](#_Toc3913762)

[Figure 5 LOGIN FORM 35](#_Toc3913763)

[Figure 6 LEAVE FORM 37](#_Toc3913764)

[Figure 7 LEASE FORM 45](file:///C:\Users\Administrator\Downloads\AngeFinal.docx#_Toc3913765)

[Figure 8 REPORT FORM 54](#_Toc3913766)

# 

# ABSTRACT

This project aims at developing a “RFTC Driver Management System “that contributes well to the organization of Transportation needs and special Attention is organization of Rftc company especially in Management of their drivers. To develop software or system that will help in Management of drivers by providing records of driver’s information, Making easy to allocate drivers and car according to different location where RFTC works and making easy to provide report. The Main objective of the project is to develop a web based application in order to manage RFTC driver management system by providing good service to Rwanda citizen in terms of transport. Specific objectives to identify the challenges faced by **Rftc,** determine the level of using technology and design the implementation of Rftc. In this research, the researcher used stratified random sampling considering 6 respondents; data have been collected using questionnaires, interview, observation, and documentation. The researcher found that according to the analysis of data gathered from Rftc the majority choose to implement the new system.

### This system was developed by using PHP, bootstrap and MySQL. Referring to the research finds a system as a solution and installation was done following waterfall model. As conclusion, the researcher decided to implement RFTC driver management system to tackle the problem stated. The researcher recommends the Company to use this application in order to avoid the miss management of business.

# CHAPTER1: GENERAL INTRODUCTION AND BACKGROUND

## 1.0 INTRODUCTION

This chapter covers background to the study, problem statement, and objectives of the study, significance of the study, scope of the study and limitations of the study.

## 1.1 BACKGROUND OF STUDY

**RFTC** is made up of 2357 members from 12 cooperatives that specialize in the national public transport from all the provinces of Rwanda and the City of Kigali, the Rwanda Federation Transport cooperatives is successor to ATRACO(Association of Transport Companies)with the vision of protecting social and economic interests of its affiliated members and increase the use of public transport services through the provision of customer-focused, safety and cost-effective passenger through road transport services using modern vehicles recommended in public transport policy. It was formed on 4th November 2011 reinstating former Association of Communal transporters (ATRACO) which represented all transport operators and supported them in organization and advocacy.

In line with the recent cooperative management plan, Rwanda Federation of Transport Cooperatives is interested in hiring competent and qualified cooperative Managers that will manage its affiliated Transport Cooperatives located in three provinces namely Eastern Province, Northern Province and Kigali City in order to achieve its long term strategies

In Kigali city province, Rwanda Federation of Transport Cooperatives (RFTC) will operate in Zone III and it will cover Kimironko, Kinyinya (Kagugu & Dutchwelle), Gisozi, Kacyiru, New Gakinjiro, Batsinda, Kibagabaga, Kimihurura, Nyarutarama and the trunk routes of this public transport zone shall include the main routes connecting it to the CBD and to the Nyabugogo and Kimironko Taxi Parks. It will operates also in Zone IV and it will cover Kimisagara, Nyakabanda, Nyamirambo, Mageragere, Kigali, Gatsata, Karuruma, Jabana, Nyacyonga, and the trunk, inter and intra zone routes connecting it to the CBD and Nyabugogo Taxi Park.  
Public transport zones are made up of trunk routes emanating from each zone heading towards the Central Business District (City center) and Nyabugogo terminal, intra-zone routes within a given public transport zone and inter-zone routes connecting two different public transport zones.

Rwanda Federation of Transport Cooperatives (RFTC)it is included in public utilities which is under control of RURA. RURA has different MissionIn regulating public utilities including Promotes free and fair competition, protects the rights of consumers and balances the interests of all stakeholders, promotes availability of affordable, quality services to all andLeads in the development of the public utilities sectors.

**Regulations in public transport, motivation for investors**

Asaba Katabarwa, who is the head of transport regulation department at RURA Katabarwa said that 6 years ago, public transport in Kigali was characterized by disorder, long staying on queues by passengers and misbehavior by some drivers.

 “One of the strategies to eliminate the disorder, was dividing Kigali into four transport zones. The zones were given to public transport companies with each zone getting its own operating company,” he said The division of zones, he said, helps to inspect and track transport companies  to hold each company accountable for the transport zone they operates  which ensures rapid operations.

“After setting up the zones, the next step was road rehabilitation in Kigali city. We increased routes from 41 to 87 routes while other routes were extended to reduce the last mile of the passenger. Regulations ensure viability of the sector to protect investors,” Katabarwa said.

RURA says the restructuring has also been reducing un-roadworthy and smaller cars that increase congestion.

 “Now we wish to have big cars as other developed cities to transport passengers in a comfortable manner and reducing delays on queues” he noted

Katabarwa said that investors are recommended to buy new and bigger cars which can transport a large number of passengers at once.

He said.

To ensure reliability of transport services RURA set up specific hours for operating starting from 5:00 am until 23:00 pm to have predictable timelines.

According to, Sam Byaruhanga the Executive Secretary for Rwanda Federation of Transport Cooperatives (RFTC), they are increasing the number of the big buses on the principle routes such as the Kimironko-city center, Masaka-Kabuga to the City Centre among others adding that they recently started by importing 20 buses with capacity to carry at least 60 passengers to adequately serve the people.

He said the buses will be fitted with cameras inside to monitor movement and avoid excess passengers by the drivers.

“The cameras will help us effectively monitor operations, drivers’ behaviors and avert cheating by ensuring all passengers are accounted for which will definitely increase revenue,” he said adding that the other role the cameras will play is to ensure the safety of the passengers.

## 

## 1.2 PROBLEM STATEMENT

After looking today’s society, I saw the following problems in area of management of many company, there is a lack of well-designed computerized systems that could offer better services to people. On my purpose in foundation of the problems meet to our life. This means a lot of manual work, which leads to the loss of control over operations of activities of many organizations or company.

**RFTC** are still managing information of their drivers using printing paper, which brings no quick method of accessing, recording, for that way they are using to manage their drivers is causing some problems. Such as take longtime to perform specific task, In **RFTC** most of the driver information is kept in a file .Therefore, it is quite hard for them to search the driver information when is needed. Moreover, it uses a lot of papers and data is lost because no backup provided for the data, Difficult to allocate drivers and car according to difference location where RFTC works And Difficult to provide report.

This is way I am interesting to develop **Rftc Driver management system** that will reduce some problems faced by **Rftc**, in order to avoid all issues.

## 

## 1.3OBJECTIVE OF THE STUDY

### 1.3.1General objectives

The Main objective of the project is to develop a web based application in order to manage RFTC driver management system by providing good service to Rwanda citizen in terms of transport.

### 1.3.2Specific objectives

* + - * To determine how to do report for daily activities.
      * To provide information or record of driver
      * To make system automatically changes status when driver were brought a car (lease or leave the car)

## 1.4 RESEARCH QUESTIONS

1. How to develop application that will be able to secure management of RFTC driver system?

2. How to develop a system that enables user to registers DRIVER information?

4. How to know exactly time driver take car and brought car ?

## 1.5 SIGNIFICANCE OF THE STUDY

### 1.5.1 To the researcher

Working on this project will certainly improve the researcher’s academic acquired skills and learned programming knowledge.

### 1.5.2 To RFTC

This system will be useful for RFTC for management of their activities between drivers and company in order to provide good service for customers

### 1.5.3 To the University of Tourism, Technology and Business Studies (UTB)

This study will be useful for academic purposes and for future researchers who wish to undertake the similar or related topic. So far, this project being certified, it will be an added value to UTB library.

## 1.6 SCOPE OF THE STUDY

### 1.6.0 Time Scope

RFTC application needs a lot of effort to accomplish; according to the features to be implemented the time for it to be completed is 4 months.

### 1.6.1 Geographical scope

**RFTC** headquarter is located Kigali City, Remera, Rwanda

## 

## 1.7 Limitations

In the context of this study, data collection may require more time on the part of the researcher due to the fact that the researcher dedicated her time in collecting data from one respondent to another. During the research study, the researcher faced a challenge of limited reference resources like books, computers, and Internet connection .To overcome these and accomplish this research the researcher used the knowledge acquired from school, Internet. The research was limited in time and cost, but the researcher had to collect data from a particular sample not from the whole population as far as time limitation is concerned.

# 

# CHAPTER TWO: LITERATURE REVIEW

2.0. Introduction

This chapter provides the literature review that is related to the project development and is intended to provide a brief description about technical terms and concepts that are being used during development of the project. It reviews about the existence of others systems. The sources are merely taken from books, articles, journals and also sources from Internet.

## 2.1. Definition of key terms

* **DRIVER** is a person employed to drive passenger motor vehicle, especially a luxury such as large sedan or limousine.
* **CAR** is a road vehicle, typically with four wheels, powered by internal combustion engine and able to carry big number of people

### Information is that which informs, that is to say that from which data can be derived. Information is conveyed either as the content of a message or through direct or indirect observation of something. That which is perceived can be construed as a message in its own right, and in that sense, information is always conveyed as the content of a message. Information can be encoded into various forms for transmission and interpretation. For example, information may be encoded into signs, and transmitted via signals. In Thermodynamics, information is any kind of event that affects the state of a dynamic system that can interpret the information.

### Information technology (IT)

Is the application of computers and telecommunications equipment to store, Retrieve, transmit and manipulate data, often in the context of a business or other enterprise? The term is commonly used as a synonym for computers and computer networks, but it also encompasses other information distribution technologies such as television and telephones. Several industries are associated with information technology, including computer hardware, software, electronics, semiconductors, and internet, and telecom equipment, e-commerce and computer services.

### ****Data****

The concept of data and information are very important in understanding issues that go with development and implementation of a computer software based sport club management system. The term “data” and “information” are used interchangeably every day conversation as meaning the same thing. Too many manager and information specialist, however, these terms have distinct meaning. According to define data and information as Data is fact events, transactions and so on, which have been recorded. They are the raw materials from which information is produced. Information is data that has been produced in such a way as to be useful to the recipient. Data are fact obtained by observation, counting, measuring, weighing, which are often records of day-to-day transactions of the organization.

### Database

Database is a logically coherent collection of data with some inherent meaning, representing some aspect of real world and which is designed, built and populated with data for a specific purpose.

### Database Management System

It is a collection of programs that enables user to create and maintain a database. In other words it is general-purpose software that provides the users with the processes of defining, constructing and manipulating the database for various applications.

* **RURA** stands for Rwanda Utilities Regulatory Agency. it has Responsibility in Transport sector is to set up regulations and guidelines and ensures the compliance by operators leading to enabling environment and sector development.

## 2.2 RELATED WORKS

* **DRIVER MANAGEMENT SOFTWARE**

Our driver management software helps you to keep your driver records up-to-date, organized and easily accessible from a central location. Keep track of assigned vehicles and equipment, their usage and related expenses. While Fleet Wave’s event management capabilities lets you set alerts and reminders for important pending, due or past due renewal deadlines for driver compliance.

* **ONLINE DRIVER MANAGEMENT**

A full range of driver information can be stored securely and managed online, integrating with dispatch, scheduling and work order management. Driver tracking, along with unique IDs, gives you the ability to manage your team more effectively, at every level.

* Driver details and skill-set
* Availability
* Driving performance
* CSA scores
* License types
* Clearance levels

## Summary

This chapter clarifies different terms used, the comparison, criticism and it gives the right way of making an improvement by implementing RFTC Driver system. Researcher introduced key terms used during development of the system and discussed published works related to this study to increase understanding on the concern. The literature review helped the researcher to understand how other management systems operate and that will give her a big help in developing the proposed system.

# 

# CHAPTER THREE: RESEACH METHODOLOGIES

## 3.0 Introduction

As it is indicated in the title, this chapter includes the research methodology of the dissertation. In more details, in this part the author outlines the research strategy, the research method, the research approach, methods of data collection, the selection of the sample, the research process, the type of data analysis, and the ethical considerations of the research in general.

## 3.1 research design

Research design refers to the overall strategy that you choose to integrate the different components of the study in a coherent and logical way, thereby, ensuring you will effectively address the research problem; it constitutes the blueprint for the collection, measurement, and analysis of data. It provided the framework for the collection and analysis of data and subsequently indicated which research methods were appropriate (Walliman, 2006).

The most common, useful purposes and main aims of research were exploration, description and rational explanation based on data (Richardson, 2005; Babbie,2007). For the purpose of this research, after examining the objectives of the study and realizing the lack of previous study and published literature on RFTC Driver management system in Rwanda, an exploratory descriptive research design had been chosen, because it would conclusively describe the characteristics and state-of-the-art of the population under study.

Exploratory descriptive research would suits best because according to Sekaran (2000), an exploratory study research was performed when a researcher had little knowledge about the situation or had no information on how similar problems or research issues had been solved in the past. It embarks on investigating and finding the real nature of the problem. In addition, solutions and new ideas could surface from this type of research (Richardson, 2005). A descriptive research on the other hand was a research that described a phenomenon (Salkind, 2000), to document and describe the phenomenon of interest (Marshall&Rossman, 2006), providing a clear answer of who, what, when, where, why, and way (6Ws) of the research problem and data were typically collected through a questionnaire survey, interviews and observation(s) (Gay and Diehl, 1992).

Prior to the development of questionnaires for both methods, the researcher had explored the RFTC system by doing field works, in an attempt to have an overview RFTC Driver management system. During these field works, the researcher had talked, discussed, questioned and seek the Staff’s opinions with regards to RFTC daily operations. The field works had been purely explorative.

## 3.2 Population and selection of the sampling

### 3.2.1 Population

By definition, population is the group to which a researcher would like the results of the study to be generalizable. It could also be a set of all cases of interest (Richardson, 2005) and might be virtually any size or might cover almost any geographical area (Gay & Diehl, 1992). Theoretically, researchers could specify an even finer distinction of population called the study population (Wolfer, 2007).

The population for this study, comprised of 4 staff members of department from RFTC who are given instructions by Manager regarding to driver.

### 3.2.2 Sample Techniques

A sample is a subset of the population being studied (Richardson, 2005), that included the process of selecting a few (samples) from a bigger group (the sampling population) to become the basis for estimating or predicting a fact, situation or outcome regarding the bigger group (Kumar, 1996). Samples should be as large as possible, in general the larger the sample the more representative and the more generalizable the results of the study were likely to be. & Diehl, 1992).

## 3.3Tools for Data collection /instrumentation

Data collection is the process of gathering information on variables of interest, in an established systematic fashion that enables one to answer stated research questions and evaluate outcomes. Data collection instruments refer to the device used to collect data, such as a paper questionnaire or computer assisted interviewing system (Pan, Puente, 2005). In this study, the researcher used questionnaire, Interview, Observation.

**Interview**

An interview was planned and done at RFTC office which is located Remera of how the current options how RFTC cooperative worked, and provide the flexibility to conduct new System improvement than existing one.

**Observation**

The observation is the act on instance of noticing or perceiving follow-up of phenomena used by collecting all information related to this project, our observation was based RFTC office

## 

## 3.4 Collection of data

**Primary data** were the main source of information for this paper and were collected through questionnaire to people and employees. Both quantitative and qualitative information were collected. Key informant questionnaire were held with people and employees who had understanding on different between manually system and electronic system.

**Secondary information** for the study was obtained from published printed documents and unpublished documents and reports from different sources like online report provided by different scholars and journals

## 

## 3.5 Analysis of data

Marshall and Rossman (1999) describe data analysis as the process of bringing order, structure and meaning to the mass of collected data. Gathered data was processed and recorded answers statistically in table.

## 3.6Validity and Reliability

According to Kothari (2004) Validity refers to the appropriateness of the instrument. The researcher ensured that the instrument that has been used are valid by making sure that the questionnaire set are adapted to the topic, clear and understandable by interested people. This will be checked by piloting the questionnaire to a small number of people within RFTC. Errors ambiguous questions removed and tools were proof read, edited and printed before administering the tools.

**Validity**

Validity is defined as a measure of truth or falsity of the data obtained through using the research instrument. It is classified as internal and external validity of the measuring instrument (Burns & Grove 2001).

# **Reliability**

According to Amin (2005) reliability means consistently good in quality or performance and able to be trusted, while according to Kothari (2004) degree to which the instrument consistently measures whatever it is measuring to ensure the reliability of this study, a modeling questionnaire will be presented to the supervisors for corrections and advices. Moreover, pilot study consisting of distributing sample questionnaire to a small group of people within the community under study.

## 3.7 Ethical considerations

During this research period the ethical guide lines that the researcher describes were anonymity and confidentiality. The researcher forced the relationship that was respectful leading to easy access of reliable information. Thought the process of data collection, it was necessary to empty ethical issues so as come up with clear and professional output, the respondent’s participation will be based on moral ground and conductive atmosphere created during the time of contact. For that kind moral approach the study becomes meaningful final product. In short the researcher managed to obtain adequate information as well as kept in good relationship with all respondents more so the information kept confidential.

## 

## 

## 3.8 SUMMARY

This chapter contains foundation of the actual field work. Without this chapter the researcher wouldn’t probably have collected the data which turned to be very useful and contributing to the study objectives. This chapter revealed to the researcher the professional and easy way to conduct the study in such a dynamic environment. Research methodologies being the science of studying how research is done scientifically, researcher was enabled by this chapter to determine the systematic way to solve the research problem while she was conducting the study.

In this chapter, researcher discussed the research design, the area of study. Researcher also discussed methods used to collect data and data collection procedures. Researcher discussed data

# 

# 

# CHAPTER 4: SYSTEM ANALYSIS AND DESIGN

## 4.1 Introduction

The present chapter reflects the analysis and interpretation of the results from gathered data in relation to the study. Data is presented in the form of descriptive statistical tables and percentages. It measures the views of respondents in relationship with loan application and verification interprets it and draws the conclusion.

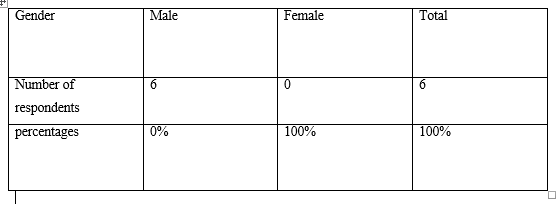
## 4.2 Data analysis and presentation

Data analysis is the process of bringing order, structure and meaning to the mass of collected data. It is a messy, ambiguous, time consuming, creative, and fascinating process. It does not proceed in a linear fashion; it is not neat. Data analysis is a search for answers about relationships among categories of data. (Marshall and Rossman, 1990).

## 4.3 Interpretation of findings

The analysis and interpretation of gathered data from 6 Staff of RFTC with help of questionnaire is represented in this section.

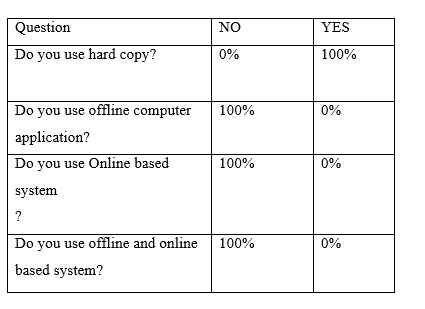
Table 1 Response about gender



.

How information of drivers is being recorded?

Table 2 Response of how information are recorded



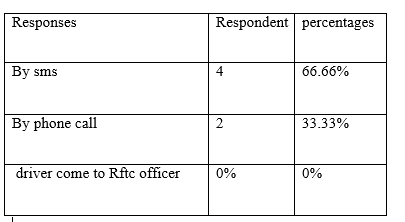
How report is being provided?

Table 3 Response of how report is being provided

|  |  |  |
| --- | --- | --- |
| Response | Respondent | Percentage |
| Daily | 5 | 83.33% |
| weekly | 0 | 0% |
| monthly | 1 | 16.66% |
| Total | 6 | 100% |

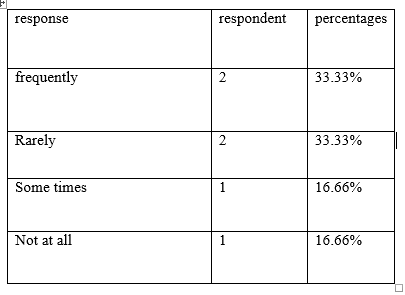
How driver know work their working place?

Table 4 Response about how to know working place



How check the problems of your car time to time?

Table 5Response about car checking time

****

How the driver know car to be used?

Table 6 Response about how driver know car to be used

## C:\Users\Administrator\Desktop\6.PNG

## 4.5 Description of existing system

The results above show that the current system is weak, because if you consider the way of how all respondents replied on questions related to the objectives of the researcher,

In **RFTC** most of the driver information is kept in a file .Therefore, it is quite hard for them to search the driver information when is needed. Moreover, it uses a lot of papers and data is lost because no backup provided for the data, there is not automatic timetable of daily activities, Difficult to allocate drivers and car according to difference location where RFTC works And Difficult to provide report.

## 4.6 Description of the new system

The new system is web- based designed to solve problem affecting the manual system in use. It is design to be used by relieving staff from much stress as experienced from the manual system

The proposed system will also have some other features like.

* Well organized report about time driver take car and time came back
* Kept information of drivers
* when driver were brought a car and then status changes automatically

## 4. 6 System configuration requirements and platform

### 4. 6. 1System configuration

For the system to be implemented will require different tools and other requirements to be fulfilled as following:

**Hardware requirement and specifications**

|  |  |
| --- | --- |
| **System** | **Specification** |
| Storage( Hard Disk): | 6 GB or more free space |
| Read access memory( RAM): | 2 GB or above |
| Processor speed ( CPU): | 1.4 GHZ or above |
| Processor: | Intel Pentium 4 or above |

Network interface card (NIC) or other type of network

**Software requirement and specifications**

* Operating system type: 32 or 64 bit operating system
* Operating system type: Windows 7 or other above platform
* .NET framework 3.0 or newer version;
* Web server: Apache wamp or xamp
* Microsoft SQL server 2008 or above version;
* PHP,bootstrap, HTML, CSS, Java Script
* Notepad++

### 4. 6.2 Software development methodology

The software development process focus on the activities directly related to the production of the software, system analysis, coding, testing (validation), integration, implementation and maintenance.

The waterfall model is implemented which is a sequential software development process is regarded as flowing increasingly downwards through a list of phases that be executed in order to successfully build a computer software.

**Why waterfall model?**

The waterfall Model was implemented in this stage of software development because it illustrates the software development process in a linear sequential flow. This means that any phase in the development process begins only if the previous phase is complete. In this waterfall model, the phases do not overlap.

The waterfall models define several consecutive phases that must be completed one after another and moving to the next phase only when its preceding phase is completely done.

The standard phases of waterfall are shown in the diagram below:



Figure 1 water fall

**Requirements**: Business requirements are gathered in this phase. This phase is the main focus of the project managers and stake holders.  Meetings with managers, stake holders and users are held in order to determine the requirements.  Who is going to use the system?  How will they use the system?  What data should be input into the system?  What data should be output by the system?  These are general questions that get answered during a requirements gathering phase.  This produces a nice big list of functionality that the system should provide, which describes functions the system should perform, business logic that processes data, what data is stored and used by the system, and how the user interface should work.  The overall result is the system as a whole and how it performs, not how it is actually going to do it.

**Design**: The software system design is produced from the results of the requirements phase. Architecture, including hardware and software, communication, software design (UML is produced here) are all part of the deliverables of a design phase.

**Implementation**: Code is produced from the deliverables of the design phase during implementation, and this is the longest phase of the software development life cycle.  For a developer, this is the main focus of the life cycle because this is where the code is produced.  Implementation my overlap with both the design and testing phases. Many tools exists (CASE tools) to actually automate the production of code using information gathered and produced during the design phase.

**Testing**: During testing, the implementation is tested against the requirements to make sure that the product is actually solving the needs addressed and gathered during the requirements phase.  Unit tests and system/acceptance tests are done during this phase.  Unit tests act on a specific component of the system, while system tests act on the system as a whole.

So in a nutshell, that is a very basic overview of the general software development life cycle model.  Now let’s delve into some of the traditional and widely used variations (Jeffrey, Joey, & Joseph, 2010).

**Advantages**

* Simple and easy to use.
* Phases are processed and completed one at a time.

Works well for smaller projects where requirements are very well understood

**4.7 Illustration of the new system**

**4.7.1 Data flow diagram (DFD)**

The Data Flow Diagram (DFD) is a graphical representation of the flow of data through an information system (Huang, 2006). It enables you to represent the processes in your information system from the viewpoint of data. The DFD lets you visualize how the system operates, what the system accomplishes and how it will be implemented, when it is refined with further

Basic notations used to create a DFD are as follows:

Process:

Data store:

Data flow:

**Process:** people, procedure, or devices that use or produce (transform) data. The physical component is not identified

**Data flow:** data move in a specific direction from an origin to a destination

**Data store:** here data are stored or referenced by a process in the system

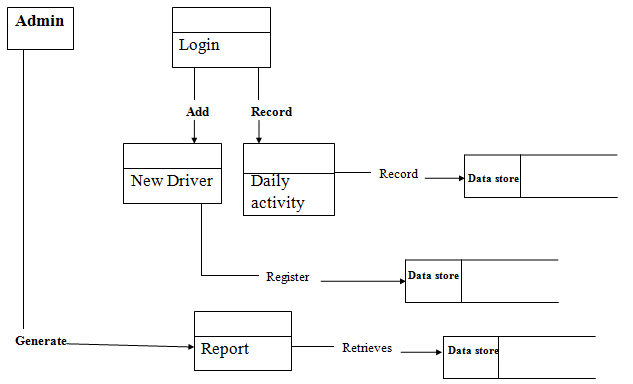


Figure 2 DFD

### 4.7.2 Use case

**A use case** is a methodology used in system analysis to identify, clarify, and organize system requirements. The use case is made up of a set of possible sequences of interactions between systems and users in a particular environment and related to a particular goal.

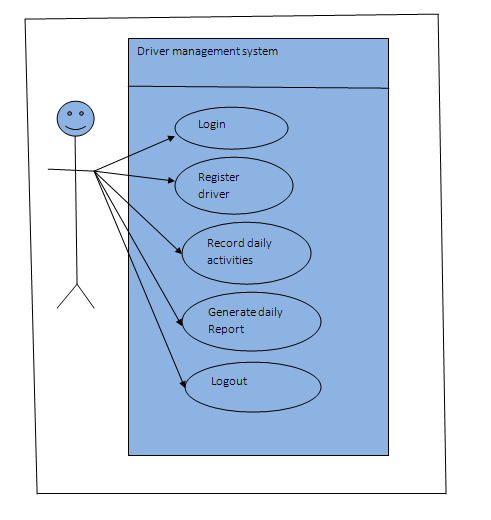
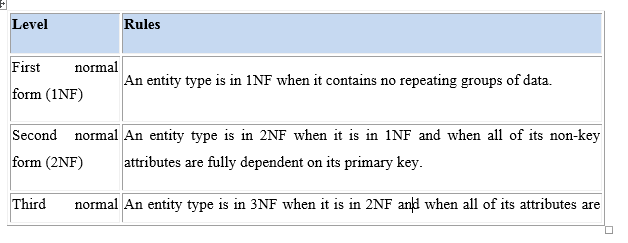


Figure 3 USE CASE

### 4.7.3 Normalization

Normalization usually involves dividing a database into two or more tables and defining relationships between the tables. The objective is to isolate data so that additions, deletions, and modifications of a field can be made in just one table and then propagated through the rest of the database via the defined relationships.

Table 7 Normalization rules



**(Scott W. Ambler 2004)**

**First normal form**

Table road

|  |  |  |
| --- | --- | --- |
| Road\_id | Road\_name | Driver\_id |

**Second normal form**

Create separate tables for set of values that apply to multiple record relate these table with foreign keys. Record should not depend on anything other than a table’s primary key (a compound key if necessary.

Table road

|  |  |
| --- | --- |
| Road\_id | Road\_name |

Table registration

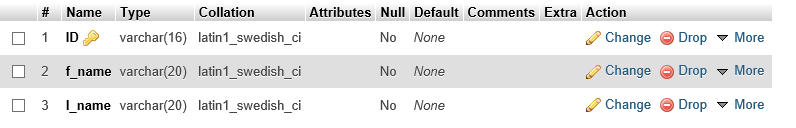
|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Licence \_driver\_id | plack | Road\_id | id | category |

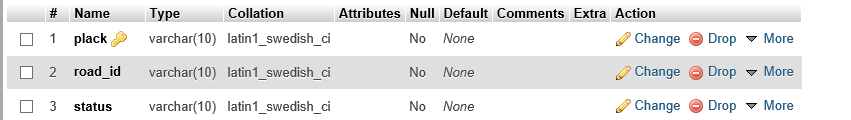
### Third normal formal

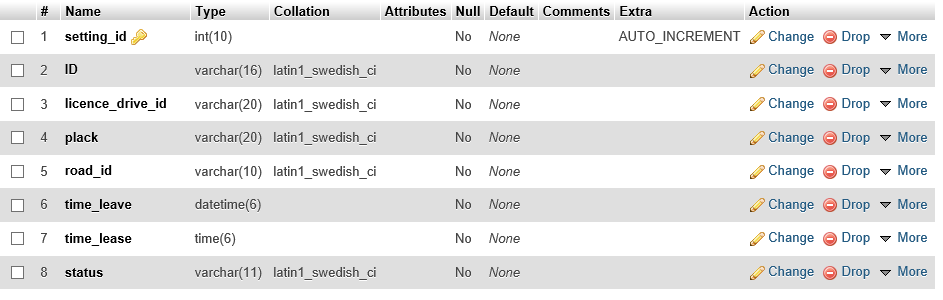
Eliminate fields that do not depend on the key values in the record that are not part of that record’s key do not belong in the table in general anytime the content of a group of fields may

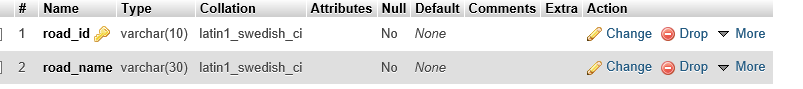
|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Licence\_driver\_id | plack | Road\_id | id | Road\_name |

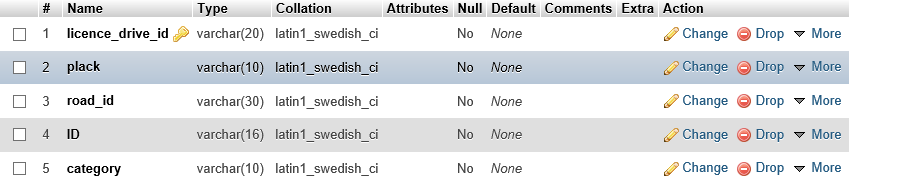
### 4.7.4 Data Dictionary

****

****

****

****

****

### 4.7.5 Entity Relationship Diagram

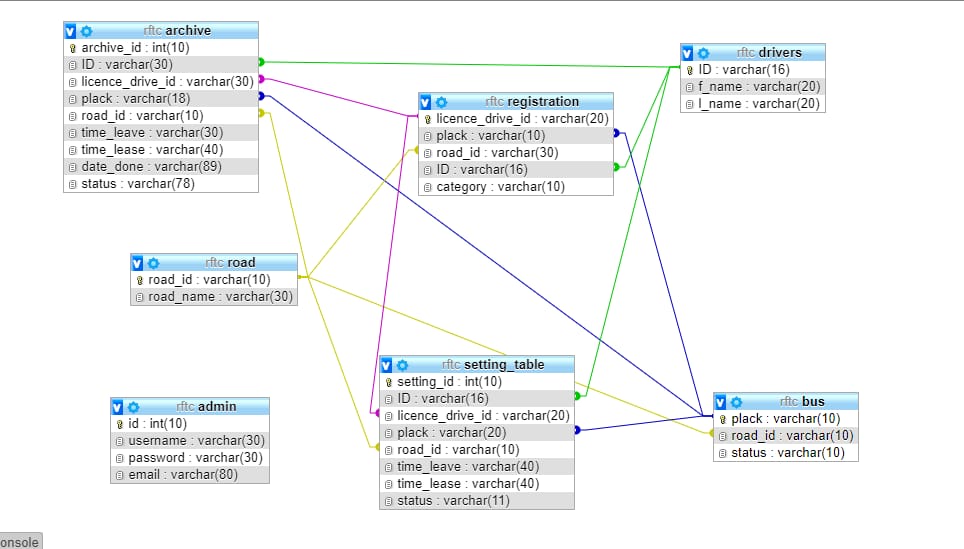
****

Figure 4 ENTITY RELATIONSHIP DIAGRAM

# 

# CHAPTER 5: IMPLEMENTATION, CODING AND TESTING

## 5.1 Implementation and coding

### 5.1.1 Introduction

System implementation is a stage in system life cycle whereby a new system is developed, installed and made ready for use. It is at this stage that all details and key point in the requirement specification are implemented. System implementation therefore, is a very essential stage in which its success determines to a great extent the success of the new system. At this instance, after all is said and done the system is duly ready to be implemented (RFTC driver management system).

The system is implemented using the current system (manual system).The work is then progressively transferred from the old system to the new system over a period of time. This ensures that any problems in the new system can be resolved.

The structure phase does two things: builds and tests a functional system that fulfils design requirements, and implements the interface between the new system and the existing system. The researcher constructed the database, application programs, user and system interfaces, and networks.

### 

### 5.1.2 Description of implementation Tools and technology

**CSS:** CSS stands for Cascading Style Sheets and Styles define how to display HTML elements. Styles were added to HTML to solve a problem. CSS is used to control the style and layout of multiple Web pages all at once.

**HTML**: HTML stands for Hyper Text Markup Language, a markup language is a set of markup tags. The tags describe document content. HTML documents contain HTML tags and plain text and documents are also called web pages. (Ben Joan, 2011)

**JavaScript**: JavaScript is the programming language of the Web that is easy to learn. All modern HTML pages are using JavaScript. It is the language for HTML, for the Web, for computers, servers, laptops, tablets, smart phones, and more.

**PHP:** Hypertext Pre-processor is a widely used, general-purpose scripting language that was originally designed for web development to produce dynamic web pages.

For this purpose, PHP code is embedded into the HTML source document and interpreted by a web server with a PHP processor module, which generates the web page document, (Mike Chapple, 2012).

**MySQL:** is an open source relational database management system (RDBMS) based on Structured Query Language (SQL).

MySQL is a relational database management system that runs as a server providing multi-user access to a number of databases. The MySQL development project has made its source code available under the terms of the GNU General Public License, as well as under a variety of proprietary agreements. MySQL is owned and sponsored by a single for-profit firm, the Swedish company MySQL AB, now owned by Sun Microsystems, a subsidiary of Oracle Corporation. Several high-traffic web sites (Flick, Face book, Wikipedia, Google (Though not for searches), Nokia and YouTube) use MySQL for data storage and logging of user data, all the enterprises must obtain a commercial license from Oracle, Margaret Rouse (2013).

**Notepad++:** notepad is a page editor that makes it possible to define "languages", or more precisely highlighting schemes. The original purpose of the feature is to enable proper highlighting of files in a programming language for which an internal Scintilla lexer is not available.

**XAMP:** xamp Server refers to a software stack for the Microsoft Windows operating system, created by Roman Bourdon and consisting of the Apache web server, OpenSSL for SSL support, MySQL database and PHP programming language (Susan, 2012)).

**Browser:** is a software application for retrieving, presenting and traversing information resources on the World Wide Web. An information resource is identified by a Uniform Resource Identifier (URI/URL) and may be a web page, image, video or other piece of content (Spirit Works, 2009).

### 5.1.3 Screen shots and Source Codes

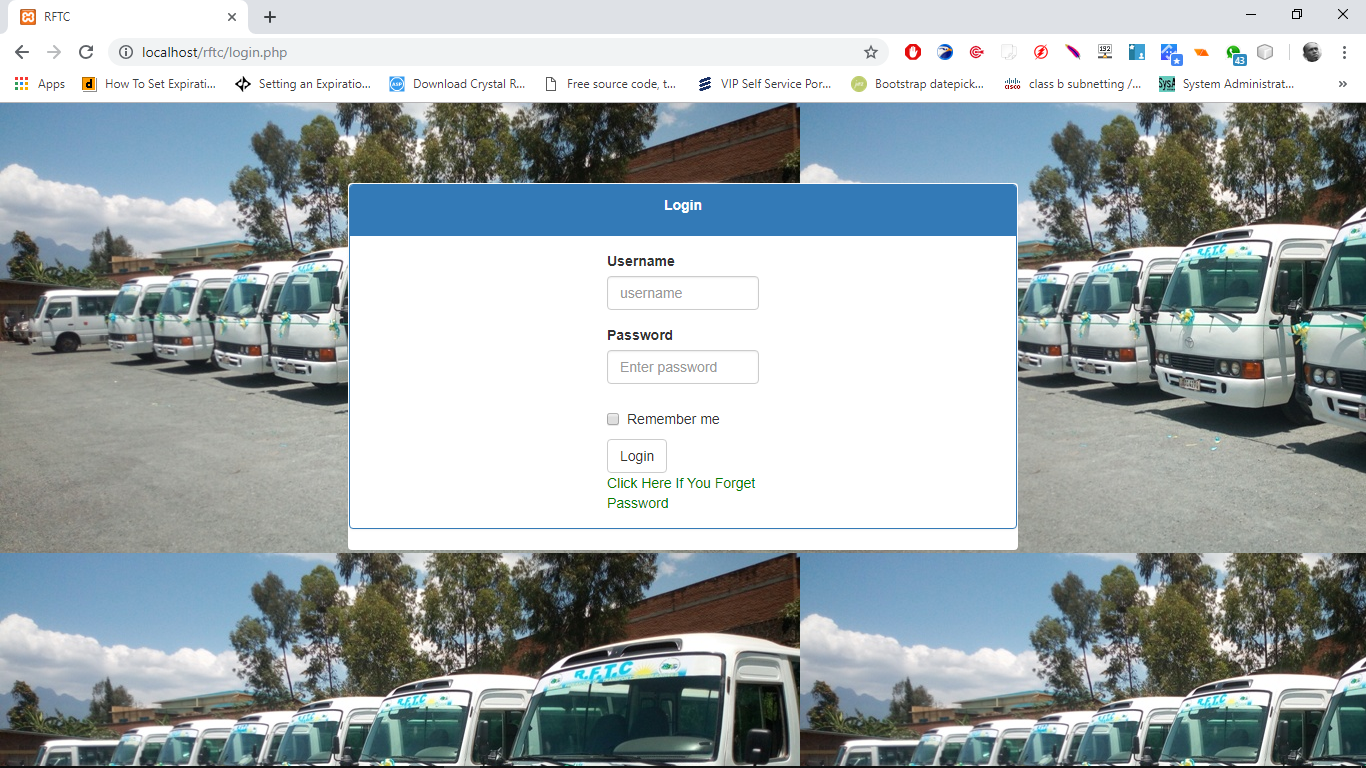


Figure 5 LOGIN FORM

**<?php**

**include\_once("connect.php");**

**if(isset($\_POST['submit'])){**

**$user=$\_POST['username'];**

**$user=$user;**

**$email=$\_POST['email'];**

**$new\_pass=$\_POST['npass'];**

**$re\_password=$\_POST['cpass'];**

**$sql=mysqli\_query($conn,"SELECT \* FROM admin WHERE username='$user' && email='$email' ");**

**if(mysqli\_num\_rows($sql)>0){**

**if($new\_pass===$re\_password){**

**$sq=mysqli\_query($conn,"UPDATE admin SET password='$new\_pass' WHERE username='$user' && email='$email'");**

**echo "<script>alert('your password changed')</script>";**

**echo "<script>window.location.assign('login.php')</script>";**

**}else{**

**echo "<script>alert('your password not match')</script>";**

**}**

**}else{**

**echo "<script>alert('invalid username or email')</script>";**

**}**

**}?>**

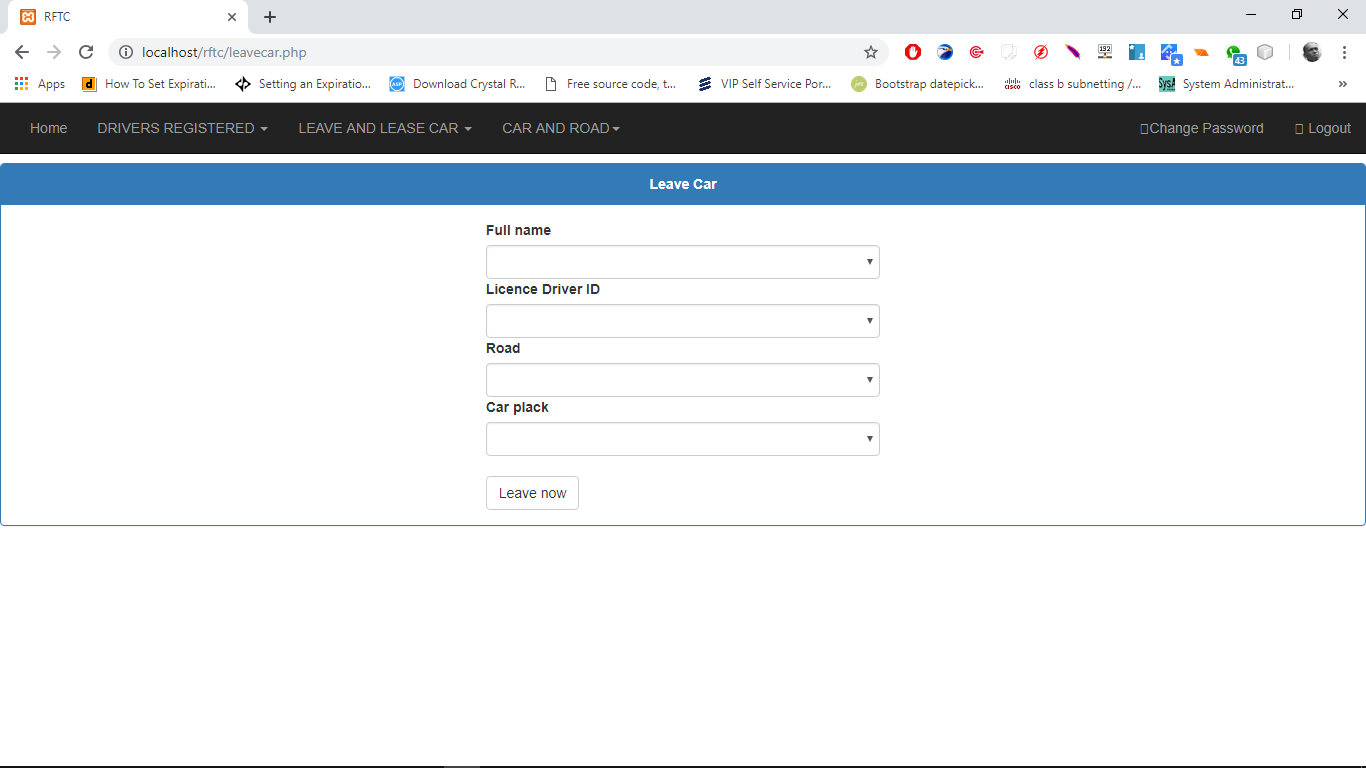


Figure 6 LEAVE FORM

**<?php**

**include('header.php');**

**include('connect.php');**

**?>**

**<!DOCTYPE html>**

**<html>**

**<head>**

**<title></title>**

**</head>**

**<body>**

**<body>**

**<div class="panel panel-primary" style=" margin: auto;">**

**<div class="panel-heading"><center><strong>Leave Car</strong></center></div>**

**<?php**

**if (isset($\_POST['leave'])) {**

**$ID=$\_POST['ID'];**

**$licence\_drive\_id=$\_POST['licence\_drive\_id'];**

**$plack=$\_POST['plack'];**

**$road\_id=$\_POST['road\_id'];**

**$time\_leave=$\_POST['time\_leave'];**

**$time\_lease=$\_POST['time\_lease'];**

**$date\_done=$\_POST['date\_done'];**

**$status=$\_POST['status'];**

**$query3=mysqli\_query($conn,"SELECT \* FROM setting\_table where licence\_drive\_id='$licence\_drive\_id' AND ID='$ID' AND road\_id='$road\_id' AND plack='$plack'")**

**or die(mysqli\_error($conn));**

**if (mysqli\_num\_rows($query3)>0) {**

**$rows = mysqli\_fetch\_assoc($query3);**

**$query4=mysqli\_query($conn,"UPDATEsetting\_table SET time\_leave='$time\_leave',time\_lease='$time\_lease',status='$status' where licence\_drive\_id='$licence\_drive\_id' AND ID='$ID' AND road\_id='$road\_id' AND plack='$plack'")or die(mysqli\_error($conn));**

**$query=mysqli\_query($conn,"INSERT INTO `archive` ( `ID`, `licence\_drive\_id`, `plack`, `road\_id`, `time\_leave`, `time\_lease`,`date\_done`, `status`) VALUES ('$ID', '$licence\_drive\_id', '$plack', '$road\_id', '$time\_leave', '$time\_lease','$date\_done', '$status');")or die(mysqli\_error($conn));**

**header("location:./viewreport.php");**

**}**

**else{**

**echo '<center><strong style="color:red">Check car is not match with driver info,</b></strong></center>';**

**}}**

**?>**

**<div class="panel-body">**

**<form class="form-horizontal" method="POST" name="drives" onsubmit="return validateform()">**

**<div class="row" >**

**<div class="col-lg-4 col-lg-offset-4 col-md-12 col-sm-12" >**

**<div class=" input-field col-lg-12 col-md-12 col-sm-12" >**

**<label>Full name</label>**

**<select name="ID" class="form-control name">**

**<option selected="selected"></option>**

**<?php**

**include('connect.php');**

**$query = "SELECT \* FROM drivers**

**inner join setting\_table ON drivers.ID=setting\_table.ID WHERE setting\_table.status='Free'";**

**$results=mysqli\_query($conn, $query);**

**//loop**

**foreach ($results as $drive){**

**?>**

**<option value="<?php echo $drive["ID"];?>"><?php echo $drive["f\_name"]." " .$drive["l\_name"];?></option>**

**<?php**

**}**

**?>**

**</select>**

**</div>**

**<div class=" input-field col-lg-12 col-md-12 col-sm-12">**

**<label>Licence Driver ID </label>**

**<select name="licence\_drive\_id" class="form-control licence">**

**<option selected="selected"></option>**

**</select>**

**</div>**

**<div class=" input-field col-lg-12 col-md-12 col-sm-12">**

**<label>Road </label>**

**<select name="road\_id" class="form-control road" id="road\_id">**

**<option selected="selected"></option>**

**</select>**

**</div>**

**<div class=" input-field col-lg-12 col-md-12 col-sm-12">**

**<label>Car plack</label>**

**<select name="plack" class="form-control bus">**

**<option selected="selected"></option>**

**</select><br>**

**</div>**

**<input type="hidden" name="time\_leave" value="<?php echo "Taken at,".date('H:i:s'); ?>">**

**<input type="hidden" name="time\_lease" value="not available">**

**<input type="hidden" name="date\_done" value="<?php echo date('d/m/Y')?>">**

**<input type="hidden" name="status" value="Busy">**

**<div class="input-field col-lg-12 col-md-12 col-sm-12">**

**<button class="btnbtn-default" name="leave" id="button" >Leave now</button>**

**</div>**

**</div>**

**</div>**

**</body>**

**</html>**

**<script src="https://code.jquery.com/jquery-3.1.1.js" integrity="sha256-16cdPddA6VdVInumRGo6IbivbERE8p7CQR3HzTBuELA=" crossorigin="anonymous"></script>**

**<script type="text/javascript" src="jquery-1.4.1.min.js"></script>**

**<script>**

**$(document).ready(function()**

**{**

**$(".name").change(function()**

**{**

**var ID=$(this).val();**

**vardataString = 'ID='+ ID;**

**//alert(dataString);**

**$.ajax**

**({**

**type: "POST",**

**url: "licence.php",**

**data: dataString,**

**cache: false,**

**success: function(html)**

**{**

**$(".licence").html(html);**

**}**

**});**

**});**

**$(".licence").change(function()**

**{**

**varlicence\_drive\_id=$(this).val();**

**vardataString = 'licence\_drive\_id='+ licence\_drive\_id;**

**//alert(dataString);**

**$.ajax**

**({**

**type: "POST",**

**url: "name.php",**

**data: dataString,**

**cache: false,**

**success: function(html)**

**{**

**$(".road").html(html);**

**}**

**});**

**});**

**$(".road").change(function()**

**{**

**varroad\_id=$(this).val();**

**vardataString = 'road\_id='+ road\_id;**

**//alert(dataString);**

**$.ajax**

**({**

**type: "POST",**

**url: "available.php",**

**data: dataString,**

**cache: false,**

**success: function(html)**

**{**

**$(".bus").html (html);**

**}**

**});**

**});**

**});**

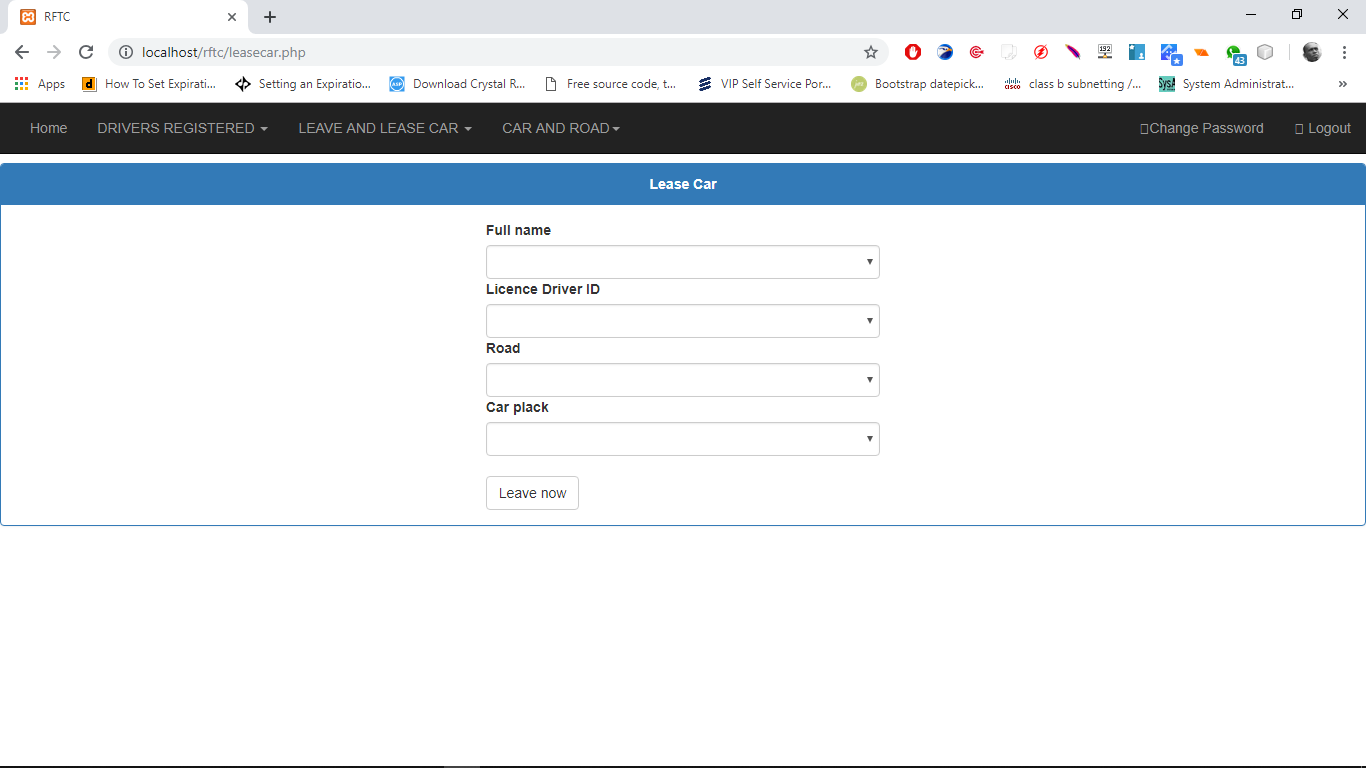


Figure 7LEASE FORM

**<?php**

**include('header.php');**

**include('connect.php');**

**?>**

**<!DOCTYPE html>**

**<html>**

**<head>**

**<title></title>**

**</head>**

**<body>**

**<body>**

**<div class="panel panel-primary" style=" margin: auto;">**

**<div class="panel-heading"><center><strong>Lease Car</strong></center></div>**

**<?php**

**if (isset($\_POST['leave'])) {**

**$ID=$\_POST['ID'];**

**$licence\_drive\_id=$\_POST['licence\_drive\_id'];**

**$plack=$\_POST['plack'];**

**$road\_id=$\_POST['road\_id'];**

**$time\_leave=$\_POST['time\_leave'];**

**$time\_lease=$\_POST['time\_lease'];**

**$date\_done=$\_POST['date\_done'];**

**$status=$\_POST['status'];**

**$query3=mysqli\_query($conn,"SELECT \* FROM setting\_table where licence\_drive\_id='$licence\_drive\_id' AND ID='$ID' AND road\_id='$road\_id' AND plack='$plack'")**

**or die(mysqli\_error($conn));**

**$query7=mysqli\_query($conn,"SELECT \* FROM archive where licence\_drive\_id='$licence\_drive\_id' AND ID='$ID' AND road\_id='$road\_id' AND plack='$plack'")or die(mysqli\_error($conn));**

**if (mysqli\_num\_rows($query3)>0) {**

**$rows = mysqli\_fetch\_assoc($query3);**

**$query4=mysqli\_query($conn,"UPDATEsetting\_table SET time\_lease='$time\_lease',status='$status' where licence\_drive\_id='$licence\_drive\_id' AND ID='$ID' AND road\_id='$road\_id' AND plack='$plack'")or die(mysqli\_error($conn));**

**}**

**if (mysqli\_num\_rows($query7)>0) {**

**$query5=mysqli\_query($conn,"UPDATE archive SET time\_lease='$time\_lease',status='$status' where licence\_drive\_id='$licence\_drive\_id' AND ID='$ID' AND road\_id='$road\_id' AND plack='$plack' ")or die(mysqli\_error($conn));**

**header("location:./viewreport.php");**

**}**

**/\*elseif ($query5=false) {**

**$query=(mysqli\_query($conn,"INSERT INTO `archive` ( `ID`, `licence\_drive\_id`, `plack`, `road\_id`, `time\_leave`, `time\_lease`,`date\_done` `status`) VALUES ('$ID', '$licence\_drive\_id', '$plack', '$road\_id', '$time\_leave', '$time\_lease', `$date\_done`,'$status');"));**

**header("location:./viewreport.php");**

**}\*/**

**else{**

**echo "<center><strong style='color:red'>Check car is not match with driver</strong></center>";**

**}}**

**?>**

**<div class="panel-body">**

**<form class="form-horizontal" method="POST" name="drives" onsubmit="return validateform()">**

**<div class="row" >**

**<div class="col-lg-4 col-lg-offset-4 col-md-12 col-sm-12" >**

**<div class=" input-field col-lg-12 col-md-12 col-sm-12" >**

**<label>Full name</label>**

**<select name="ID" class="form-control name">**

**<option selected="selected"></option>**

**<?php**

**include('connect.php');**

**$query = "SELECT \* FROM drivers**

**inner join setting\_table ON drivers.ID=setting\_table.ID WHERE setting\_table.status='Busy'";**

**$results=mysqli\_query($conn, $query);**

**//loop**

**foreach ($results as $drive){**

**?>**

**<option value="<?php echo $drive["ID"];?>"><?php echo $drive["f\_name"]." " .$drive["l\_name"];?></option>**

**<?php**

**}**

**?>**

**</select>**

**</div>**

**<div class=" input-field col-lg-12 col-md-12 col-sm-12">**

**<label>Licence Driver ID </label>**

**<select name="licence\_drive\_id" class="form-control licence">**

**<option selected="selected"></option>**

**</select>**

**</div>**

**<div class=" input-field col-lg-12 col-md-12 col-sm-12">**

**<label>Road </label>**

**<select name="road\_id" class="form-control road" id="road\_id">**

**<option selected="selected"></option>**

**</select>**

**</div>**

**<div class=" input-field col-lg-12 col-md-12 col-sm-12">**

**<label>Car plack</label>**

**<select name="plack" class="form-control bus">**

**<option selected="selected"></option>**

**</select><br>**

**</div>**

**<input type="hidden" name="time\_lease" value="<?php echo "Brought at,".date('H:i:s'); ?>">**

**<input type="hidden" name="time\_leave">**

**<input type="hidden" name="date\_done" value="<?php echo date('l,d/m/y'); ?>">**

**<input type="hidden" name="status" value="Free">**

**<div class="input-field col-lg-12 col-md-12 col-sm-12">**

**<button class="btnbtn-default" name="leave" id="button" >Leave now</button>**

**</div>**

**</div>**

**</div>**

**</body>**

**</html>**

**<script src="https://code.jquery.com/jquery-3.1.1.js" integrity="sha256-16cdPddA6VdVInumRGo6IbivbERE8p7CQR3HzTBuELA=" crossorigin="anonymous"></script>**

**<script type="text/javascript" src="jquery-1.4.1.min.js"></script>**

**<script>**

**$(document).ready(function()**

**{**

**$(".name").change(function()**

**{**

**var ID=$(this).val();**

**vardataString = 'ID='+ ID;**

**//alert(dataString);**

**$.ajax**

**({**

**type: "POST",**

**url: "licence.php",**

**data: dataString,**

**cache: false,**

**success: function(html)**

**{**

**$(".licence").html(html);**

**}**

**});**

**});**

**$(".licence").change(function()**

**{**

**varlicence\_drive\_id=$(this).val();**

**vardataString = 'licence\_drive\_id='+ licence\_drive\_id;**

**//alert(dataString);**

**$.ajax**

**({**

**type: "POST",**

**url: "name.php",**

**data: dataString,**

**cache: false,**

**success: function(html)**

**{**

**$(".road").html(html);**

**}**

**});**

**});**

**$(".road").change(function()**

**{**

**varroad\_id=$(this).val();**

**vardataString = 'road\_id='+ road\_id;**

**//alert(dataString);**

**$.ajax**

**({**

**type: "POST",**

**url: "occupied.php",**

**data: dataString,**

**cache: false,**

**success: function(html)**

**{**

**$(".bus").html(html);**

**}**

**});**

**});**

**});**

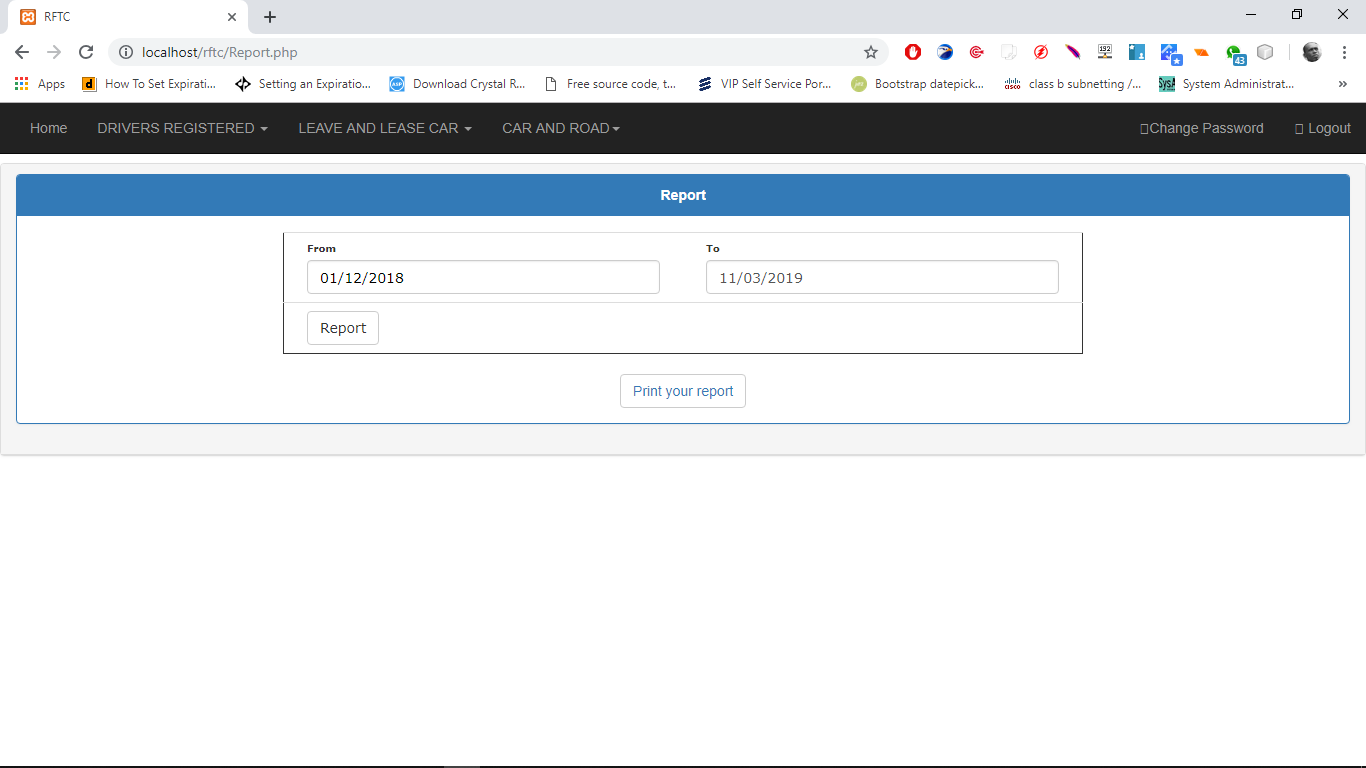
****

Figure 8 REPORT FORM

**<?php**

**include('header.php');**

**?>**

**<html xmlns="http://www.w3.org/1999/xhtml">**

**<head>**

**</head>**

**<body align="center" background="pic/bg2.JPG">**

**<center>**

**<div class="panel panel-default">**

**<div class="panel-heading">**

**<div class="panel panel-primary">**

**<div class="panel-heading"><strong>Report<form action="" method="POST" ></div></strong>**

**<div class="wrapper">**

**<div class="panel-body">**

**<form action="" method="post">**

**<table class="table" style="max-width: 800px">**

**<div class="col-lg-4 col-lg-offset-4 col-md-12 col-sm-12" >**

**<tr><td>**

**<div class=" input-field col-lg-12 col-md-12 col-sm-12" >**

**<label>From</label>**

**<input type="text" class="form-control" name="from" id="datepicker" plcaeholder="yyyy-mm-dd">**

**</div>**

**</td>**

**<td> <div class=" input-field col-lg-12 col-md-12 col-sm-12" >**

**<label>To</label>**

**<input type="text" class="form-control" name="to" id="datepicker1" plcaeholder="yyyy-mm-dd">**

**</div></td></tr>**

**<tr><td colspan="2">**

**<div class="input-field col-lg-12 col-md-12 col-sm-12">**

**<button class="btnbtn-default" name="send" id="button" >Report</button>**

**</div></td>**

</tr></div>

**</table>**

**<script language="javascript">**

**functionClickheretoprint()**

**{**

**var disp\_setting="toolbar=yes,location=no,directories=yes,menubar=yes,";**

**disp\_setting+="scrollbars=yes,width=400, height=400, left=100, top=25";**

**varcontent\_vlue = document.getElementById("print\_content").innerHTML;**

**vardocprint=window.open("","",disp\_setting);**

**docprint.document.open();**

**docprint.document.write('<html><head><title>Inel Power System</title>');**

**docprint.document.write('</head><body onLoad="self.print()" style="width: 400px; font-size:12px; font-family:arial;">');**

**docprint.document.write(content\_vlue);**

**docprint.document.write('</body></html>');**

**docprint.document.close();**

**docprint.focus();**

**}**

**</script>**

**<center><button class="btnbtn-default" ><a href="javascript:Clickheretoprint()">Print your report</a></button></center>**

**<div id="print\_content" >**

**</form>**

**<?php**

**if(isset($\_POST['send'])){**

**$from=$\_POST['from'];**

**$to=$\_POST['to'];**

**?>**

**5.2 Testing**

**5.2.1 Introduction**

**5.2.2 Objectives of Testing**

To demonstrate to the developer and the system owner that the software meets its requirements and objectives, a successful test shows that the system operates as intended.

To discover faults or defects in the software where its behavior is incorrect or not in conformance with its specification

A successful test is a test that makes the system perform incorrectly and so exposes a defect in the system.

Tests show the presence not the absence of defects.

A series of testing is done for the proposed system before the system is ready for the user acceptance testing.

**5.2.3 Unit Testing Outputs**

Unit testing refers to tests that verify the functionality of a specific section of code we performed this test at function level. As we were working in an object-oriented environment, this test was made at the class level. We did these types of test as we were working on code (white-box style), to ensure that the specific system is working as expected.

**5.2.4 Validation Testing Outputs**

Validation tests are performed after a set of functional sub-system have been tested and integrated. Validation tests check general functions, hardware/software interfaces; real time functioning, performance, use and distribution of resources. Validation tests aim to make sure that the software implemented in the hardware meets the functional specifications.

Validation tests in the system development were applied in different modules including admin modules where data before are inserted into the system test on inputs are verifies as shown in the following screen shots: **Specification of Input:**

**5.2.5 Integration Testing Outputs**

Integration testing works to expose defects in the interfaces and interaction between integrated components (modules). Integration tests are used to demonstrate the proper operation of functional units that make up the assembly of modules. Integration testing is any type of software testing that seeks to verify the interfaces between components against a software design. Normally the former is considered a better practice since it allows interface issues to be localized more quickly and fixed.

In my work, after making various unit tests, the researcher tested the whole project to see if the different parts of the software interact well and allow for the generation of outputs and the achievement of expected result.

**5.2.6 Functional and system testing Results**

It is testing the behavior of the whole software/ system as defined in Software Requirements Specification (SRS). Its main focus is to verify that the customer requirements are fulfilled. System testing was performed on the entire system after integration testing is completed. We tested not only the design. But also the behavior and even the expectations of the user

**5.2.7 Acceptance Testing Report**

Acceptance tests are done primarily by the users with support from the project team. The goal is to confirm that the system is complete, meets the business needs that prompted the system to be developed, and is acceptable by the users. Acceptance testing is done in two stages; **Alfa testing**, in which users test the system with made-up data, and **beta testing**, in which users begin to use the system with real data and carefully monitor the system for errors.

## 

## CONCLUSIONS AND RECOMMANDATIONS

## Introduction

The last chapter of the present study which is the fifth is concerned with the summary of the findings, conclusion which is the concluding remarks in view of the findings. Then, at the end of this study, the researcher suggested the recommendations, in regards to the findings from the questionnaire and interviews. Finally, in this chapter, the researcher suggested one topic to future researchers.

**Conclusion (s)**

Regarding to the output of the RFTC driver Management System , all the objectives have been achieved well considering to the way the system designed process operations in a small bit of time than how they were done manually without forgetting many difficulties seen as discussed in earlier chapters.

From this system, the printout message to the scientific environment where the researcher is belonging is very relevant than before where the things like those this system processes were seen as the magic but now it is remarkable that all the things done with intellectual contributions and commitment are very advantageous to real time researchers as well as future researchers while they are taken into considerations and in priorities for a living life of a scientific person because there are most valuable things in today’s business scene.

The researcher is grateful that the system will be able to serve its future purpose and meet its objectives to the satisfaction of RFTC staff.

## 

## Recommendations

* **Head office**

For implementing RFTC driver Management System, all staffs must be committed to see that the system operates as the intentions were set initially by the researcher to improve the working environment of the RFTC. It should however be noted that there is a need for training to the staffs, this is because the system involves aspect of new technology that may not be familiar to everybody.

* **Future Researchers**

The researcher recommends also the future researchers to develop additional functionality to adopt all kind of users who need the access on RFTC driver Management System which supports multiple platform users to access the system on the move.

## 

## References

1. Walliman, N. (2006). Social research methods. London: SAGE publications.

(2) Babbie, E. (2007) the practice of social research. 11th Edition, Thompson Wadsworth, Belmont.

(3) Hewlett M. (1993). *The internet in education column*: \*special issue+. “internet world”, 6

(4) Sekaran, U. (2000) Research Methods for Business: A Skill Business Approach. John Wiley & Sons, New York.

(5)L. R.Gay,P . L. Diehl (1992) Université de d’état de Pennsylvanie

(6)Marshall and Rossman, 1990). "Application Design for Wearable Computing"

(7)Taylor, J (2012). ῞Decision Management Systems: A Practical Guide to Using Business Rules and Predictive Analytics. Boston MA: Pearson Education. ISBN 978-0-13-288438-9.

## 

## APPENDICES

Dear respondent,

I am Zaninka Ange, a student at University of Tourism, Technology and Business Studies (UTB) in the department of Business Information and Technology (BIT), Registration Number 1810222, Tel: 0781661640. As a final year student, I am writing a dissertation on “**RFTC Driver Management System**”. Therefore, I kindly request you to read carefully this questionnaire and respond to the questions asked. Information that you will provide will be confidential and will be used for academic purposes only.

Kindly, I request you to spare few minutes of your time and express your views on the questions below.

A. Profile respondent

Instruction: Tick as appropriate

A. Demographical data characteristics of respondents

**1. What is your gender?**

* Male
* Female

**2. How old are you?**

* Less than 20 years
* 21-29 years
* 30-40 years
* Above 40 years

**3. How information of drivers are recorded:**

* We use hard copy
* We use offline computer application
* Online based system
* We use offline and online based system

**4 How weekly daily, monthly report are provided??**

* We use hard copy
* We use soft copy
* We use offline computer application
* We use offline and online based system

**5 How driver know location place he/she work??**

* Sms
* Phone call
* RFTC offices

**6 Do you check the problems of your car time to time?**

* Very frequently
* Rarely
* Sometime
* Not at all

**7 How driver know car to be used??**

* Driver has its owner
* Driver take available car

Any other comment?

....................................................................

.......................................................................

Thank you very much!