Information Gathering with E-Governance Websites

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Abstract - In today's era of Digital Revolution, for easy access and management of services offered by various organizations internet plays a major role. A lot of services are offered with context to Education, Real Estate, Municipal Corporation, Electricity Department, Vehicle Registration, Government issued ID Proofs and more, and are made accessible via the internet through websites or the mobile application services. The database of such websites holds crucial and personal information about a lot users using its services. So proper implementation and security is very much important.

But what if improper implementation or lack of security measures creates a door to exploit user's information? This paper spreads light on a web application that started its journey towards e-governance but lacks proper security and is threat to citizen's personal data.

Keywords – E - Governance, RTO, Regional Transport Office, ICT.

I. INTRODUCTION

In order to spread information and increase data visibility, websites play an important role and have evolved to a media of mass communication. Almost every organization own a website now days. Electronic governance is considered as a medium for delivering government services, exchange of information, communication transactions, government to customer services and more. The use of e governance is aggressively spreading and is achieved through information and communication technologies, as a result the development of e governance took place. The main purpose of governance is that services should be available and should fulfill the requirements of citizens effectively and efficiently. We know that the government service in the offices are restricted with time, only in office hours the work can be done but with the help of the e-government services the barrier of time is removed as the services online are available 365 days 24*7. [1][2][3]

II. E - GOVERNANCE IN REGIONAL TRANSPORT OFFICE

In a country with a huge population like India, transportation is an important factor to be taken care of. With the rise in population a rise in number of vehicles is also obvious as for daily commutes people need transport. The registration of all vehicles like cars, buses, trucks, bike and others are taken care by the Regional Transport Office (RTO) which comes under the Ministry of Road Transport and Highway. The registration process is divided on the basis of different states. Every vehicle is registered and is allotted a unique registration number starting with the code representing the state and then a number representing the district. This registration number is used for maintaining all records which includes the owner details like name of owner, address of owner etc. as well as the vehicle details like the Engine number, Fuel Type, Color etc.

The tasks to be performed by the Regional Transport Office is not only registration of vehicle but also it has a lot more tasks to take care.

Some of the operations which are to be carried out by RTO are:

- Registration of motor vehicles.
- Issuing the Certificate of fitness to vehicles.
- Issuing Learner's License.
- Issuing Driving License.
- Recording and Maintaining Tax records of vehicles...

To achieve the above tasks people, need to visit the RTO offices situated in their City. A large number of people visit the offices to their task done, which often lead to chaos and became a time consuming process. To overcome this problem various states started using websites by implementing ICT to enable users to perform the tasks online. Such websites offered various online services like applying for License online, checking of various Payment Receipts online, Searching for vehicle registration details and more.

Examples of some the websites are mentioned below:

STATE	WEBSITE
Madhya Pradesh	http://mptransport.org/
Maharashtra	https://transport.maharashtra.gov.in/
Haryana	https://haryanatransport.gov.in/
Gujrat	http://rtogujrat.gov.in

III. PROBLEM / ISSUES FOUND IN WEBSITE

The website which belongs to state Madhya Pradesh and is responsible for management of governance services is "www.mptransport.org".

I analyzed this website and found that, this website holds record of every transport related services including the Driving License and vehicle registration department of Madhya Pradesh.

On this website there is a section specifically maintained for the license appointment system and to provide user with their license details. So for a user to search his license online, the website provides an option to enter Name and Date of Birth and as an output it returns the Driving License of the person whose details are given without verifying the identity of the person searching for it.

The search output includes the following information:

- Unique License Number
- Name
- Name of Father / Husband
- Address
- Photo

- Blood Group

License Number can be further used to modify the data of the applicant and also to obtain other details like the email address, mobile number and more.

Apart from this, the website also promotes a section specifically related to vehicle registration details, where user gets an option to search for a vehicles registration details. By entering the registration number of any vehicle registered within Madhya Pradesh State, anyone can obtain the details about the vehicle like:

- Owner's Name
- Owner's father Name
- Address
- City
- Year of Manufacture
- Registration Date
- Engine Number
- Chassis Number\
- Previous Owner details and more.

The website also allows the user to apply filters on the search criteria as follows:

CRITERIA	OUTPUT
Start with	All matches with initial chars of input value.
Anywhere	All matches with occurrence of all chars in input value.
End With	All matches with ending(last) chars of input value.

These filters enable the user to find details about anyone owning a vehicle even without knowing the proper registration number of vehicle.

IV. RISK FACTORS

With the help of this website it is easy to perform reconnaissance and gain information about a person.

There are various attacks possible which includes:

Data Breach: Data Breach means release of important information knowingly or unknowingly. So as this website is unsecure and also provides easy access to information the data on the website can be breached easily and all the personal information of users will be disclosed publicly.

Identity Theft: It refers to the fraudulent practice of using another person's name and personal information. So any user can access the Learning License on anyone and can replace the photo in it and can use his name and other details.

Threat to Privacy/ Social Engineering: As this website provides almost all the information about a person who owns a vehicle or a license, there is a threat of their personal information being leaked and used by various other people like the scammers who also use different social engineering techniques to perform fraudulent activities. It will be very easy for anyone to use the information on the site negatively.

Example: Anyone can randomly access anyone's license record and obtain the mobile number from there and can call them and pose as a Regional Transport Official and can gain more personal information of the person.

V. PROPOSED SOLUTION

For License Appointment / Access: While applying for the license the user should be asked for a sign up using mobile number and email id verified with an OTP and then user should be granted access to an account belonging to him / her. By doing so the access will be limited to the authorized user only.
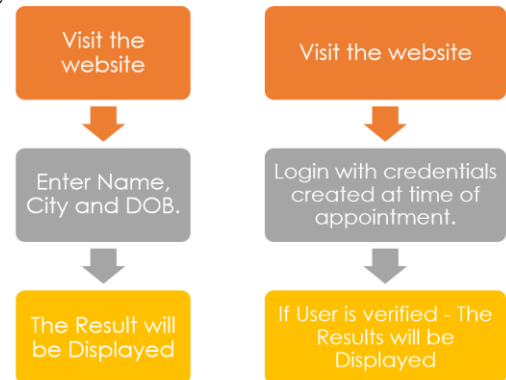

Figure 1
Current System

Figure 1.1
Proposed System

For Vehicle Registration Details: To limit the access to authorized users only. The authorities should be provided a separate login from their ID card numbers. Their unique employee code or ID card number can be considered as a username and passwords can be provided to them. Taking unique employee code as a username will enable the administrator to grant and revoke access to the database.

The citizen should be able to only access the basic details like the Owner's name, Vehicle Model, Color when searching details of registration number, this is because only name and vehicles basic details can be used to verify the possibility of remembering a number in cases like hit and run or an accident case. For implementing this the search criteria and other output fields should be removed.
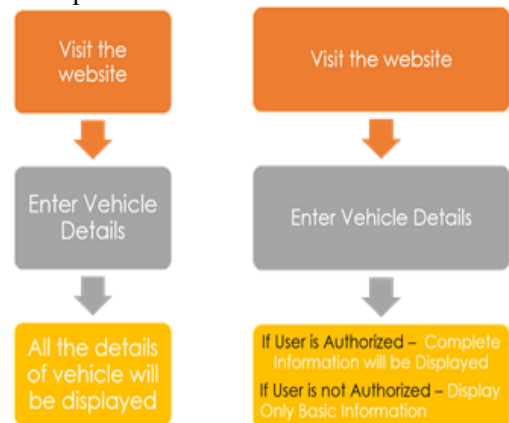

Figure 2
Current System

Figure 2.1
Proposed System

VI. REFERENCES

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