PROJECT PROPOSAL
[RFID based Automatic Attendance system]

Date: 11th May, 2022

Respected,

Co-ordinator of Department of ICT,

Dr. Pushpal Desai.

Subject: Allocation of resources for project development of department

We hereby, Team of 10 students from B.Sc. (I.T.) (Sem – 4). represents a project proposal about RFID based automatic attendance system for department of ICT.as discussed before we have developed one prototype and basic working demo with all components we got till now here is the link:-

(https://drive.google.com/drive/folders/1-3ufWX9Zai-x98oe4ZFTO4fmYOVORiBl)

This proposal application contains the system overview as well the resources required for this project, so if Department wants proceed with project further then advanced hardware as well as software resources will be needed in order to develop the complete system.

System Overview

- Automatic attendance capture with wide range RFID Reader in real time.
- Web Application with different user account from student to faculties and non teaching staff also
- Android Application for improving user experience
- PWA (Progressive web app) (new technology for low resource high performance app)
- All data will be available in application in mean & real time
- Customized report and attendance- setup creating functionalities for faculties

Tools & Technology

1. Tech Stack for project:

(MERN Stack)

1. HTML, CSS, JS (Basic on Requirement)
2. ReactJS
3. NodeJS
4. Express JS
5. MongoDB

2. Tools for Project Management:

1. GitHub (for Project Version Control and cloud storage)
2. Skype (for Communication) & Google meet (for Discussion and presentation)
3. Trello (for Task Management among the team)
4. Arduino IDE (for hardware programming)

5. Postman (for Testing APIs)
6. Visual Studio Code (Code Editor for web application)

Hardware & Software Requirements

- Hardware:

1)ESP8266 WIFI module (Full Kit)

2)3 type Jumper with soldering tool.

3)RFID reader with long range capacity, Like 1 or 2 meters. (As per the requirement of number of classrooms).

4) LED's of RGB color (3 total) and buzzer

5)Bread board (medium capacity).

6)changeable Passive RFID tag card with read and write + with Tag id Modification

7) we need 50-70 passive cards at least because MASS attendance is main purpose of system so we need that for proper testing

8)Proper Fiber Box for putting entire system in it. (Transparent enough to increase the card scanning efficiency.)

These are basic requirement for starting up the project, once we get all above basic components and we start our project then after according to project development and making better system may be another resource can be needed. (Kindly note that)

- Software:

1. Web Hosting *(Digital Ocean/AWS preferred)*
2. Highly Scalable & Responsive server
3. According to project development another needy requirement might occur (kindly note that)

Kindly review the application as soon as possible and hence, we duly request you to grant us the required hardware & software resources so that project can be moved to next stage.

Thanking You,

Harshil Ramani (Team Lead),

Drashti Dhola, Shubham Khunt, Archit Ghevariya, Shikhaa Tikiwala, Krish Bhanderi, Meet Makwana, Parth Mistri, Tulsi Rathod, Jaydev Jadav (Team Members)

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