HARARE INSTITUTE OF TECHNOLOGY



DEPARTMENT OF INFORMATION TECHNOLOGY

BTECH (HONS) INFORMATION TECHNOLOGY

[TOPIC]

BY

[Name Surname]

[REG NUMBER]

HIT 200

SUPERVISOR: [….]

**This project report was submitted to Harare Institute of technology in partial fulfilment of the bachelor of technology (Hons) degree in information technology**

**DECLARATION**

**DEDICATION**

# ACKNOWLEDGEMENTS

# ABSTRACT

# Table of Contents

# Table of figures

# Table of tables

# List of Acronyms (Optional)

# CHAPTER 1 INTRODUCTION

## Introduction

## 1.2 Motivation

## 1.3 Problem Statement

## 1.4 Related Work

## 1.5 Hypothesis

## 1.6 Technical Objectives

## 1.7 Expected Results

## 1.8 Ethics Consideration

## 1.9 Conclusion

# CHAPTER 2 REQUIREMENTS ANALYSIS

## 2.1 Introduction

### 2.1.1 Evaluate Alternatives

### 2.1.2 Outsource

### 2.1.3 Improvement

### 2.1.4 Development

## 2.2 User Requirements

### 2.2.1 Collection Phase

### 2.2.2 Technical Feasibility

### 2.2.3 Hardware

### 2.2.4 Software

### 2.2.5 Technical Expertise

## 2.3 Economic Feasibility

### 2.3.1 Cost Benefit Analysis

### 2.3.2 Tangible Benefits

### 2.3.3 Intangible

## 2.4 Operational Feasibility

### 2.4.1 Schedule Feasibility

## 2.5 Work plan

### 2.5.1 Work schedule

### 2.5.2 Gantt chart

## 2.6 Conclusion

# CHAPTER 3 SYSTEM ANALYSIS

## 3.1 Introduction

## 3.2. Description of current system

## 3.3 Analysis of existing system

### 3.3.1 Context diagram of the existing system

### 3.3.2 Weaknesses of current system

## 3.4 Description of the Proposed Solution

### 3.4.1 Analysis of the proposed system- Context diagram, DFDS

## 3.5 Requirements Analysis

### 3.5.1 Functional Requirements (use case diagram)

### 3.5.2 Non-functional requirements (outline constraints)

## 3.6 System Models

### 3.6.1 UML-Activity Diagram

### 3.6.2 UML- Class Diagram

### 3.6.3 UML-Sequence Diagram

# CHAPTER 4: SYSTEM DESIGN

## 4.1 Introduction

## 4.2 System Design

### 4.2.1 How will the system work?

## 4.3 Solution Architecture – architectural diagram of the proposed solution

## 4.4 Database Modelling

### 4.4.1 E-R Diagram

### 4.4.2 Data Dictionary

### 4.4.3 Database Schema

## 4.5 Algorithm Design

## 4.6 Interface Design

## 4.7 Security Design

## 4.8 Conclusion

# CHAPTER 5 IMPLEMENTATION AND TESTING

## 5.1 Introduction

## 5.2 Coding Strategy

## 5.3 Coding Review

## 5.4 Types of Testing and Results

### 5.4.1 Functional Testing

### 5.4.2 Non-Functional Testing

## 5.5 Test Cases

## 5.6 Levels of Testing and Results

### 5.6.1 Unit Testing

### Integration testing

**5.6.3** **Validation testing**

### 5.6.4 System Testing



## Installation

### 5.7.1 User training

### 5.7.2 System conversion

### 5.7.3 File conversion

### 5.7.4 System changeover strategy

## 5.8 Conclusion

# CHAPTER 6 CONCLUSION

## 6.1 Scope for Future Extension

## 6.2 Maintenance

### 6.2.1 Interval System Review

### 6.2.2 Maintenance Activities

### 6.2.3 Disaster Recovery

## 6.3 Recommendations

# APPENDIX

# USER MANUAL

**NB: A Technical paper is to be submitted together with this document.**