



Biometric Based Exam Entry Authentication System With SMS Alert

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ABSTRACT: Biometrics authentication plays a vital role in organization, company, colleges and institutions. Security within the examination hall is one of the foremost repetitive issues. To maintain attendance verification is a sophisticated and time-consuming process, this biometric will help in maintaining attendance and security in the examination hall. This advanced authentication system is made for identifying candidates and granting access to them. After turning on the system, the project will first initialize GSM. It will then ask the admin to call in order to register the number of admin, after successful registration SMS feedback is given, a user need to enroll fingerprint of candidates. After enrolling fingerprint user can start the system, authorized person can scan fingers then the door opens and an SMS is sent to the admin notifying him about the candidate. And if the user is an unauthorized person and tries to access, the system doesn't provide access and after a 3rd failed attempt an SMS is sent to the admin notifying him/her about the same.

KEYWORDS: Raspberry pi, android app, Fingerprint module, USB Converter.

I.INTRODUCTION

Biometrics authentication plays a vital role in organization, company, colleges and institutions. Security within the examination hall is one of the foremost repetitive issues. To maintain attendance verification is a sophisticated and time-consuming process, this biometric will help in maintaining attendance and security in the examination hall. This advanced authentication system is made for identifying candidates and granting access to them. After successful registration SMS feedback is given, a user need to enroll fingerprint of candidates. After enrolling fingerprint user can start the system, authorized person can scan fingers then the SMS is sent to the admin notifying him about the candidate. And if the user is an un-authorized person and tries to access, the system doesn't provide access and after a 3rd failed attempt an SMS is sent to the admin notifying him/ her about the same. In this process student attendance will be calculated. After completion of this process the system will be allocated to the student before going to the examination hall the student will know which system is allocated to him/her.

II.RELATED WORK

In the current exam system all activities are done manually like attendance on paper sheet also student enter in exam hall and check all important things like ID cards, exam hall tickets but sometimes unauthorized person directly enter in exam hall because every time not possible to check all things like hall tickets and other things of each and every student so unauthorized student should be possible to directly enter in exam hall without hall ticket, there are no scope for advanced system so this process is so congested ,time consuming & risk.

III.PROPOSED ALGORITHM

- *Design Considerations:*
 - Admin login to the system.
 - Registration of the student.
 - Compared with the student fingerprint scanning and data stored in database system.
 - Alert message send to admin if the student is authorized or unauthorized.
 - Student attended the exam.



• *Description of the Proposed Algorithm:*

Aim of the proposed algorithm is to Security within the examination hall is one of the foremost repetitive issues. To maintain attendance verification is a sophisticated and time-consuming process, this biometric will help in maintaining attendance and security in the examination hall. It helps to manage record of the student. Easy to operate.

Step 1: Login module-

In which module there is need of user name and valid password for login the system.

Step 2: Registration module-

In which module the student information stored with some mandatory fields and maintains record in the system.

Step 3: Comparison module-

In which module information entered by the user at the time of registration compared with the student fingerprint scanning data stored in database system.

Step 4: Alert message-

In which module alert message send to admin if the student is unauthorized.

IV. PSEUDO CODE

Step 1: Login to the system.

Step 2: Enroll Student and their fingerprint into the system database.

Step 3: Check the below condition for enter into the student in exam hall.

if (Student is valid) then

Student goes to exam hall.

else

Alert message send to Exam Controller as well Admin.

end

Step 4: Calculate attendance of the Student.

Step 5: Alert message send to the admin if the student is Authorized.

Step 6: Generate hall ticket of the student.

Step 7: Allocate the system.

Step 8: Particular student exam portal is already open in exam hall if the exam is online.

Step 8: End.

V. SIMULATION RESULTS

The performance of the system should be fast and accurate. Biometric Exam Entry Authentication System shall handle expected and non-expected errors in ways that prevent loss in information and long down time period. Thus have inbuilt error testing to identify invalid username/password. The system should be able to handle large amount of data.

After enrolling fingerprint user can start the system, authorized person can scan fingers then the SMS is sent to the admin notifying him about the candidate. In accordance with the situation of exam hall , we design a new intelligent Biometric based exam entry system by using MYSQL DATABASE server. It can improve the quality of the security in exam hall.

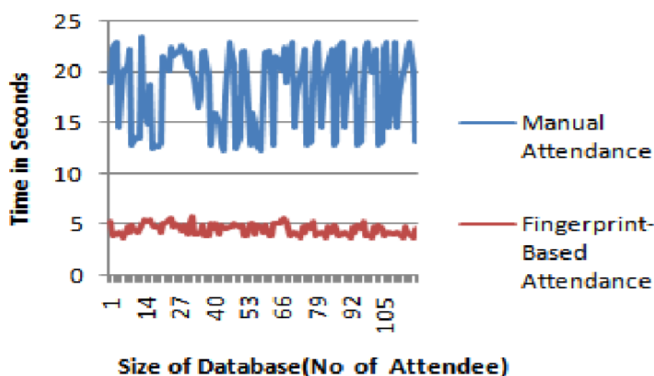


Fig. 1 Comparison of the manual or fingerprint based attendance system .

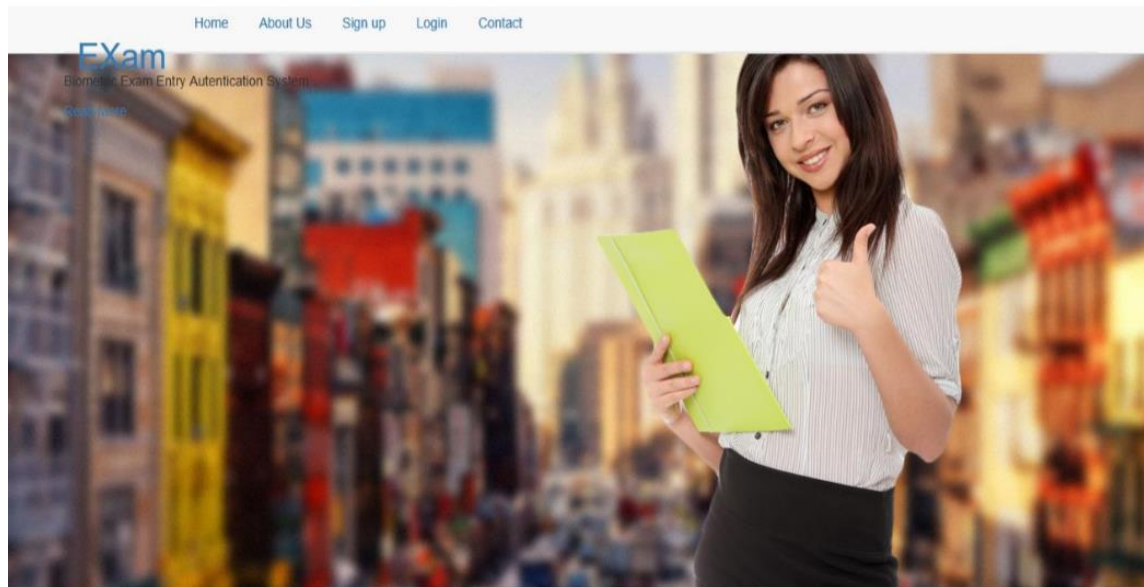


Fig.2 Homepage.

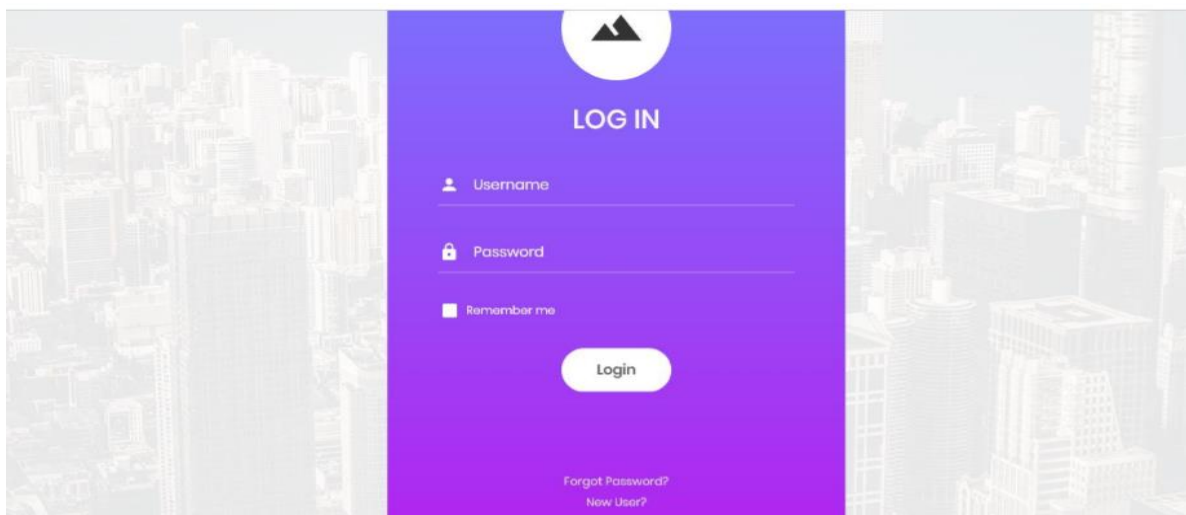


Fig.3 Login page

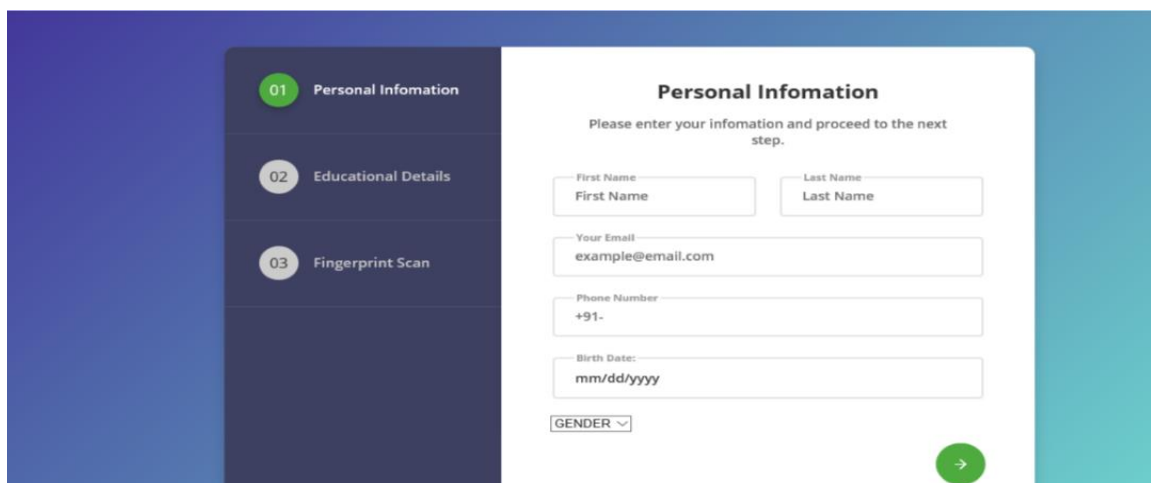


Fig.4 Registration page



VI. CONCLUSION AND FUTURE WORK

The Exam hall authentication system using fingerprints. The implemented minutiae extraction is much more accurate and faster than our previous feature-extraction. In our proposed system accurately verify the fingerprint is valid user or not. If valid user then it allow attending the exam else not allowed. In this experimental result shows the proposed method is suitable for all the authentication based application and also it robust. To maintain attendance verification is a sophisticated and time-consuming process, this biometric will help in maintaining attendance and security in the examination hall. This advanced authentication system is made for identifying candidates and granting access to them. Biometric based Authentication system has been widely utilized in many security applications. Biometrics is a marvelous technology that is lower in cost, faster and more accurate. Biometrics authentication plays a vital role in organization, company, colleges and institutions. Security within the examination hall is one of the foremost repetitive issues. To maintain attendance verification is a sophisticated and time-consuming process, this biometric will help in maintaining attendance and security in the examination hall. This advanced authentication system is made for identifying candidates and granting access to them.

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