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Smart Card Based Online Complaint Registration

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Abstract: The paper presents an idea to implement an online complaint registration through smart card. People go to Government offices to file complaints about their needs. For a common man, this process is a tedious one and also they should undergo lot of paper works to commence their needs .In order to overcome this, a web solution can be used to file the complaints using smartcard, by which we can track the complaint status through internet. The status of the complaint will be sent to the registered mobile number. Based on the duration of the complaint, the message will be forwarded to the higher officials, if the complaint is not addressed in the timeline provided for that particular category. By this web solution, the status of the complaint can be tracked and will result in smooth processing of the request. Since the complaint is made online, there is no chance for bribe and the processing time is much faster than usual.

Keywords: Smartcard, Online complaint, Web solution, Tracking system.

I. INTRODUCTION

In Recent years, online complaint system is a set of procedures used in Government organizations to address complaints and resolve disputes [5], [15]. Online complaint systems in India has undergone several innovations especially, since about early days with the advent of extensive workplace regulation information provided by Government officials on a typical complaint is not sufficient for the citizen[10],[11], to have a clear idea on progress of the complaint.

There is also a major need to collect, review and understand the nature of conflict management and complaint systems around the government organization [3]. Studies and citations are needed about how complaint systems work for petitioner. Research is needed as to how systems work for many different department of government organization [9], for people of different educators, in every state. This can be improved by providing through online [6]. Everywhere internet is used even our Prime Minister Narendra Modi has announced the Digital India scheme, which encourages the citizens of India to work online. Every complaint must have the record until the solution is revealed. So a new effort is being made to record the complaint and to monitor its status in digital manner through online [8].

By this solution, the status update of the complaint can be known through the internet [3]. A number of artificial Intelligence technologies are helpful in complaint resolution process, understanding the attitudes of involved parties and reasoning about them, in particular, based on Belief–desire–intention model.

This web solution is created using asp.net, through RF tag, Smartcard & GSM to support the completion of the system .Message will be sent to the registered mobile number, giving the status update of the complaint raised. GSM is used to send the message to the register mobile number [14] and RF tag for the unique identification of the smart card [1], [2].

II. LITERATURE REVIEW

In existing system people must visit government office for any kind of problem. The users can petitoin their problems in government office but cannot get solution for their problems[6] i.e(the user couldn't monitor the petition). This system doesn't have the proper monitorisation of the petitioner and is not user friendly.In this paper the complaints has been monitoring [4],[5] and tracking of the status of the complaint[3]. The online petition filling website is (onlinegdp.tn.nic.in) this also does not monitor or track the complaint status of the system.

III. SYSTEM DESIGN

This online complaint system is divided into two parts - Hardware & Software. The hardware unit has Power Supply, RFID and GSM etc. The software unit is done using ASP.NET.

3.1 Hardware Setup

3.1.1radio-Frequency Identification (RFID)

Radio-Frequency Identification (RFID) is the use of a wireless non-contact system that uses radio-frequency electromagnetic field to transfer data from a tag attached to an

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object [2], for the purposes of automatic identification and tracking. Some tags require no battery and are powered and read at short ranges via magnetic fields (electromagnetic induction). Others use a local power source and emit radio waves (electromagnetic radiation at radio frequencies). The tag contains electronically stored information which may be read from up to several meters away. Unlike a bar code, the tag does not need to be within line of sight of the reader and may be embedded in the tracked object [1].

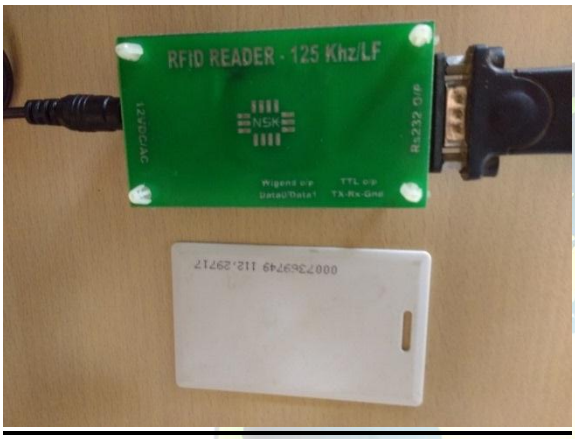

Fig.1 Radio Frequency Identification Device

RFID tags are used in many industries. An RFID tag attached to an automobile during production can be used to track its progress through the assembly line. Pharmaceuticals can be tracked through warehouses. Livestock and pets may have tags injected, allowing positive identification of the animal. Since RFID tags can be attached to clothing, possessions, or even implanted within people, the possibility of reading personally-linked information without consent has raised privacy concerns.

3.1.2 GSM Modem SIM 300

It is vastly used because of its simplicity in both transmitter and receiver design, can operate at 900 or 1800MHZ band, faster, more reliable and globally network. Here the system is capable of controlling the devices by receiving control messages from an authorized mobile number[14].GSM is the most popular mobile phone system in the world which could be used for this controlling operation from anywhere else[12],[13].

GSM – Global System for Mobile Communication is used as a media which is used to control and monitor the industrial equipment's from anywhere by sending a messages [12]. It has its own deterministic character. Thereby, GSM is used to monitor [4] and control the DC motor, Stepper motor, Temperature sensor and Solid State Relay by sending a message through GSM modem [13]. Hence no need to waste time by manual operation and transportation.

Hence it is considered as highly efficient communication through the mobile which will be useful in industrial controls, automobiles, and appliances which would be controlled from anywhere else [6], [7]. It is also highly economic and less expensive; hence GSM is preferred most for this mode of controlling. GSM module is shown in below fig 2.

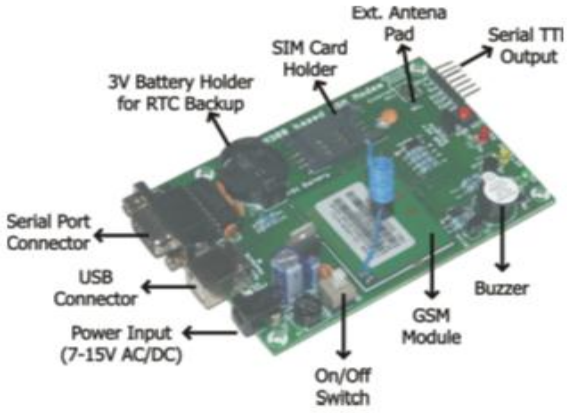

Fig.2 GSM modem SIM 300

3.2 Design Flow

The RFID tag is used to scan the user id and take the petitioner to the complaint website to solve his solution. The GSM is used to track the complaint registered by the Petitioner [11]. The general flow diagram is shown in below fig.3.

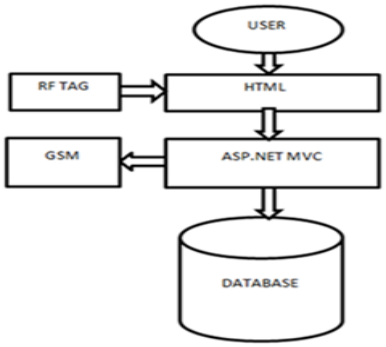

Fig.3 Flow diagram of online complaint registers tracking system with RFID smartcard.

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Part I: USER LOGIN

The user has to register through smart card. After doing registration the unique identification code is automatically verified by the system.

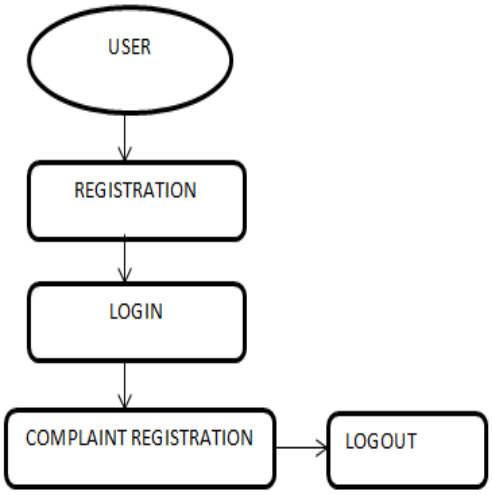

Fig.4 User login

After verifying the smartcard it provides ID to the user with help of this, he is permitted to enter into the system [3].

Part II: GOVERNMENT OFFICER-LOGIN

Government officer have to login in the system, then there are two sections for the officer to work.

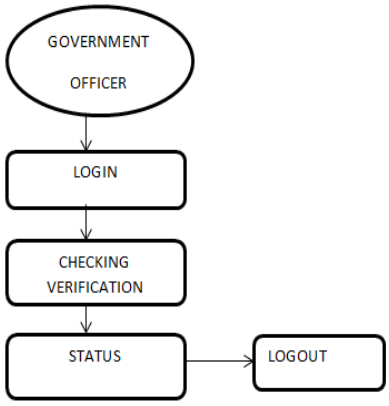

Fig.5 Government officer - login

One is to check whether the given ID [3],[9] is attached properly and conformation message is sent to the user and then the given complaints have been processed. The figure is shown in above fig. 5.

IV. SOFTWARE SETUP

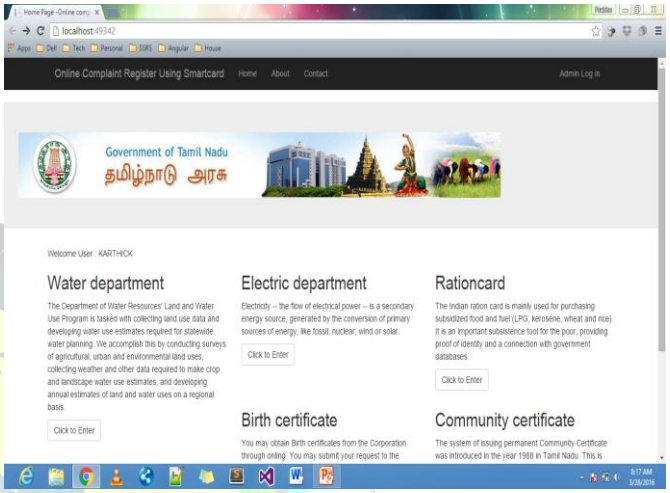

Fig.6 Home page

Web applications have revolutionized the way business is conducted. These application enable organizations to share and access information from anywhere, anytime. This has majorly moved the focus of applications to web applications. Today, one of the most popular server-side technologies used for developing web application is ASP.NET [10]. It is a server-side technology that enables programmers to create dynamic web applications. It has a number of advanced features such as simplicity, security & scalability, which help us in developing robust web applications. These advanced features of ASP.NET are based on .NET framework [9]. The basic login page of the website is shown in fig.7. We can see the easy available user interface with this web design [15].

V. CONCLUSION

Application software meets the information requirements specified to a great extent. The system has been designed by keeping in mind in that it serves for both present and future requirements and made very flexible. The goals that are achieved by the software are unique instant access , Optimum utilization of resources , Efficient management of records , Simplification of the operations , Less processing time and getting required information , User friendly , Portable and flexible for further Enhancement. The document can be uploaded from the internal storage when it is necessary to file a complaint. The below fig .7 shows the status in registered mobile number.

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Fig.7 Status through registered mobile number

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