BIOMETRIC ENTRIES SYSTEM
(Project Proposal)

Project Code
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- **Abstract**
The challenge of maintaining hostel students entries record of departure and arrival justifies the development of Biometric Entries System(BES).BES has been built to eliminate the time and efforts wasting in manual data entry.It also greatly reduce the amount of paper resources

needed in entering data .Report generation approach and histroy keeping feature enables more efficient handling of students record.BES will provide robust fingerprint recognition and face recognition system in hostels which uses biometric device for fingerprint scanning and matching machanism.Pairing of the data packages with finger scanner will ensure security.It gets date ,intime and outtime automatically of each individual.BES keeps track of student visits and also keeps track of late comers ,early leavers and by using the stored info it generates report on monthly basis.BES gives option to mail the report to the guardian.

- **Background and Justification**
- **Problem Statement**

In traditional hostel entries method,students have to enter some info on register like roll no,room no,department,leaving time etc.There is no method to ensure that either student has entered   correct info or student is hostalized or a day scholar.Most of the time closing entries are missing on register , reason is the lack of proper check and balance.Hard copy of data may get lost or if a student is missing or late , as data entries are not clear , accurate and student's histroy is not kept properly.So in such cases , they have to face alot of problems.BES is developed for students to maintain their records and to get rid of cheating and false marking in data entry.BES makes sure that only particular hostalized student is making entry in system.By using stored data,BES generates report and send it to the guardian of student to keep them aware and updated.

- **Justification**

BES will significantly develop the conventional procedure of student data entry framework in hostel surrounding.BES proposes computorized info accumulation technology,which leads to more precise entry.The whole idea is about designing a system that keeps record ,match it along gadgets sencor and generate report.

- **Project Methodology**

This proposed BES uses fingerprint identification as well as face recognition. In fingerprint identification, the system recognizes an individual by comparing his/her biometrics with every record in the database. In general, biometric identification consist of two stages:

i. Enrolment
ii. Authentication

During enrolment,the biometrics of the student is captured (using a fingerprint reader, which are likely to be an optical, solid state or an ultrasound sensor or other suitable device) and the unique features are extracted and stored in a database as a template for the subject .The objective of the enrolment module is to admit a student using his/her fingerprints into a database after feature extraction. These features form a template that is used to determine the identity of the student, formulating the process of authentication.   During authentication, the biometrics of the student is captured again and the extracted features are compared (using a matching algorithm) with the ones already existing in the database to determine a match.

In this way ,students will be authenticated.
- For face recognition,BES will use matching methodology to match captured picture with db stored pic.This feature is mainly for physically disabled students.

• Project Scope

- Biometric enrollment of all relevant information of the employees like fingerprints, photographs,contact information,personal info etc to ensure a comprehensive database of information for the functioning of the biometric entries system(BES).
- Authenticate student, if fingerprints matched   with stored fingerprint on database.
- Recognise student faces by matching them to images on a   database.
- A comprehensive reporting functionality with the ability to generate MIS reports.
- Automatic date and time generation ability.

• Limitations
- System can't handle other hostel issues such as mess activities ,payments of students accommodation fee and maintaines fee etc.
- Different face angles of the target's face can throw off facial recognition's reliability.

• Objectives

- The objective of BES is to design a configurable system that keeps data,generate reports and match data in efficient way.
- System deals with reliable techniques for fingerprint image enhancement and minutiae extraction.
- System intented to inform guardians so that they can get notified about children routine.
- System deals with testing to ensure that wether entry by fingerprint and face recognition is enough for identification.

• FEASIBILITY STUDY
• Technical Feasibility
   This system uses andriod studio as front end technology and SQlite as backend   technology. So BES is technically feasible.

• Economical Feasibility
   Andriod studio and MS access are easily available and user freindly.

• Legal Feasibility

Security within the hostel is one of the foremost repetitive issue.BES provides aid in legal purpose.

- **Resource Feasibility**

- **Hardware Requirments**

The hardware to be used can be divided into two categories – fingerprint scanner which captures the image and a personal computer which: houses the database, runs the comparison algorithm . The fingerprint scanner is connected to the computer via its USB interface.

- **Software Requirment**
- Andriod Studio
- SQlite

- **References**
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