DECLARATION

I, **JOSUE Byiringiro**, hereby declare that I carried out the work reported in this report in the department of Information and Communication Technology in Integrated Polytechnic Regional College NGOMA, under the supervision **Mr. Jean Paul NIYIBIZI**, I declare that to the best of my knowledge, there is no part of this report has been submitted here or away in a previous application for award of an academic qualification. All sources of knowledge used have been properly acknowledged. I also declare that this project report stay as Integrated Polytechnic Regional College NGOMA property.

Date: ..... /……/……

Signature: …….

APPROVAL

This is the confirmation that, this project titled **"Umuganda Activity Management system"** has carried out by **JOSUE Byiringiro** have been read, checked and approved for meeting part of the requirements and regulations governing the award of the Advanced Diploma in **Information and Communication Technology** at Integrated Polytechnic Regional College (IPRC NGOMA), Rwanda.

Supervisor

Signature……..……..…….. Date……...……..……..……....

Names: **Mr. Jean Paul NIYIBIZI**

Head of ICT Department

Signature……..……..…….. Date……...……..……..……....

Names: **Mr. Jean Paul NIYIBIZI**

DEDICATION

This project report is dedicated to Almighty God for his care and protection throughout my stay in IPRC NGOMA, I also dedicate this work to my lovely family especially my lovely Mama for making me a graduate through the mercy of God, to all my brothers and sisters; to all my relative relatives and friends. May God give them long life and prosperity and also dedication to each one who contributed to my little success in life. God bless you.

ACKNOWLEDGEMENT

First and foremost, I fondly thank the Almighty God for the gift of life and spirit of hard working I sincerely thank **Mr. Jean Paul NIYIBIZI**, who is my guide in this project, for her constant support through the course and for providing necessary advice to carry out this project work, his advices, guidance, support were highly appreciated. I expand my straight thanks to my appreciate head of ICT department Mr. Jean Paul NIYIBIZI, for allowing me to utilize the various facilities available. I would like to thank the other department's members, my family especially my Mother, friends and class members for the hold up and encouragement they have given me during the course of my work.

May God bless you!

ABSTRACT

As the title specifies “Umuganda Activity Management System” is software developed for managing attendance taken by reporters on the fields of umuganda activity especially in the way of storing and sharing data around all the areas of country. That why Umuganda activity management system is a different set of procedures used in administrations to make and manage attendance and resolve disputes (V kassarnig 2017). Attendance is act of making records of people who participated in a given activity by the purpose of identifying attended people from those who are absent ones. Where someone says those people have been participated the other ones have not participated. My project intention is to create way of sharing attendance report in every areas of the country and accessed at the same time and also will increase the speed-up, security and reduce cost used in transport by reporters from umuganda fields to the offices to depose records. This project will deal with the problems of making and managing attendance and prevents the problems which occur when the attendance carried manually. This system will be used by 3 users (Agents, reporters, administration officers), each user have own responsibilities to use the system. The purpose of designing this system leads to the computerized system that will resolve many problems found in existing system, is more user friendly and more Graphical User Interface oriented where registered people can be recorded through forms available in the system by recording their address in the Database, the responsibility for agents are equally where is to check attendance and absent times for a given person then they count amount of money that person will have to pay for absent time. Also they will be another part of reporters which will have form to use in attendance from umuganda fields where reporters will have to record the identification number of all people attended the activity. Finally there will have the other part which working in administration officers of village, cells and sectors which have capabilities to give persons the services they want after checking if they are not missing any activity, so if persons have missed some of activities, they will have first the slip of payment of the all times missed as will be counted by agents. Development and the implementation of this system have been a great instance for me to extend my knowledge and skills in web development using PHP and JAVASCRIPT. By implementing this system, the cost used by reporters to come in the officers from fields will be reduced, time to make attendance will be reduced, security of Data will be Increased and it will be easy to handle data updating, to keep record, to backup data and generate report of attendance.

TABLEOF CONTENTS

CHAP 1: GENERAL INTRODUCTION **Error! Bookmark not defined.**

1.1 INTRODUCTION ..... Error! Bookmark not defined.

1.2 BACKGROUND OF THE STUDY ..... Error! Bookmark not defined.

1.3 PROBLEM STATEMENT ..... Error! Bookmark not defined.

1.4 OBJECTIVES OF THE PROJECT ..... Error! Bookmark not defined.

1.4.1 GENERAL OBJECTIVE ..... **Error! Bookmark not defined.**

1.4.2 SPECIFIC OBJECTIVES ..... **Error! Bookmark not defined.**

1.5 SIGNIFICANCE OF THE STUDY ..... Error! Bookmark not defined.

1.6 SCOPE AND LIMITATION OF THE PROJECT ..... Error! Bookmark not defined.

CHAP 2: LITERATURE REVIEW **Error! Bookmark not defined.**

2.1 INTRODUCTION ..... Error! Bookmark not defined.

2.2 WHAT IS UMUGANDA ACTIVITY MANAGEMENT SYSTEM? ..... Error! Bookmark not defined.

2.3 MANUAL SYSTEM AND WEB-BASED PLATFORM ..... Error! Bookmark not defined.

2.3.1 ADVANTAGES OF USING WEB BASED APPLICATION ..... **Error! Bookmark not defined.**

2.4 DEFINITION OF KEY TERMS ..... Error! Bookmark not defined.

2.4.1 UMUGANDA ..... **Error! Bookmark not defined.**

2.4.2 ACTIVITY ..... **Error! Bookmark not defined.**

2.4.3 SYSTEM ..... **Error! Bookmark not defined.**

2.4.4 MANAGEMENT ..... **Error! Bookmark not defined.**

2.4.6 DATABASE ..... **Error! Bookmark not defined.**

2.4.7 TABLE ..... **Error! Bookmark not defined.**

2.4.8 FIELDS ..... **Error! Bookmark not defined.**

2.4.9 RECORDS ..... **Error! Bookmark not defined.**

2.5 PRIMARY KEY ..... Error! Bookmark not defined.

2.6 TOOLS USED IN DEVELOPING THE SYSTEM ..... Error! Bookmark not defined.

2.6.1 INTERNET ..... **Error! Bookmark not defined.**

2.6.2 WEB BROWSER ..... **Error! Bookmark not defined.**

2.6.3 HTML AND CSS ..... **Error! Bookmark not defined.**

2.6.4 JAVASCRIPT ..... **Error! Bookmark not defined.**

2.6.5 MYSQL ..... **Error! Bookmark not defined.**

2.6.6 PHP ..... **Error! Bookmark not defined.**

2.6.7 RELATIONSHIP BETWEEN PHP AND MYSQL ..... **Error! Bookmark not defined.**

2.6.8 PHPMYADMIN ..... **Error! Bookmark not defined.**

2.6.9 XAMPP ..... **Error! Bookmark not defined.**

2.6.10 SERVER ..... **Error! Bookmark not defined.**

2.6.11 WEB SERVER ..... **Error! Bookmark not defined.**

2.6.12 APACHE WEB SERVER ..... **Error! Bookmark not defined.**

2.6.13 DIA DIAGRAM EDITOR ..... **Error! Bookmark not defined.**

CHAP 3: RESEARCH METHODOLOGY **Error! Bookmark not defined.**

3.1 INTRODUCTION ..... Error! Bookmark not defined.

3.2 SOFTWARE DEVELOPMENT MODEL USED ..... Error! Bookmark not defined.

3.2.1 WATERFALL MODEL ..... **Error! Bookmark not defined.**

3.3 TECHNIQUES USED IN DATA COLLECTION ..... Error! Bookmark not defined.

3.3.1 INTERVIEW ..... **Error! Bookmark not defined.**

3.3.2 OBSERVATION ..... **Error! Bookmark not defined.**

3.3.3 DOCUMENTATION ..... **Error! Bookmark not defined.**

3.4 SYSTEM ANALYSIS ..... Error! Bookmark not defined.

3.4.1 INTRODUCTION ..... **Error! Bookmark not defined.**

3.4.2 ANALYSIS OF THE EXISTING SYSTEM ..... **Error! Bookmark not defined.**

3.4.3 THE PROBLEM OF THE EXISTING SYSTEM ..... **Error! Bookmark not defined.**

3.4.4 JUSTIFICATION OF THE NEW SYSTEM ..... **Error! Bookmark not defined.**

3.5 SYSTEM REQUIREMENTS ..... Error! Bookmark not defined.

3.5.1 SOFTWARE REQUIREMENTS ..... **Error! Bookmark not defined.**

3.5.2 HARDWARE REQUIREMENTS ..... **Error! Bookmark not defined.**

3.5.3 FUNCTIONAL AND NON-FUNCTIONAL REQUIREMENTS ..... **Error! Bookmark not defined.**

3.6 SYSTEM DESIGN ..... Error! Bookmark not defined.

3.6.1 DESIGN OVERVIEW ..... **Error! Bookmark not defined.**

3.6.2 FUNCTIONAL BLOCK DIAGRAM ..... **Error! Bookmark not defined.**

3.6.3 FLOW CHART DIAGRAM ..... **Error! Bookmark not defined.**

3.6.4 UML (UNIFIED MODELING LANGUAGE) ..... **Error! Bookmark not defined.**

3.6.4.1 USE CASE DIAGRAM ..... **Error! Bookmark not defined.**

.6.5 DFD (DATA FLOW DIAGRAM) ..... **Error! Bookmark not defined.**

3.6.5.1 CONTEXT DIAGRAM ..... **Error! Bookmark not defined.**

CHAP 4: SYSTEM IMPLEMENTATION **Error! Bookmark not defined.**

4.0. INTRODUCTION **Error! Bookmark not defined.**

4.1 SYSTEM IMPLEMENTATION ..... Error! Bookmark not defined.

4.2 SYSTEM ORGANIZATION ..... Error! Bookmark not defined.

4.3 UNIT TESTING ..... Error! Bookmark not defined.

4.4 SYSTEM TESTING ..... Error! Bookmark not defined.

4.5 INTERFACES OF THE SYSTEM ..... Error! Bookmark not defined.

4.5.1 HOME PAGE ..... **Error! Bookmark not defined.**

4.5.2 ADD NEW USERS FORM ..... **Error! Bookmark not defined.**

4.5.3 ADD NEW PEOPLE FORM ..... **Error! Bookmark not defined.**

4.5.4 VIEW PEOPLE'S DETAILS ..... **Error! Bookmark not defined.**

4.5.5 MAKE PERSON ATTENDANCE ..... **Error! Bookmark not defined.**

4.5.6 CHECK PERSON ATTENDANCE ..... **Error! Bookmark not defined.**

4.5.7 USERS (ADMIN, ADMINISTRATION OFFICER AND AGENTS) ALLOWED TO PRINT DAY TO DAY AND PDF .. **Error! Bookmark not defined.**

4.5.8 AGENTS APPROVE BANK SLIP ..... **Error! Bookmark not defined.**

4.5.9 ADMINISTRATION OFFICERS ..... **Error! Bookmark not defined.**

CHAP 5: CONCLUSION AND RECOMMENDATIONS **Error! Bookmark not defined.**

5.1 CONCLUSION ..... Error! Bookmark not defined.

5.2 RECOMMENDATIONS ..... Error! Bookmark not defined.

REFERENCES **Error! Bookmark not defined.**

LIST OF FIGURES

Figure 1: Waterfall Model.....**Error! Bookmark not defined.**
Figure 2: Functional Block Diagram of the System.....**Error! Bookmark not defined.**
Figure 3: Flowchart Diagram of the System.....**Error! Bookmark not defined.**
Figure 4: Components of a Use Case Diagram.....**Error! Bookmark not defined.**
Figure 5: Use Case Diagram of the System.....**Error! Bookmark not defined.**
Figure 6: Level 0 Data Flow Diagram (Context Diagram) of the system...**Error! Bookmark not defined.**
Figure 7: Database's Tables of the System.....**Error! Bookmark not defined.**
Figure 8: System Organization.....**Error! Bookmark not defined.**
Figure 9: Home Page of the System.....**Error! Bookmark not defined.**
Figure 10: Add New User Form.....**Error! Bookmark not defined.**
Figure 11: Add New People Form.....**Error! Bookmark not defined.**
Figure 12: View People Table.....**Error! Bookmark not defined.**
Figure 13: Make Person Attendance.....**Error! Bookmark not defined.**
Figure 14: Check Person Attendance.....**Error! Bookmark not defined.**
Figure 15: Users Print Report.....**Error! Bookmark not defined.**
Figure 16: Agents Approve Bank Slip.....**Error! Bookmark not defined.**
Figure 17: Offering Services.....**Error! Bookmark not defined.**

LIST OF ABREVIATION

IPRC: Integrated Polytechnic Regional College

RP: Rwanda Polytechnic

ICT: Information and Communication Technology

DFD: Data Flow Diagram

UML: Unified Modeling Language

CSC: Cascading Style Sheet

HTML: Hypertext Markup Language

HoD: Head of Department

DAS: Director of Academic Service

DAF: Director of Finance

GUI: Graphical User Interface

SA: System Analysis

LAN: Local Area Network

WAN: Wide Area Network

JS: JavaScript

PHP: Hypertext Preprocessor