

Smart Document Accessing System Using Raspberry pi

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Abstract— This paper presents Smart document accessing system using raspberry pi. The main mission of making india digital is overall growth in the various services such as electronics, product manufacturing, and to fullfill this requirement it is necessary to have digital Infrastructure as a convenience to Every Citizen. This project develop system using raspberry pi as cloud for storing the necessary documents and The particular documents one can access where they become necessary. This system uses RFID Reader for accessing documents of particular person and it also uses fingerprint sensor for security. Suppose anyone want to open account in bank they just have to just carry a RFID tag .The bankers will scan that card and also check fingerprint and all the necessary documents will get display there without carrying documents physically.

Key Words— Digitalization, raspberry pi, finger print, RFID reader.

I. INTRODUCTION

As everyone know at any government services or office for example bank, RTO office, passport office and there are many other government office where it is necessary to submit our important documents, for example if someone have to generate a account in bank ,it is necessary to submit different documents such as Aadhar card ,PAN card ,address proof and many other documents .

Sometime what happen while carrying all this documents physically with there is possibility of they may get lost ,especially in the rainy season there is more possibility of documents got wet due to rain or sometimes we miss any of the document at home then he/she is unable to complete that particular process at that time and suppose someone carrying their documents as soft copy in pen drives there are also chances of getting lost or sometimes because of virus pen drive is unable to show our documents at that particular time and then only option is to format pen drives and data get lost. and because all this reasons it is impossible to complete our processes within time this becomes time consuming and which is worst thing in today's rapidly moving world. So there is need to have a system which will overcome all these drawbacks of the existing system and reduce the time and make the process easy and reliable. So this system will overcome all these problems, because now it is not necessary to carry all these documents physically. It is possible to access required documents through the cloud where they are necessary that means at any government service or office for example bank, college admission, RTO office, passport .only with the help of RFID card it is possible to access document.

II. BLOCK DIAGRAM

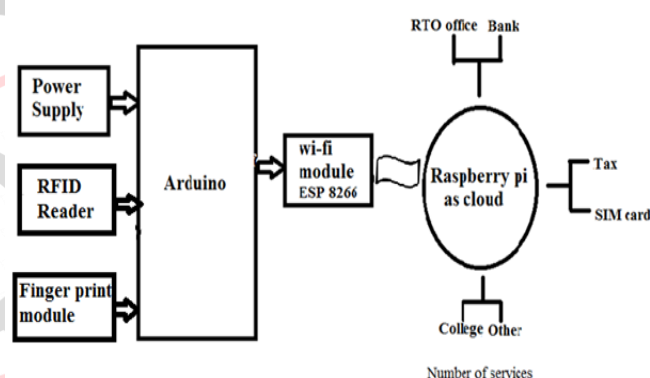


fig .(1).Block Diagram

Block diagram Description:

1.Power supply :-Power is an electronic device that provide electric power to the circuit. This system uses power supply to provide 5V to the circuit.

2.RFID :-This system uses EM-18 RFID reader module which can read 125KHz tags, Since it has in built antenna. It can read tags within in the distance up to 10cm and its operating voltage is 5V.

3.Finger print module:-Finger print module (R305) used to store the fingerprints in the module and can configure in 1:1 or 1:N mode for identifying the person. It has storage capacity up to 256.It's operating voltage is 3.6V-6V.

4.Arduino:- Arduino uno is microcontroller based on Atmega328.Its clock speed is 16 MHz. In this system ATmega 328 provides serial communication. It operating voltage is 5V.

5.Wi-Fi module:- This system uses ESP 8266 wi-fi module to provide full internet connectivity .It has operating range up to 366m.It works only with 3.3V.It is used to provide communication in between Arduino and raspberry pi.

6. Raspberry pi :-Raspberry pi is nothing but computer on small chip it works on raspbian operating system. This system uses raspberry pi by configuring it as a cloud. database is stored on raspberry pi cloud.

III. METHODOLOGY

Step1: Creating database

In this system database is stored on raspberry pi. we assigned unique RFID card to each user whose database is stored and for two stage verification we introduced fingerprint module in which fingerprints of user are stored by assigning them unique id.

Step2: Accessing database

While accessing documents initially scan the RFID card and fingerprint and these unique ids of RFID and fingerprint are passes to Wi-Fi module using serial communication through arduino. Then these ids are transmitted to the raspberry through Wi-Fi . At raspberry pi these incoming ids compared with stored id .If these two ids are matches then documents (database) associated with that particular id will be accessed.

IV. RESULT

Fig.(1) shows the system GUI, there are three options on the screen respectively 1) Registration 2) Admin Login 3) User Login.

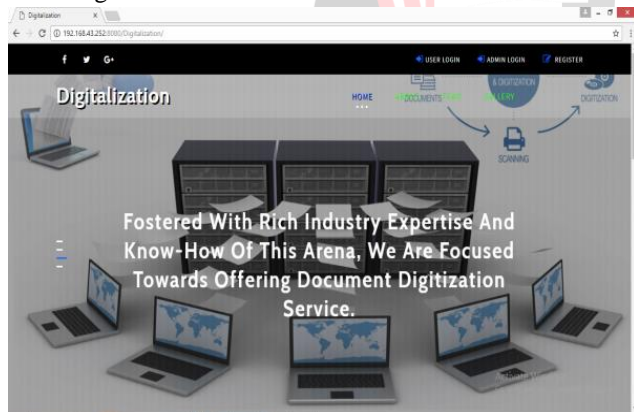


Fig.(1) GUI.

Fig.(2) shows, registration form for the new users. Where users have to insert Username, Password, Mail-id, Mobile No.

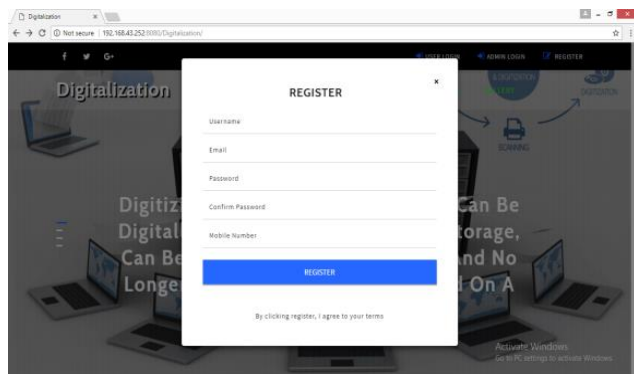


Fig.(2) Registration.

Fig.(3) shows document uploading process, where it is necessary to select document category ,insert document name and choose the document from computer and then upload document. Document should be less than 1 MB.

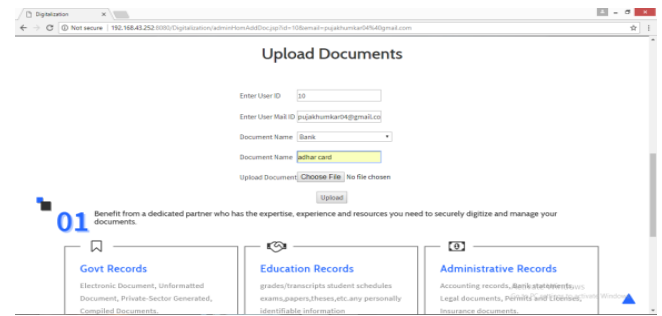


Fig.(3) Uploading documents.

Fig.(4) shows documents accessing process,in which 1st select view document option then select category of documents.

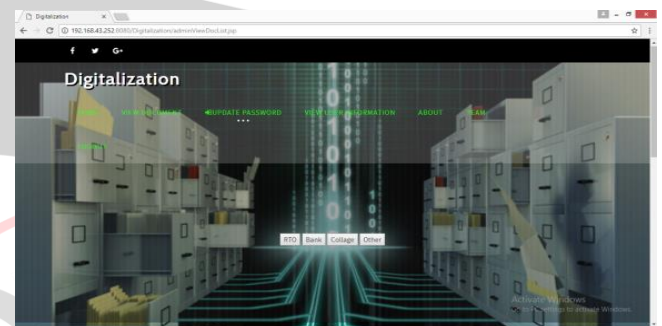


Fig.(4) Accessing documents.

Fig.(5) shows downloading process of documents,for that it is necessary to scan the fingerprint and RFID card then only documents of associated user will display .

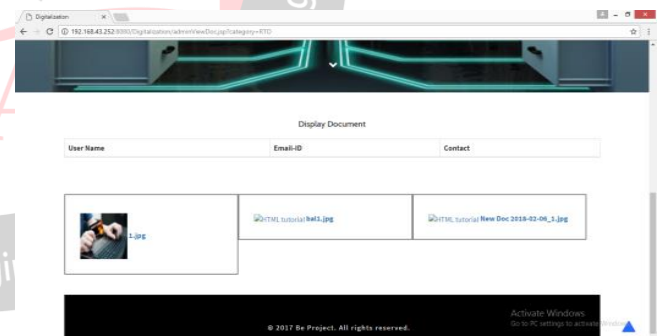


Fig.(5) Downloading documents.

Fig.(6) shows hardware connectivity

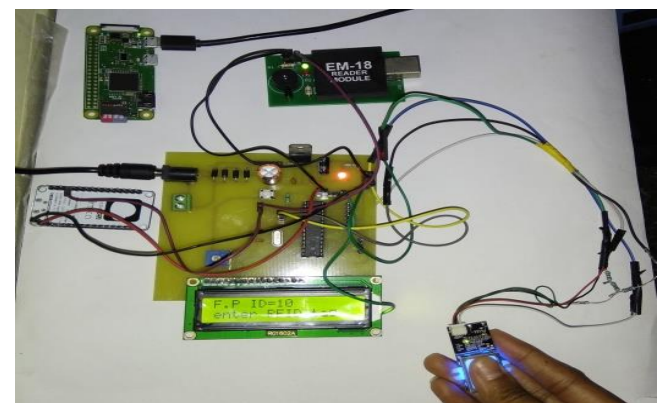


Fig.(6) Hardware Connectivity.

V. CONCLUSION

In existing systems, for storing database there are servers like E-mail, Dropbox etc., The implemented system uses own server created using raspberry-Pi which provides more security. Thus the developed system provides efficient way for accessing documents using raspberry pi as cloud.

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