Table of Contents for SRS (Draft-1)

1. **Project Title: MIST AUTOMATED ATTENDANCE SYSTEM**
2. **Project Objectives :**
3. To ensure 100% secure attendance by biometrics technology.
4. To keep track of a student how much portion of a class he/she was physically present.
5. To reduce wastage of time during manual roll calling system.
6. To make it easy for both students and teachers to know about their attendance.
7. To reduce late coming tendency.
8. **Requirement Elicitation Process:**

* **Requirement discovery:** We have contacted with the teacher and student about the current system. We found out the flows in current system.We will design the system is such a way that current system flaws will be eliminated.

Those are the stakeholders we have contacted with

Lec Raiyan

CSE Department,MIST

Lec Raiyan sir told us that current system of taking attendance is very much inefficient and most of the students have the tendency to go out from the class after giving attendance  
He mainly initiated this automated attendance system idea and gave mainly 3 requirements   
1.Taking the attendance timely

2.Late attendance will also be counted   
3.If any student go out due to some reason and come within 5 minutes,his/her attendance will not be discarded

Sumaiya Afrin  
201714058,CSE-17,MIST  
Sumaiya also gave us the same review that the system should be automated  
  
Zakaria  
2017140117,CSE-17,MIST

He said that if this sytem is implemented then many time can be saved

**Requirements classification and organisation:** System needs two types of requirements. Hardware based attendance system & software based management.

Taking attendance, saving it in the server, showing eligibility to give exam, list of non-collegiate and dis-collegiate students are the main requirements.

* **Prioritisation and negotiation:** Our main priority is to take the attendance automatically and save it in the server. After that we will add the way of auto calculating dis-colligate & non-colligate students. Online application for leave is the least priority for our system requirements.
* **Requirements specification:** Requirements are specified in both user & system requirements.

1. **User Requirements:**

4.1. Attendance will be taken using fingerprint sensor.

4.2. All fingerprint patterns will be stored in database

4.3. Number of students present in the class will be tracked

4.4. The project will keep track of which class is going on

4.5. Sensor will entry the attendance between a certain time

4.6. After each class the attendance will be automatically updated in database

4.7. After completion of the course the eligibility to give exam will be shown

4.8. Fine will be calculated for a particular student

4.9. Average class attendance for a particular instructor will be shown.

4.10. Security will be maintained.

4.11. The amount of time a student is outside of class during class time will be tracked.

4.12. Application system for non-collegiate and dis-collegiate students will be available in the system.

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1. **System Requirements:**

5.1 Finger print scanningThe job of taking attendance have to be done using one fingerprint sensor which will be implemented outside the classroom.

5.2 Database  
Some certain information must have to be stored in the database

* Fingerprint image of every student,teacher and staff
* Attendance of each Student
* Class schedule

5.3 Tracking

If any student go out from the class during classtime,system must have to be able to detect it using LDR sensor and total time student remains in the class have to be calculated.

5.4 Classes  
Routine will be provided to the system. by this, system will always know that which class is running

5.5 Time limit

5 minutes Before and after starting of a class ,attendance will be taken as regular attendance and after 5 minutes of starting any class, attendance will be counted as late attendance.

5.6 Updating

Real time database will be used for updating information

5.7 Eligibility

After completing of a course,Student will be classified into 3 categories

* Non-Collegiate : Who have attendance more than 75 percent and less then 90 percent
* Dis-Collegiate : Who have attendance below 75 percent
* Collegiate : Who have attendance more than 90 percent

5.8 Fine

After completing of any semester, the fine(if any) which needs to be paid by a particular student will be calculated and the student will be notified

5.9 Security

Security of the system will be ensured by using firebase authentication.

1. **Requirements Classification:**

|  |  |  |  |
| --- | --- | --- | --- |
| Ser. | User Requirements | Types of Requirement | |
| Functional | Non-  Functional |
| 01. | 4.1. |  |  |
| 02. | 4.2. |  |  |
| 03. | 4.3. |  |  |
| 04. | 4.4. |  |  |
| 05. | 4.5. |  |  |
| 06. | 4.6. |  |  |
| 07. | 4.7. |  |  |
| 08. | 4.8. |  |  |
| 09. | 4.9. |  |  |
| 10. | 4.10. |  |  |
| 11. | 4.11. |  |  |
| 12. | 4.12. |  |  |

* **Text Description**:
* Ser. No. 01 involves data processing and other functionality that defines what our system is supposed to accomplish. So it is a functional requirement. Also without fulfilling this requirement our system is totally useless. So it is also a non-functional requirement.
* Ser. No. 02, 05, 06, 10 are such requirements without which our project can’t work, which must be done. So they are classified as non-functional requirements.
* Ser. No. 03, 04, 07, 08, 09, 11 and 12 are some requirements which are related to the technical functionality of our system . These are the desired operations that define our system. So they are categorized as functional requirements.

**7. References:**

[<https://www.androidauthority.com/how-fingerprint-scanners-work-670934/>]

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Signature of the Course Teachers