Security for Online Examination Using Raspberrypi

B.NAVYA[1], Dr. VANDANA KHARE[2], T. SWAPNA RANI[3]
[1]*PG Scholar, M.Tech (Embedded), CMRCET, Hyderabad, India*
[2]*Professor, Department of ECE, CMRCET, Hyderabad, India*
[3]*Assistant Professor, Department of ECE, CMRCET, Hyderabad, India*

Abstract- Education is one of most important source for the people to develop and interact with the world. Now a day examination plays crucial role in the student's life there are writing examination of universities, company recruitment process, schools and colleges. In the previous days the teacher has prepare the question paper before three days and take out print of the question for many students here there is disadvantage while keeping the test it more number of days, timing will be lagging, result correction it much of time it depend on total number of students and students there again need paper and pens there can be copied from the other students and cheating will be done there more number no of invigilator for a room to look after students. In present we are conducting online examination without wasting more number of days and time will totally save. Teacher used to prepare the question paper in the server and when they want keep the exam they can be easily through the internet. Now a days Wi-Fi is available everywhere internet can be accessible. In this proposed I am providing more secure for the students that "biometric authentication" .When there registered with the database then whenever there want to exam there can be written and result is shown to them and stored in MySQL sever. When teacher want the result of student they have login with webpage of php with their username and password. Most of students are writing other student exam to provide secure for your exam "biometricauthentication" is important. For different students we provide different question paper so that malpractices will not be done. In IoT technology improves security for online in coming generation all the exams are conducted online.

I. INTRODUCTION

A. INTRODUCTION TO THE PROJECT

In this method students interfaces with fingerprint scanner in which will it generate id and it stored in it database. When the student authenticates it matches then question automatically opened in browser with timer it will send the data and result automatically stored in the MYSQL server. When teacher want the progress of the student they have admin login page which they have user name and password atomically result will be stored in that server database. In this result will be with design paper in the sever it will be display at the end of exam and stored in the server.

This method proposes secure computer and facilitate exam process and supports other languages for preparing question and solution also there will no cheating will be done. This embedded device reduces number of computers and detects the cheating behaviour of the candidate to provide more secure for the examination. This support graph, formulas in the question paper which in the html format stored in the server. This method is used to improve reliability, more secure for the candidates in which more helpful for the colleges in the time of placements and schools in which to know student knowledge and improve their efficient knowledge.

II. BLOCK DIAGRAM OF PROPOSED SYSTEM

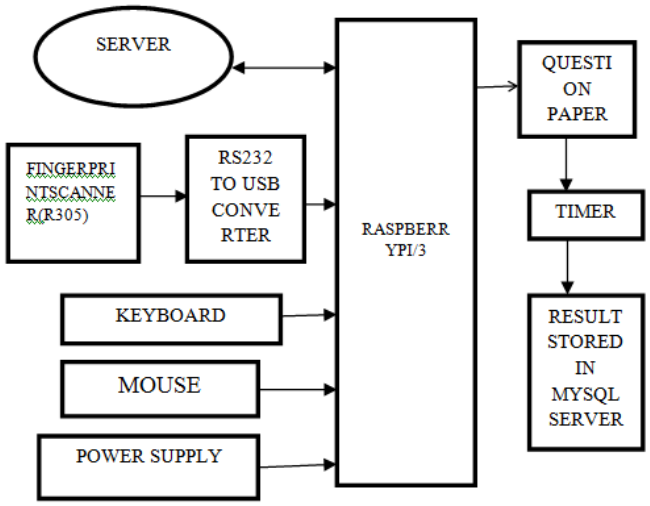
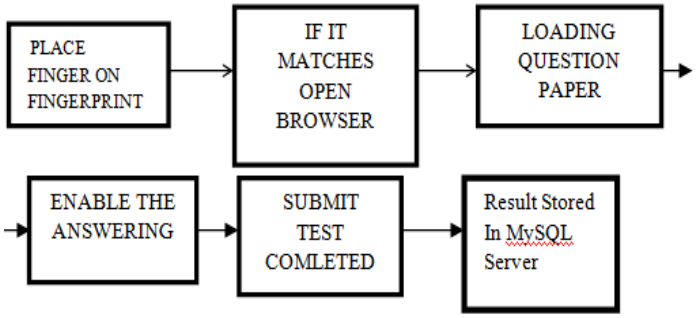
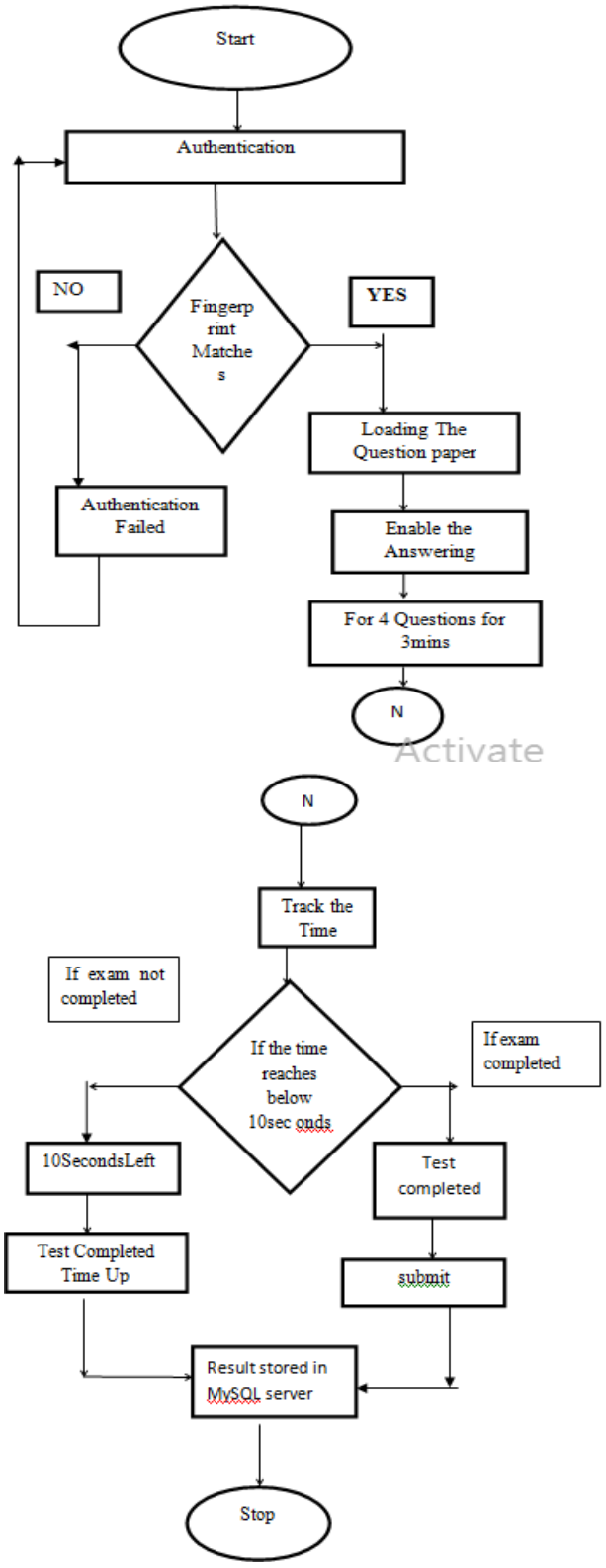


Fig.1: Project Block Diagram

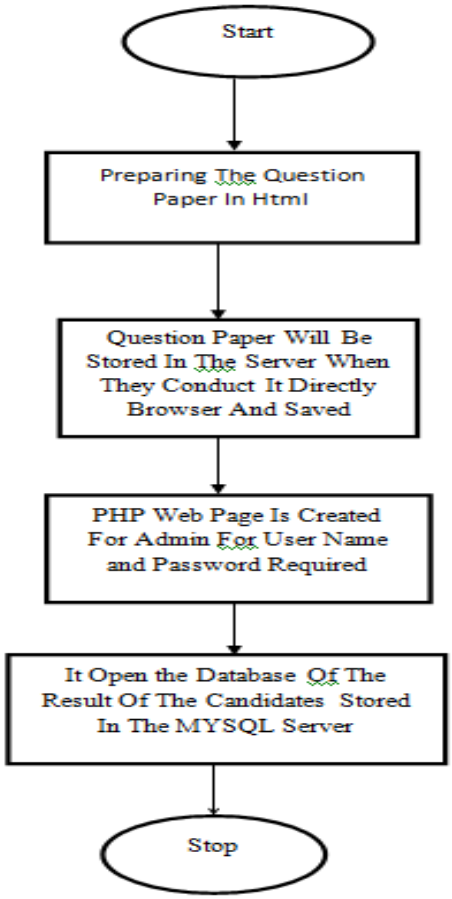
A. STUDENT AUTHENICATION



Flowchart for Students



Flowchart for Admin



III. RASPBERRYPI3/MODEL(BCM2835)

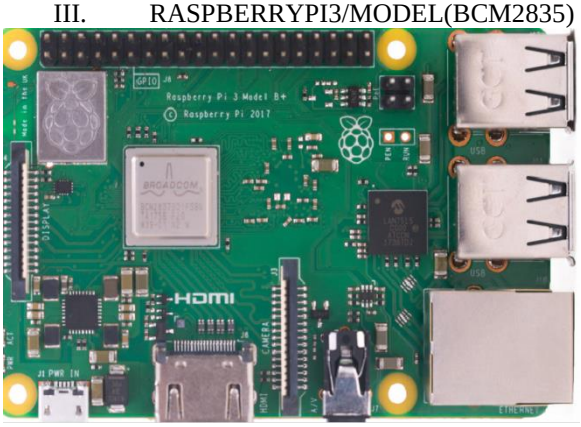


Fig.2: Block Diagram of Raspberry Pi/3

Raspberry Pi is a credit sized computer that can be plugs into monitor or and uses normal keyboard and mouse without CPU means directly we connect monitor through power supply of 5v.The amount bore of the arrangement is

accomplished application a Raspberry Pi 3 board; it's a $ 35 bare-bones computer advised and developed by the Raspberry Pi Foundation, the Pi 3 appearance a BCM 2837 System-on-Chip which includes a Quad- Core 64-Bit ARM Cortex A7 CPU clocked at 1.2 GHz consist of 1 GB of RAM. It as well has Video Core IV GPU for graphical processing applications, it as well includes four USB ports for peripherals and 40 Pin General Purpose Input (GPIO) pins for interfacing the Pi with alien internal circuits, these GPIO pins are acclimated to interface the Pi to the web server by using wiring Pi software. The Raspberry Pi is advised to run assorted Linux based operating systems and has Raspbian as its general operating arrangement and Python is general programming language.

In this arrangement the amount bore plays a awful pre-eminent role and is obedient for assorted functions, the amount bore is obedient for accepting the images from the camera, processing and storing. It's as well obedient for advancement the facial database which consists of pictures of all the accustomed bodies for reference.

IV. ROLE OF FINGER PRINT SCANNER

We choose the fingerprint scanner is cheap, provide high speed, high accuracy of fingerprint identification. It stores the 1000 different fingerprints in its database .it is able to recognize the finger of 360^0 position. Downloading and uploading can be done using RS 232 serial communication interface. It provides connector baud rate and UART. Communications is based on the UART communication protocol can operated through RS-232cable.fingerprint can be done by 3 kinds of packet.

- Command packet: used for the finger button pressing.
- Response packet: used for the success or failure.
- Data packet: used to carry extra information of the finger like images, time, date it does not have static length.

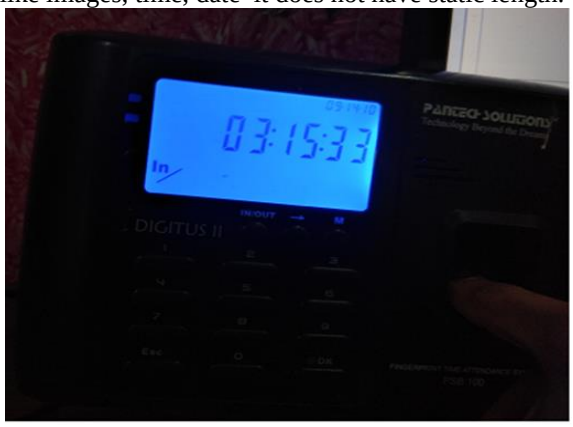


Fig.3: Fingerprint Scanner

V. PROJECT IMPLEMENTATION

Working of the System

Stage 1: Place a finger on fingerprint scanner.
Stage 2: It gives ID of your finger and stored in database.
Stage 3: When you're already registered it searches show the fingerprint it matched it show"PASSED".
Stage4: When you're registered or not matches fingerprint then it show "NOT PASSED".
Stage5: When it passed it directly open browser of question paper send by the server
Stage 6: With the questions there is a time limit when it opens it automatically timer start
Stage7: Within the time if candidate completed then it show result automatically stored the result in the MYSQL server
Stage8: Out of time test will be completed then it time up test completed, result will be shown and stored in the MYSQL server

ADMIN LOGIN

Stage 1: We create a web page for result of candidates
Stage 2: We require username, password for login
Stage 3: when admin enter the name, password it open the database of the result stored
Stage4: In the database it shows the ID, name, result.

VI. RESULTS

When you are in already registered in fingerprint scanner it matches with your id then it directly browser

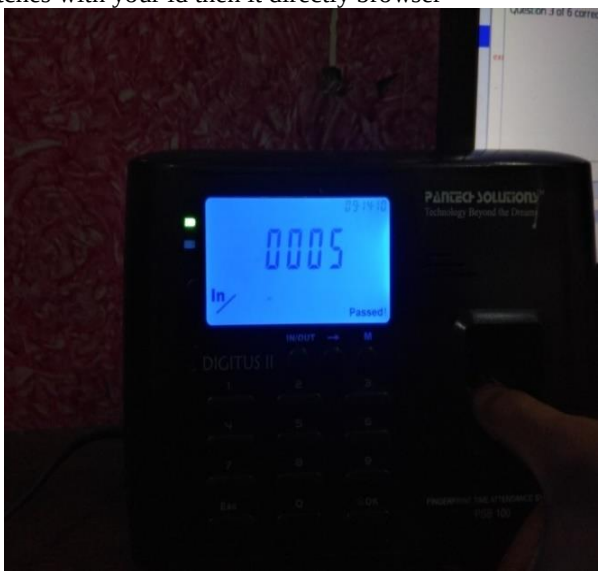


Fig.4: Fingerprint Matches

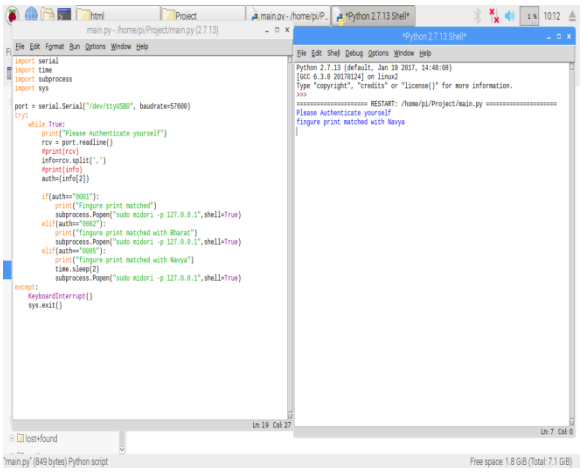


Fig.5: Fingerprint It Matches Then It Shown By Name

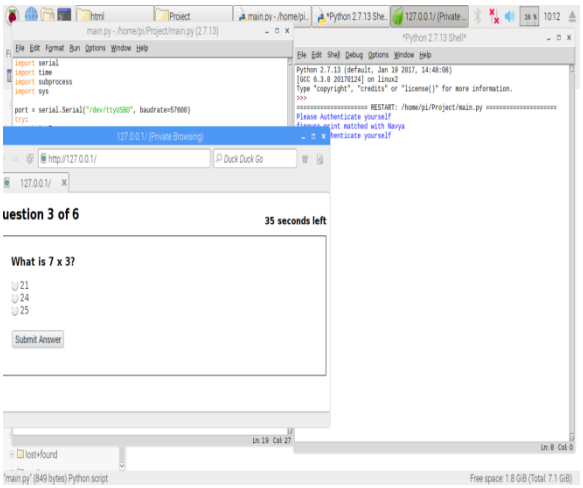


Fig.6: Opening the Question Paper

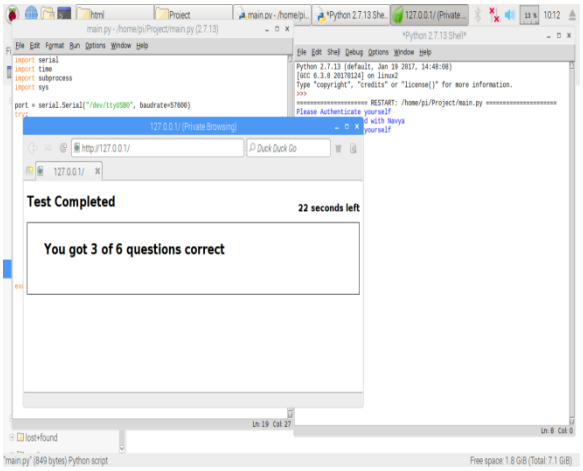


Fig.7: Result of the Examination Completed In Time

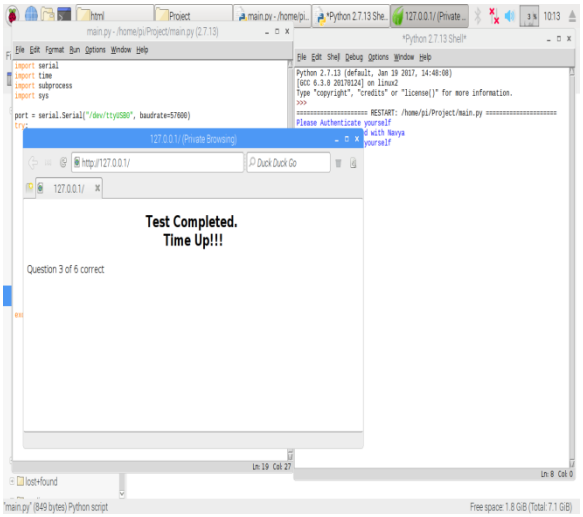


Fig.8: Result of the Examination Completed Out of Time

Fig.9: Fingerprint Doesn't Match

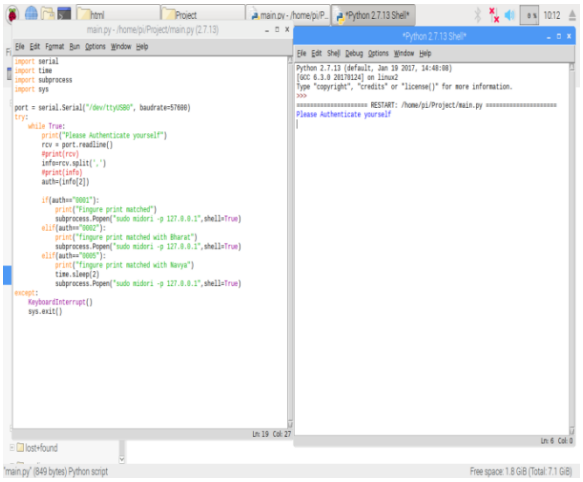


Fig.10: It Does Not Any Name When Fingerprint Doesn't Matches

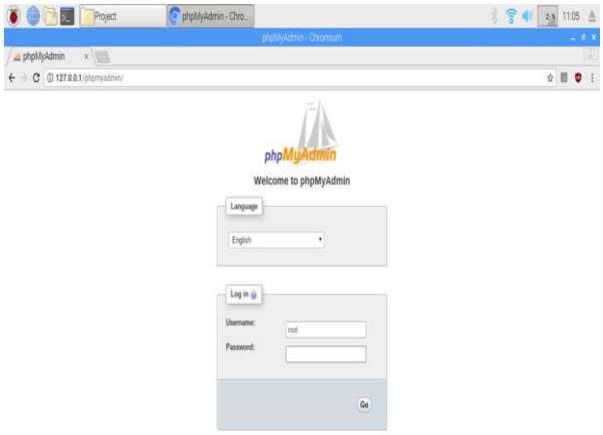


Fig.11: Admin Login

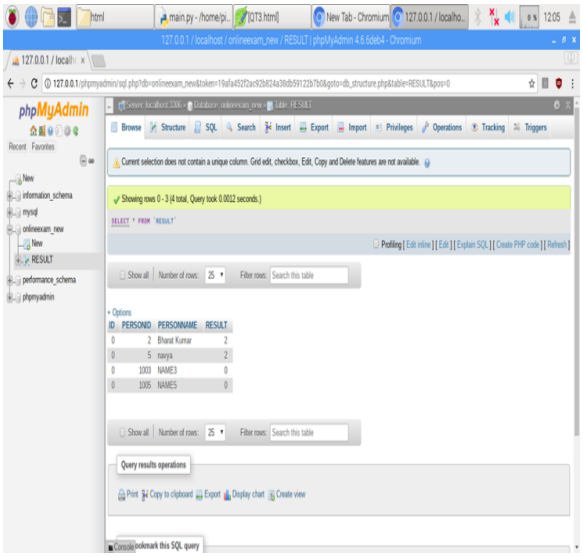


Fig.12: Students Results stored in server

VII. CONCLUSION AND FUTURE SCOPE

The proposed method online system can be easily adopted by the universities and institutions in order to make more secure by fingerprint and flexible. The system is divided to two main subsystems (student and administrator) .The administrator function is to add, delete the user and manging question paper of adding and deleting questions. The student must write the exam by fingerprint when it matches it directly open question paper and result can be saved.

In future, we plan to investigate the merits of this technique by generating other coding question in a database. Also, we plan to investigate special purpose applications for which one may get even more savings using Coding. As we are going to use in the parking of vehicle for secure purpose as everywhere utilize IoT technology.

VIII. REFERENCES

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Author Profile

NAVYA her is B.Tech degree in 2016 from Sri Prakash college of Engineering & Technology, AP, India. He is currently working towards Post Graduation degree in the department of Electronics and Communication Engineering in CMR College of Engineering & Technology, TS, India. Her research interest is in Embedded systems.

Dr. VANDANA KHARE is working as Professor in CMR College of Engineering & Technology with teaching experience of 21years. Interested research domains are Embedded Systems and specialization in Digital Electronics.

T. SWAPNA RANI is working as Assistant Professor in CMR College of Engineering & Technology