BUSITEMA UNIVERSITY

FACULTY OF ENGINEERING

DEPARTMENT OF COMPUTER ENGINEERING

FINAL YEAR PROJECT REPORT

FINGER PRINT BASED ANDROID APPLICATION FOR MANAGING CLASS ATTENDANCE RECORDS

BY

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May the ALMIGHTY GOD bless the works of your hands?

Thanks.

DECLARATION

I WAISWA WYCLIF, Reg. No BU/UG/2017/1886 hereby declare that this project report is my original work except where explicit citation has been made and has never been published and/or submitted for any other diploma award to any other university or institution of higher learning for any academic award.

Sign: .....

Date: .....

APPROVAL

This is to certify that the project under the title "**Figure print android-based application for managing class attendance records**" has been under my supervision and is now ready for examination.

Sign: ……

Date: ……

Mr. PINYI OTHIENO ERIA

Department of Computer Engineering

LIST OF ACRONYMS AND ABBREVIATIONS

Reg. No Registration number

Id Identification

Pc personal computer

SQL Structured Query Language

No Number

UI: User Interface

API: Application Interface

IDE: Integrated Development Environment

SDK: Software Development Kit

XML: Extensible Markup Language

SQL: Structured Query Language

APK: Application Package

ABSTRACT

The project work aims at designing a finger print based android application for managing class attendance records which could effectively manage attendance of students of Universities, school, colleges. In this project work, attendance is marked after student's biometric identification.

For student identification, a fingerprint recognition-based identification system is used. Fingerprint features are considered to be the best and fastest method for biometric identification. These features are more secure to use and unique for every person that don't change in one's lifetime. Fingerprint recognition is a mature field today, but still identifying individual from a set of enrolled fingerprints is a time taking process.

It was very necessary to improve the fingerprint identification system for implementation on large databases, e.g. of an institute or a country. In this project, the minutiae algorithm is used to develop the identification system which is faster in implementation than any other available today in the market. The attendance system based on fingerprint recognition was tested on a class of student fingerprint databases and achieved significant results for taking an attendance of the students in any learning area. The system was implemented using android programming language.

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CHAPTER ONE: INTRODUCTION

1.1 Background

The study is focused on the attendance recording of the students in the class through the design and development of the system providing a means of information on the student's inputted attendance. The present is the revolutionary time of computer technology. Most of the works depends on computer application.

The traditional student attendance includes all the hassles of roll calling and very time consume of the students as well as teachers for conducting the classes in the department. The previous processes are very boring very time-consume of the students as well as teachers. So, a new approach is needed to handle this process. This motivated me to design a reliable system for student attendance.

The Biometric Identification Systems are widely used for unique identification of humans, like students, mainly for verification and identification. Also, the use of biometric features in student attendance management system is a secure approach.

A biometric system can be either an 'identification' system or a 'verification' (authentication) system. Several biometric features are used for user verification. Are DNA Matching (Chemical Biometric), Ear (Visual Biometric), Eyes (Iris Recognition and Retina Recognition), Face Recognition (Visual Biometric), Fingerprint Recognition (Visual Biometric), Gait (Behavioral Biometric), Signature Recognition (Visual/Behavioral Biometric), Speech and Speaker Recognition (Auditory Biometric), etc. Designing and developing a figure print based android application for class attendance records based on fingerprint recognition manages records for attendance in the departments like DCE BUSITEMA University could be hassles-free, accurate and save valuable time of students as well as teachers for conducting the classes.

1.2 Problem Statement

Whereas it is a requirement for students in public universities of Uganda to sit for an examination for which they have attended 75% of the taught classes, it is quite tedious and time consuming to manually record, track and compute class attendance. This project is to design and implement an android application powered by biometric security mechanism to be used for recording, tracking, and computing class attendance.

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