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FOR VETERINARY HOSPITAL DOCTORS: FINGERPRINT BIOMETRIC ATTENDANCE AND INFORMATION SYSTEM

[1]Mr. Venkateswar Rao,   [2]Mr. B.Sreenu   ,[3]Mr. N.Mahesh

Abstract— **In institutions, corporates and establishments presence of employee to be ensured for to increase productivity. It is necessary to avoid unauthorized person to enter on to the premises. In some areas access of unauthorized person should be well-ordered and watched through an automatic structure of presence. Supervision of individuals is a tough task for the most of the establishments and continuing the attendance documentation is a key reason in public administration. When seeing the veterinary hospitals, taking the attendance of doctors on daily basis and maintaining the records is a major task. Physically taking presence and keeping it for a long time adds to the struggle of this task and more time consuming. An effective system is planned in this work to resolve the problematic of physical attendance. This scheme yields attendance automatically with the aid of a fingerprint recognition system, and all the records are protected for succeeding processes. The planned biometric attendance scheme employs an automatic system to compute attendance of doctors in a veterinary hospital and do further designs of monthly attendance swift in order to reduce humanoid mistakes during controls and also the automatic messaging system to the officials and the close to village farmers. In spirit, the planned system can be engaged in curbing the problems of lateness, stamping and absence in any institution, organization or establishment. The planned system will also improve the productivity of any group.**

Index Terms— **Veterinary, Fingerprint recognition, Truancy, Biometric attendance.**

I. INTRODUCTION

India is farming country. 60 percent of India's people dependent on farming. 14 percent of the gross domestic product is based on farming and allied sector like forestry and fisheries. Basically, Indian economy is extremely based on the farming products. Cattles and livestock play an important role in agriculture. They are used to plough the fields and to transport the crops to the nearby villages. The well-being of the cattle's is important for the farming processes. If cattle are sick, the farmer have to take it to the veterinary hospital, away from his house. In the nonappearance of doctor in veterinary hospital during that time, it is embarrassment for the farmer and cattle. If applying biometric attendance and information system are there, which will make the veterinary doctor prompt. The non-presence of doctor, situation can be evaded and farmers has to wait for a long time can be avoided and late coming of doctor is stopped. Biometric system allows the farmers and the establishments to distinguish about the doctor's arrivals and non-arrivals. They can see about doctor's arrival, since an information is passed to all of the authorities as early as possible when the doctor's fingerprint is accepted. It evades unsolicited portable to the hospital by farmers and their cattle's while the doctors are absent or late. This saves time. Moreover, the doctors will certainly keep up promptness. This paper emphases on the efficiency of the biometrics and the way the people get profited by this system and how it marks the veterinary doctors prompt. Fingerprint authentication is a distinguished and exposed biometrics technique. Due to its exclusivity and uniformity over period, fingerprints are in practice for ID for over a period, more lately fetching automatic due to progressions in computed competences. Fingerprint restoration is standard since the intrinsic comfort of acquisition, the many sources (e.g. ten fingers) offered for gathering, and their recognized use and gatherings by law implementation and migration.

Assistant Professor
Assistant Professor
Assistant Professor
Department of EEE Engineering,
Pallavi Engineering College,

The attendance schemes use paper methods for taking and manipulative attendance. This method needs paper and a stationary. Earlier some works have done for the attendance observing using RFID based systems. The idea of attendance tracking systems using facial recognition techniques have also been proposed requires expensive apparatus still not getting the required ac-curacy. Gunjan Talaviya, Rahul Ramteke and A.K.Shete (2013) done with good analysis on the process of biometric attendance to resolve this problematic issue. In this work, the developed system maintains attendance of doctors and preserving its registers in the institute routinely. This scheme yields attendance with the aid of a finger-print sensor and all the archives are protected on a laptop. Author concluded that proposed system is secure, fast, reliable and an efficient. Face recognition method can also be used for attendance monitoring system. However, it is hard to assess the attendance exactly using each result of face recognition individualistically since the face detection rate is not appropriately high. Yohei kawaguchi, Tetsuo shoji, Weijane lin, Koh kakusho, Michihiko minoh (2003) proposed a method that takings the attendance of students. This work, propose a method that take the attendance using face acknowledgement based on constant scrutiny. Continuous observation improves the performance for the estimation of the attendance. Marijana (2004) done a critical review of the degree to which biometric expertise has supported in governing unlawful admission of wanderers into exact entry over the addition of biometric passport. The problem concerning how the untrue receipt proportion can be restrained in a perimeter control setting was also taken into. The author completes that the glitches supplementary with biometric knowledges such as error rates, deceiving spells, non-uniformity and interoperability can be low-price over an general confidence practice that includes public, expertise and processes. Proposals were haggard on how the safety subjects at the border can be enhanced.

II. PROPOSED SYSTEM

This work is created on the strategy and application of doctor biometric attendance and messaging method by means of fingerprint verification. The planned scheme can be expended to screen, recognize and form the IN and OUT timings of all the doctors in veterinary hospital. The system requires that all the doctors enroll his fingerprint for the ploy to recognize and authenticate if he is a authorized doctor and also to proof everyday continuation and end timings for the doctor for a entire month, before payment of salaries are effected. The primary idea behind this is to avoid a situation where doctor records fake timings in the manual register and yet receiving full payment for the month.

This importantly disturbs output to input ratio of doctor and in serious the veterinary hospital as a complete. This project makes use of GSM technology to send the information to the higher official and to the nearby farmers. It is done in such a way that an effective attendance and information system is possible. The doctor would enter his fingerprint on the fingerprint sensor. It will be automatically monitored by the PC with visual basic software used as far as possible in the development of application software. The application software will be integrated with H.R. Gerber's My Studies application and server. The sms will be sent to all the higher officers and farmer's mobile numbers as "doctor came". If doctor once again record his fingerprint, the PC will open the page for typing a message which is conveyed to all the necessary people by the doctor. This report provides background information and an introduction to the project, a system level design overview and detailed design solution. The subsequent norms remained engaged into thought for real presentation of the project. These conventions include:

a. There is a stipulated time for resumption and end of job
b. Both access and departure doors must be fingerprint based
c. There is a grace time of 20 min for traffic

Consent there is a medicinal testimony, hours wasted by doctor can be calculated during payroll. The bureaucrat can view daily attendance and monthly report for all doctors of the veterinary hospitals.
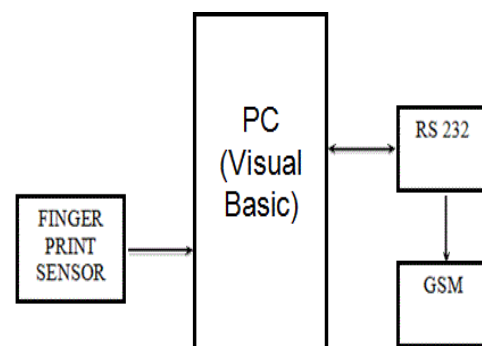

Fig. 1 Proposed Block Diagram

III. DESCRIPTION OF PROPOSED SYSTEM

The proposed system consists of mainly 4 components,

a) Fingerprint sensor
b) Computer (VB software)
c) Rs-232 cable
d) GSM module

A finger print sensor is used to identify whether the doctor is valid or not and to send the details about the doctor to the higher officials and the neighbouring village farmers, if he is valid. A large number of

fingerprint sensors are available in the market which can be used for this purpose of all the sensor, we are using R303A series sensor because this type of sensor is suitable for this proposed system. The fingerprint treating contains two fragments: fingerprint registration and fingerprint matching. When registering, user desires to insert the finger two times. The scheme will route the twice finger pictures, make a pattern of the finger created on treating result and store the template. When matching, employer inserts the finger over optical device and system will produce a pattern of the finger and match it with the patterns of the finger collection. The visual studio software is used for proposed system. The advantage of using this software are,

i.   It is easy to develop application file (.exe)
ii.   It is very user friendly
iii.   Other software use supporting software to develop the .exe file

GSM is a cellular network, which means that mobile phones connect to it by searching for cells in the immediate vicinity. There are five different cell sizes in a GSM network are macro, micro, pico, femto and umbrella cells. The coverage area of each cell varies according to the implementation environment.

Two types of GSM modules are available

I.   SIM 300
II.   SIM 900

SIM 900 is mainly used for transfer of bulk data. The location of the sender can also be known by using this module. But here we are using SIM 300 because we are not sending any bulk data. The size of the data will not be more than 1MB. Only message like 'doctor has came' is to be transferred.

Table 1 Specification of R303A series sensor

Power	DC 4V- 6V	Interface	UART / USB 1.1
Working current	Typical: 100 mA Peak: 150 mA	**Matching Mode**	1:1 and 1: N
Baud rate	(9600*N) bps, N=1～12 (default N=6）	**Character file size**	256 bytes
Image acquiring time	<0.5s	**Template size**	512 bytes
Storage capacity	120/ 375/ 880	**Security level**	5 (1, 2, 3, 4, 5(highest))
FAR	<0.001%	**FRR**	<0.1%

Average searching time	< 0.8s (1:880)	**Window dimension**	18mm*22mm
Working environment	Temp: -10°C- +40°C RH: 40%-85%	**Storage environment**	Temp: -40°C- +85°C RH: <85%
Outline Dimension	Split type		Module: 42*38*7mm Sensor:56*20*21.5mm
	Integral type		54.5*20.6*23.8mm

IV. RESULT AND DISCUSSION

The planned doctor biometric attendance scheme is a scheme that sees the attendance automatically. This scheme was applied by means of Microsoft Visual Basic .Net programming. It includes the interface with the central database which covers all archives of doctors in veterinary hospital and records of monthly attendance. In applying this scheme, some standards are studied. These standards comprise: Merely entitled non-academic staff can enroll and get attendance. No one can take attendance for other. The archives of each attendance booked can be saved and the monthly attendance for all doctor generated and observed. Moreover, in a period of time within which IN and OUT timings can be acquired. The design needs are met over the use of a fingerprint reader which seizures the fingerprint of workers and needed
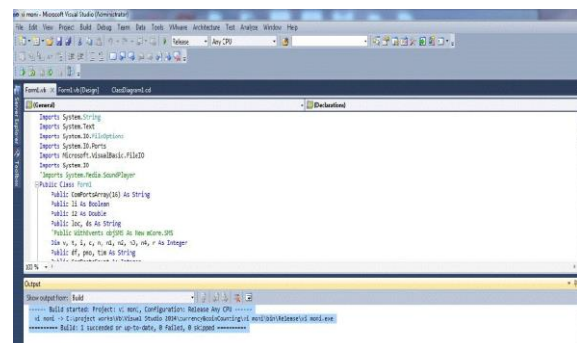
results are attained.

Fig. 2 Snapshot of Result

V. CONCLUSION

The application of an automatic biometric based technique of attendance supervision scheme will support hospitals, institutions or any corporation and

stops time-wasting procedures. Doctor biometric attendance scheme delivers the overseer with calm admission to doctor attendance info and easy watching of monthly attendance. This will advance the output of institutions. The planned scheme is consistent, safe, effectual, and skillful of switching the traditional undependable method of attendance system. This system ensures security of doctor's records; eradicate fake attendance record, saves time as well as reducing the amount of work done by the administrator in gathering doctor attendance records. The proposed system can be improved through the integration of multimodal biometric technologies to provide more security for the doctor attendance management and Messaging system

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