Portable Biometric Attendance System

Team Id : 259607

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How does the Portable Biometric
Attendance System can be a Better
opinion to ease the attendance Method ?

Project objective

The intention to develop Attendance Management System is to advance the tradition way of taking attendance. Another purpose for developing this project is to generate the desired reports automatically at the end of the session or between the session as per requirement. This project is basically a self-contained system which runs on the system on which it has been installed under the user control and it will work for a particular institute or college.

AEIOU Canvas

AEIOU Canvas

AEIOU Summary	Team Id - 259607	Date – 10/10/2020	Version - 1.0
	Domain Name - Portable Biometric Attendance System		

Environment

- Fresh Air
- Cool Wind
- Clean
- Fresh Water
- Peaceful
- Noisy
- With or without light

Interactions

- Teacher to Student
- Student to Student
- Student to Teacher
- Teacher to Teacher
- Teacher to Parents
- Parents to Teacher
- Teacher to Blackboard

Objects

- Bench
- Chalk/Duster
- Table
- Marker
- Chair
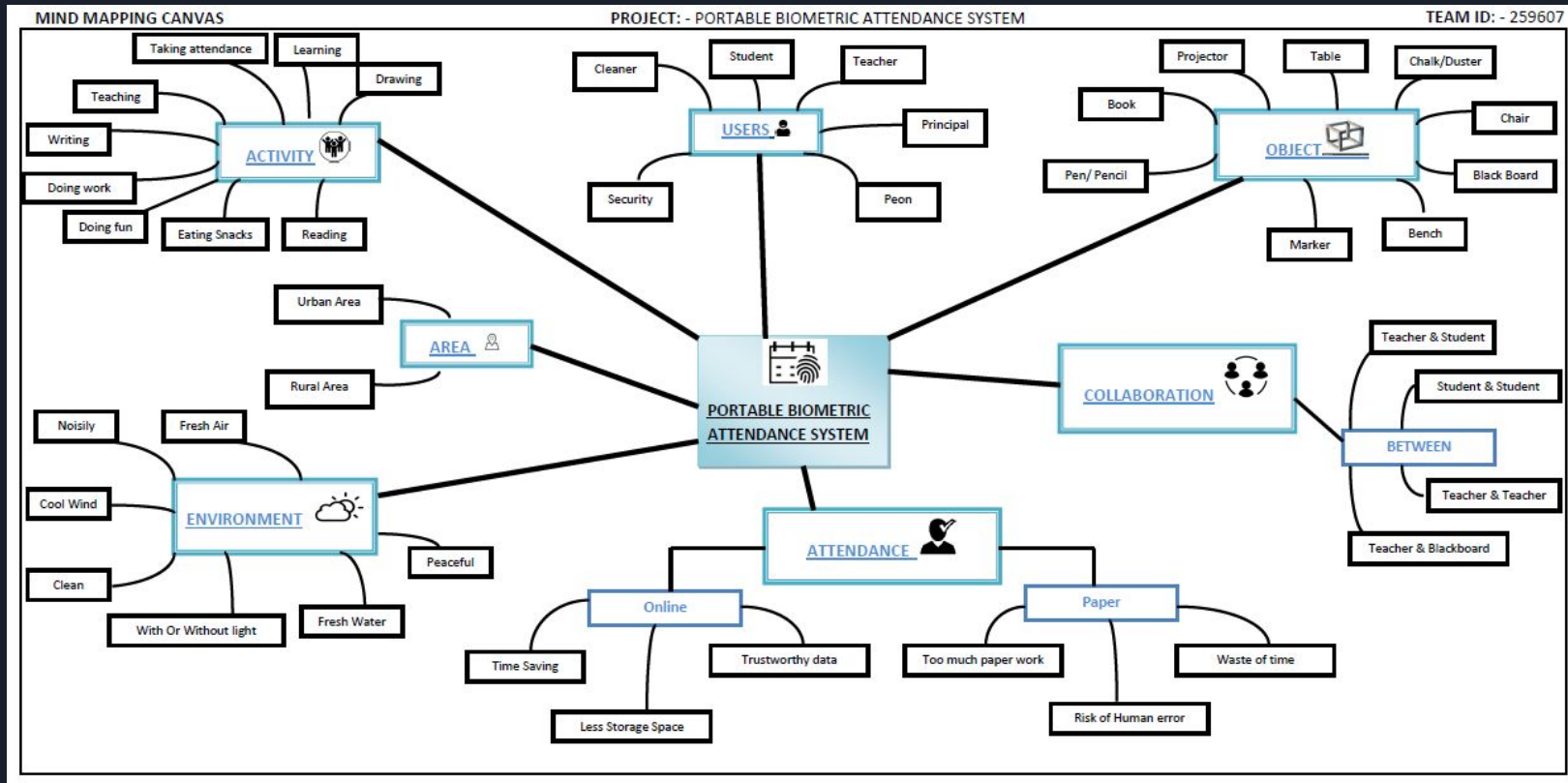- Books
- Projector
- Pens
- Black Board

Activities

- Learning
- Doing Fun
- Teaching
- Writing
- Playing
- Listening
- Eating Snack
- Reading
- Doing Work

Users

- Student
- Security Guards
- Teacher
- Principal
- Peon
- Swiper

Mind Map Canvas

MIND MAPPING CANVAS   PROJECT: - PORTABLE BIOMETRIC ATTENDANCE SYSTEM   TEAM ID: - 259607

ACTIVITY
- Taking attendance
- Learning
- Drawing
- Teaching
- Writing
- Doing work
- Doing fun
- Eating Snacks
- Reading

USERS
- Cleaner
- Student
- Teacher
- Principal
- Security
- Peon

OBJECT
- Projector
- Table
- Chalk/Duster
- Book
- Chair
- Pen/ Pencil
- Black Board
- Marker
- Bench

AREA
- Urban Area
- Rural Area

ENVIRONMENT
- Noisily
- Fresh Air
- Cool Wind
- Clean
- With Or Without light
- Fresh Water
- Peaceful

PORTABLE BIOMETRIC ATTENDANCE SYSTEM

COLLABORATION
- Teacher & Student
- Student & Student
- Teacher & Teacher
- Teacher & Blackboard
- **BETWEEN**

ATTENDANCE
- Online
  - Time Saving
  - Trustworthy data
  - Less Storage Space
- Paper
  - Too much paper work
  - Waste of time
  - Risk of Human error

Ideation Canvas

Ideation Canvas

Project - Portable Biometric Attendance System   **Team Id** - 259607

People

- Student
- Teacher
- Principal
- Peon
- Watchmen
- Other Staffs

Activities

- Taking Attendance
- Scanning Fingerprint
- Generating Report
- Applying Filters

Situation/Context/Location

- Schools
  - Urban Areas
- Tuitions
  - Rural Areas
- Colleges
  - Libraries

Props/Tools/Object/Equipment

> Taking Attendance   > Raspberry Pi

> Generating Report   > WIFI   > Power Bank   > Attendance Machine

> Time Saving   > Wire   > Charger   > Fingerprint Scanner

Product Development Canvas

Product Development Canvas | **Project – Portable Biometric Attendance System** | **Team Id - 259607**

Purpose

- Taking Attendance
- Time Saving
- Ruling Out Unnecessary Noise
- Ease the method of taking Attendance

Product Experience

- Better response
- Working as Per Assumption
- Time Saving

Product Functions

- Online Working (Wi-Fi Compulsory)
- Report Generation

Customer Revalidation

- Detecting Unregistered Fingerprint
- Multiple Filters to generate report
- Student In and Out Timing
- Generation of report in .xls form

People

- Students
- Faculties
- Security Guard
- Peon
- Sweepers

Product Features

- Registering Attendance
- Proper Report Generation
- Sorting reports using multiple Constraints

Components

- Fingerprint Scanner
- Raspberry Pi 3 / ESP32

Reject, Redesign, Retain

- Proper Internet Connection
- Cost of Device
- Web Portal Design
- Accessibility

Empathy Canvas

Design for – Students and Teachers	Design By – Parth Naresh Patel
	Patel Vaidehi Parimal
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	Nishita Dharmendrakumar Patel
Date - 10/10/2020	Version - 1.0

User
- Students
- Teachers
- Principal
- Peon
- Watchmen
- Other staff

Stakeholders
- Teachers
- Principal
- Students

Activities
- Learning
- Teaching
- Reading
- Taking Attendance
- Listening
- Doing work
- Doing fun
- Drawing
- Writing

Story Boarding

Happy

Faculty are ecstatic as the time which they had to use for attendance would be reduce and it would become easy for them and eliminates the duplicate data entry and errors in time and attendance entries won't be there.

Happy

Students being in lectures sometimes their attendance is being not marked because of the coordination or some other reasons that would not happen and everyone who is present their attendance will be counted.

Sad

If any student could not attend the lecture due to some reason, so he came up with an idea that his attendance will be filled by one of his friends they did the same thing and the faculty came to know about their deed which made them poignant.

Sad

While taking attendance there will be a long queue or going one by one and no one will be listening to the faculty and for that reason the faculty is sad.

Prototype Canvas

Prototype Canvas **Project:** Portable Biometric Attendance System **Team Id:** 259607

The Machine/Device could consist the Following Components:
- ESP32 (or) Raspberry Pie + Wifi Module
- Led Display
- Arduino Uno R3
- Fingerprint Scanner

Registration
- Fingerprint registration of Individuals
- Saving Corresponding Data with their Institute Unique Id

Device Activation
- Changing the Mode of Device to Attendance Mode

Attendance
- Fellow Individuals will give their Attendance though Fingerprint Scanner

Transfer of Data
- The Following Attendance Will be marked on Dedicated Web Portal

Thank you!