**WORKERS ATTENDANCE MANAGEMENT SYSTEM**

**NAME:** DEBORAH MUTHONI

**REG NO:** EDV2/10395/23

**SUPERVISOR**: Mr. FRANCIS KAIRARIA

Project proposal submitted to the faculty of physical Science Engineering and Technology in Partial Fulfillment of the Requirements for the Award of the diploma in information technology at Tharaka University

JULY, 2024

# **DECLARATION**

I hereby declare that this project is based on my original work except for citations and quotations which have been duly acknowledged. I also declare it has been previously and concurrently submitted for a diploma or any other award in any other educational institution.

Student Name:

………………………………………….

Signature:

………………………………………….

Date:

………………………………………….

**APPROVAL**

This project was conducted under our supervision and is submitted with our approval as university supervisor.

Supervisor Name: ……………….

Signature: …………………

Date: ……………………

# **DEDICATION**

My heartfelt dedication to my parent, for being the pillar of my esteem towards my studies, through encouragement and support, my pastor and Dad, Daniel Maluki, mum Beth and the entire family, my elder sister pastor Esther, and my close friends Japhet and lois for your great concern.

# ACKNOWLEDGEMENT

I love to express my gratitude to all who contributed to the success of this study. Am pleased to express my gratitude to the following individuals and organizations who have contributed to the completion of this project.

First I thank my supervisor, lecturer francis for invaluable guidance, support and encouragement throughout the duration of this project. He gave me crucial insight and shaped the direction and outcome of this work.

I thank the institution for providing necessary resources and facilities, especially smart labs and the computer science department.

My family members and friends, for unwavering support, patience and understanding during the demanding phases of this project and studies.

My church pastor and the family, you played a big role for the success of this project and studies by supporting me financially, emotionally, psychologically and in prayers.

My mentors, you did great for being there for me, your availability in my hard times solved much and really counted.

# **ABSTRACT**

The purpose of the project is to create a system for attendance of workers management in Tharaka technical training institute. Worker’s attendance play a significant role in order to ensure accuracy of workers attendance for effectiveness in the area of work. It’s very unfortunate that workers intentionally fail to attend their duties effectively, thus leading to time wastage, incomplete duties, loss of finances, extended job duration coming up with online based attendance will include real time attendance tracking, the accuracy of attendance, this will lead to avoidance of errors caused by paper work.

The system will include a centralized database, a web-based interface for administrative use and an application for the employees to check their attendance records.

The development of this system is based on PHP programming, SDLC and HTML as a programming language while MYSQL serves as the DB of the system.

Table of Contents

[DECLARATION ii](#_Toc140783271)

[DEDICATION ii](#_Toc140783272)

[ACKNOWLEDGEMENT ii](#_Toc140783273)

[ABSTRACT ii](#_Toc140783274)

[CHAPTER ONE: INTRODUCTION 2](#_Toc140783275)

[1.1Background of the Study 2](#_Toc140783276)

[1.2 Problem statement 2](#_Toc140783277)

[1.3 Objectives 2](#_Toc140783278)

[**1.3.1General Objectives. 2**](#_Toc140783279)

[**1.3.2 Specific Objective. 2**](#_Toc140783280)

[1.4 Research questions 2](#_Toc140783281)

[1.5 Significance of the Project 2](#_Toc140783282)

[1.6 Scope Of The Project 2](#_Toc140783284)

[CHAPTER TWO: LITERATURE REVIEW 2](#_Toc140783285)

[2.0 Introduction 2](#_Toc140783286)

[2.1 Review Of Related Work 2](#_Toc140783287)

[2.2 Conclusion 2](#_Toc140783288)

[2.3 Conceptual framework 2](#_Toc140783289)

[CHAPTER THREE: RESEARCH METHODOLOGY 2](#_Toc140783290)

[3.0 Introduction 2](#_Toc140783291)

[3.1 Research design 2](#_Toc140783292)

[3.2 System Methodology 2](#_Toc140783293)

[3.3 Target population 2](#_Toc140783294)

[**3.4 Data Collection Methods** 2](#_Toc140783295)

[Interview 2](#_Toc140783296)

[Observation 2](#_Toc140783297)

[Questionnaire 2](#_Toc140783298)

[3.5 Data Analysis 2](#_Toc140783299)

[APPENDIX 2](#_Toc140783300)

[i. QUESTIONNAIRE 2](#_Toc140783301)

[ii. GANT CHART 2](#_Toc140783302)

[iii. BUDGET 2](#_Toc140783303)

[QUESTIONNAIRE 2](#_Toc140783304)

[GANT CHART 2](#_Toc140783305)

[BUDGET 2](#_Toc140783306)

# **CHAPTER ONE:** **INTRODUCTION**

1. **Introduction**

This chapter introduces the background of the study which deals with how the system was operating and how it is operating, secondly the problem statement handles how the system will deal with problems, third is the objectives that shows why the developer want to come up with this system, fourth research questions, fifth significance of the project and finally the scope of the project.

# **Background of the Study**

# Taking attendance is crucial for tracking workers participation, engagement, and ensuring compliance with institution regulations. Traditional methods of attendance taking, such as paper work, are time-consuming, prone to errors, and susceptible to manipulation. To address these challenges, many institutions are exploring automated attendance systems using modern technologies. Developing online attendance supervision will help solve these challanges. Due to the large number of workers in the institution keeping books for records maybe tedious thus online management system will make work easier.

Technology and internet is what drives us. In this era or generation everything is technologized or technologically advanced as in this life everything is very hard to handle without the help of technology. And thanks for all brows developers for allowing us share resources.This system will be a system that deals with total supervisions to the who are physically available in the institution only. However there are challenges faced by the management of this system first there is cost of implementation second, training users, third, adaptation to the changes may take a period of time, So, I decided to come up with this online ordering system of developing a website that will at least solve half of the institutions workers supervision problems.

Finally this system will highly help the instituttion as the entire process of supervision will be done automatically. The data will be placed on the database ,and incase theres a problem it can be easly traced and solved

# **Problem Statement**

The current system of books keeping has many weakness that includes inaccuracy of manual attendance records are prone to human error, leading to inaccurate tracking of employee attendance, working hours and leave balances. Inefficiency of manual process is time consuming for both employees and administrators leading to decreased productivity. Data manipulation: traditional systems lack rebust security measures making it easy for employees to manipulate attendance data. Lack of integration :traditional systems often do not integrate well with other HR and payroll systems ,leading to redundant data entry and inconsistencies.

# **1.3 Objectives**

## General Objectives.

The main aim is to develop a working system for workers attendance management.

## 1.3.2 Specific Objectives.

1. To enable real time monitoring of employee attendance status by administrators
2. To Improve data security by ensuring high accuracy of attendance data by eliminating manual entry, thus reducing discrepancies in attendance records and enhancing data reliability.
3. To Generate comprehensive report to develop functionality of generating detailed and customizable attendance reports which can be used for performance evaluations and payroll processing.
4. To Enhance security measures for implementing security features to protect attendance data, including encryption and secure access controls, ensuring that only authorized personnel can access or modify models.

# **1.4 Research Questions**

1. What are common challenges faced by institution in monitoring employees using traditional methods?
2. What are best practices to improve data security and ensure accuracy of attendance?
3. What is the cost of implementation of this system to generate its authentic funtionality?
4. How to enhance security of this system?

# **1.5 Significance of the Project**

The development of this system holds substantial significance for various stakeholders including

organizations, employees and researches. in particular it will enhance efficiency and productivity

thereby reducing administrative burden, errors and inaccuracy. Also, it will enhance data management by providing valuable data for analyzing attendance records, which are critical for

payroll processing, compliance reporting and performance evaluations.This will minimize paper time sheets and minimizes labor costs associated with manual attendance tracking. It will also Improve employee experience for its user friendly interfaces and mobile accessibility making it easier for them to track their attendance, apply for leave and view their attendance history.

# **1.6 Scope of The Project**

The system will enhance improvement in employee’s attendance supervision, minimizing errors and reducing manual workload and efficiency.

# CHAPTER TWO: LITERATURE REVIEW

# **2.0 Introduction**

This chapter introduces the literature review of the system and the area of use meaning the history of the system. It also gives review of documentation or papers that guides the user on accomplishing his system or work.

# **2.1 Review of Related Works**

Attendance management systems have transitioned from manual to highly automated systems over the years. the evolution can be broadly categorized into three phases: manual systems, semi-automated systems, and fully automated online systems. Manual systems historically organizations relied on papers to track attendance.it was simple but prone to errors, time-consuming and suspectable to manipulation. studies by smith(1998 ) highlights the inefficiencies of manual systems, particularly in large organizations.

With advancement in technology, semi-automated systems like punch cards and spreadsheets became popular, these methods reduced errors but still required significant manual intervention. research by johnson (2005) indicates that while some automated systems improved accuracy, they did not significantly reduce administrative overhead.

Fully -automated online systems: the advent of the internet and cloud computing has led to the development of fully automated online attendance systems. these systems offer real-time tracking, accessibility and integration with other enterprise systems. According to Brown etal. (2012), online systems drastically improve efficiency and accuracy, especially for remote and distributed workforces.

# 2.2 **Conclusion**

# Workers management system is one of the main system that every organization and institutions should have. The system will help increase an efficient working in the institution as it will help increase accuracy and reduce the issue of time wastage, making long queues to fill the attendance, collusion and lastly will help curve financial losses.

# **2.3 Conceptual Framework**

WORKERS ATTENDANCE MANAGEMENT SYSTEM

Non-dependent variables

Dependent variables

To enable real-time management of employees

To Improve data security

Workers attendance management system

To generate comprehensive report

To improve employes experience

To raise the management integration

To reduce cost of traditional methods

Source: author (2024)

# CHAPTER THREE: RESEARCH METHODOLOGY

# 3.0 **Introduction**

This chapter introduces the methodology that will be used in the study. It includes the research design the target population sample size and sampling design data source and collection procedure and data analysis techniques that will be utilized.

# 3.1 **Research Design**

The system will be designed by use of a Data Flow Diagram. A DFD is a graphical representation of the flow of data through an information system, modelling its process aspects. A DFD shows what kinds of information will be input to and output from the system, where the data is coming and where it will go, and where the data was stored. It does not show information about the timing of processes will operate in sequence or in parallel as it is shown on a flow chart.

It is a simple graphical technique which is easy to understand, it helps in defining the boundaries of the system, it is also useful for communicating current system knowledge to the users, it is used as the part of system documentation file and also it explains the logic behind the data flow within the system,

According to among the disadvantages is that, physical considerations are left out, it simply takes long time to create and this is especially true when there is a lot of leveling to be performed, and it does not model time dependent behavior well.

Finally It’s a two-dimensional diagram that explains how data is processed and transferred in a system. The graphical depiction identifies each source of data and how it interacts with other data sources to reach a common output.

# 3.2 **System Methodology**

The methodology that used to develop this system is prototyping. prototyping model is fast and cheap to design. It is suitable to use when the needs of the users are unclear. By using this model, it can ensure that the system requirements are validated and that they are clearly understood. Once the requirements are cleared, the systems will be developed from the beginning. The actual prototype can be discarded when the appropriate knowledge has been required. prototyping can develop a system in a short time compare with other methodologies. When using this methodology, the user can receive the feedback from the end users and keep on working to develop a system that match the requirements of the end user.

# **3.3 Target Population**

The system developer targets population in tharaka technical training institute where the P entire institution majors with 2 groups the staff management and the workers

According to the researcher the population of the staff is 40 in the entire institution

The workers range between 250-300 and all of them are people over the age of 18.

## **3.4 Data Collection Methods**

# Interview

Interview method of collection will be used in this system development. The researcher will communicate with the staff in person so as to gather information or firsthand information on how they are conducting their tasks.

# Observation

This is technique that involve systematically selecting via watching, listening, Reading touching, and recording the behavior. This method was used to collect data through watching how workers are doing their work, how customers are being handled by the management.

# Questionnaire

This is a method of data collection where the researcher gives out questions in a paper so as to get answers from them but in form of question paper.

The researcher asks questions related to the post of the managements questions like how is the system running how is the management handling the workers, the accuracy of attendance , how payments are made, how are the workers paid and whether they are paid on time.

3.5 **Data Analysis**

The analysis stage is the final stage in this methodology. The analysis is based on the performance of the system related where the output must be performed well and successful and the second is identifying the conclusion of the project and how it will continue operating.

REFERENCE

[1]. A book by Noe ,R.A.,Hollenbeck,J.R.,Gerhart,B.,& write,P.M(2017).*Human resource management:gaining a competitive Advantage.*McGraw-Hill Education

[2] A journal article Becker,B..E.,Huselid,M.A.,&Ulrich,D(2001).*The HR Scored:linking people,strategy,and performance.*Harvard Business Review Press.

[3] Industry report from SHRM(society for human resource management).(2020).2020

*Employee benefits:The evolution of benefits.*

[4] Websites like society for human resource management(SHRM).www.shrm.org

[5] Starndards and best practice like ISO 30414:2018-Human resource management-*Guidelines for internal and external humana capital reporting.*

# **APPENDIX**

# **QUESTIONNAIRE**

# **GANT CHART**

# **BUDGET**

# **QUESTIONNAIRE**

SECTION A (Personal information)

1. What’s your gender?

FEMALE MALE

1. How old are you?

18-25 26-30 31-40 41-50 51-60

1. What’s your level of Education

CERTIFICATE DIPLOMA DEGREE

Section B (work related)

1. What’s your post in job?

MANAGER STAFF SUBORDINATE

1. What’s the duration of payment?

HOURLY DAILLY MONTHLY WEEKLY

1. What’s you work duration?

6 HOURS 10 HOURS 24 HOURS ABOVE 24 HOURS

SECTION C (Relationship between workers and the management)

1. How is the management handling the workers?

FAIR UNFAIR

1. What are the challenges faced by the workers?
2. How is the management communication with its workers?

FAIR UNFAIR

# **GANT CHART**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **NO** | **TASK** | **DURATION** | **MAY** | **JUNE** | **JULY** |
|  |  |  |  |  |  |
| **1** | Topic Formulation | 2 Weeks |  |  |  |
| **2** | Approval | A Week |  |  |  |
| **3** | Proposal Writing | 3 Weeks |  |  |  |
| **4** | Presentation | A Day |  |  |  |
| **5** | Analysis | 2 Weeks |  |  |  |
| **6** | Design | 2Week |  |  |  |
| **7** | Presentation | A Day |  |  |  |

# **BUDGET**

|  |  |  |
| --- | --- | --- |
| **NO** | **ITEM CATEGORY** | **EXPENDITURE** |
| **1** | **Computer** | **40,000** |
| **2** | **Printing** | **300** |
| **3** | **Airtime** | **1,500** |
| **4** | **Research** | **1000** |
| **5** | **TOTAL** | **42,800** |