Unique ID Management

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Abstract— The Unique ID system provides unique identification numbers to Indian residents. UID Number which would not just help the government to track down individuals, but would make life far easier for citizens as they would not have to submit multiple documents each time they want to avail a new public, private and government service. This system will contain personal details like name, sex, address, marital status, photo, identification mark and fingerprint biometric. The unique identification number will be in the formed of 12 digit alphanumeric number to provide more security. UID system helps to manage persons needs in his/her life span by using a single UID i.e. the number is used as Driving license number, Voter ID card number, registration number in any organization, bank account number, personal or professional details. This system will create government jobs for computer sector in the development, implementation and maintenance of the UID system.

Keywords—Unique Identification Numbers, UID, E-Government, UIDM, UIDAI

1. INTRODUCTION

This system is to provide a unique ID to each and every citizen of India while providing him/her a birth certificate. Citizens after attaining age of 18 must register at RTO office or Collector office or Thasildar office and get a password to access the site. ID card will be provided to every user after registration. Later on they can change their password. Once they enter the site they can pay their electricity bill and telephone bill, book railway tickets and airline tickets and pay their taxes. During elections people can poll online. Government officials can verify details about a person from the database for issuing vehicle license, passport, visa, etc.

Unique Identification Authority of India (UIDAI):

The UIDAI is the government project and name for the project is “AADHAAR” means “support”.

Unique Identification Management (UIDM):

The UIDM that creates unique identification number to particular citizen of state/country.

2. UIDAI

UIDAI is expected to provide a link across diverse identities as a citizen, so that once one has it, the Govt. needs nothing more from one because it can find the links on its own. AADHAAR signifies ‘foundation’ or ‘support’ and communicates the fundamental role of UID initiative and its impact.

2.1 Applications of UIDAI

AADHAAR assurance of uniqueness and centralized online identity verification would be the basis of building multiple services and applications —

- It can substitute all other identification issues including illegal migration, in banking and financial transactions, fraud, health related matters, in education sector, welfare sector, in the election process, monitoring efficient law and order.
- It is easy to count country's population without any mistakes and take a action to control population which gradually increase in excess amount.
- It will provide support in providing proper identification to the individuals and this UID will be linked with a person's Passport Number, Driving License, PAN card, Bank Accounts, Voter ID etc. and all this information will be checked through a database.

2.2 Risks in implementation of UIDAI

Risks that arise from this centralisation include possible errors in the collection of information, recording of inaccurate data, corruption of data from anonymous sources, and unauthorised access to or disclosure of personal information.

The centralised nature of data collection also heightens the risk of misuse of personal information and therefore potentially violates privacy rights. The creation of a centralised database of personal information, it is imperative that such a programme not be established without the proper
mechanisms to ensure the security of each individual’s privacy rights.
As we considered for India, the population of India is more than 5 million, so network traffic have to be controlled but is it very tedious task. Also we have to increase the bandwidth spectrum and connectivity.

3. UIDM
The UIDM system is to develop unique identification number to particular citizen of country. As well as management of perspective data, information of that citizen. Secondary goal is that we provide some feature in this project which are try to help people to achieve/reduces their stress of normal life. Basically, The UIDM system which is handled by moderator, according to recent work the “Aadhaar” system which is developed for providing unique-id. This system not provides different feature. This system can be accessed by the citizen, and different people related to governmental activity, so we try to achieve simple interface, and user friendly system.

3.1 Design and Architecture
We describe the Algorithm, which is used to explain how the system is going to work, i.e. the process logic behind it, the flowchart, which represents the pictorial representation of the process logic and finally the Data Flow Diagram (Context Level) of the UIDM system.

3.1.1 Algorithm:
Security mechanism in UID project - if there is no physical Identity card or electronic smart card, then how will UID system validate its citizens. For implementing this, two different processes have to followed, the first one being the recording process and the second one - the authentication process.

Recording Process:
In the first process, the UIDM builds up a centralized database consisting of UID, biometric record and various other details of the person. The UIDM allocates a unique 12 digit alpha numeric number (UID) which is randomly generated by the main computer to every citizen. Then a biometric data record is made by scanning the 10 fingerprints of a person. This biometric data is tagged to the person’s unique 12 digit number (UID). The UID tagged to the biometric record of a citizen is later used in the authentication process.

Authentication Process:
In the second process, whenever a person has be identified whether he/she is a genuine one, a fresh biometric scan is made and then the scanned image is sent to the centralized server. The server takes the fresh scanned biometric image as an input and compares it with all the already stored biometric records in the database. If a relevant match found is found, then the person is designated to be a genuine citizen.

3.1.2 Flow chart:
The diagram as shown below gives some basic description regarding the flow of the system. It will not show the operations performed in detail but just access the operation and where it goes after the operation has been performed.

3.1.3 Data Flow Diagram:
3.2 Advantages

Manage all the details related to the Bank account, Driving License, Vehicle registration, Voter ID card, Medical records, education and profession, passport, PAN card in one database.

A single unique number is used therefore decreasing manual labour and increasing efficiency as every detail is available on the single click and reducing the efforts in maintaining different ID databases. The UID will reduce the duplication, an attempt to make fake documents.

The purpose of this UID system is to provide one unique number to all the citizens to increase the security and verification process by introducing the Biometric authentication technology, and thus identifying illegal immigrants and terrorists.

Along with UID various facility provided in the system, like pay their electricity bill and telephone bill, book railway tickets and airline tickets and pay their taxes. During elections people can poll online. If a person commits crime, his/her details will be added to the crime database. This will be useful for embassy, employment exchange and CBI officials.

3.3 Disadvantages

The disadvantage of this system is that the network has to be very quick and crash free which is not possible. As at a time there will be many citizens who will be working on the system.

Security is the biggest task in this system as each and every possible security measures will have to be taken.

4. Biometrics

Electronic scanning and matching technologies are not 100 percent error-free. Since biometrics is not an exact science, the problem is not only is the underlying data flawed, even the biometric technologies have some error rates. At the time of purchasing biometric scanning equipments, it is important to include a clause mentioning the calibration requirements.

While biometric data in digital format is the norm for modern day authentication process, choosing the right type of scanning device is more important. While fingerprinting is the most straightforward biometric available in market. The erosion of fingerprints of people who are involved in heavy physical labour being affected over a period of time is one such challenge.

5. Implementation of UIDM System

The system will be having only one User-name and Password section on the front page, as per the user-name and password the system will know whether user is Citizen/Moderator/Administrator/Security official.

5.1 Scenario of UIDM

Scenario 1: Citizen

Citizen will enter the user-name and password. The Citizen will be guided to its homepage where he/she would be able to view their profile and avail facilities like Booking Railway/Airline Tickets, Payment of Electricity/Phone bills. Citizen will also be able to vote at the time of election. He/She will be provided with discussion forum and help section.

Scenario 2: Government Security officials

The security officials will be able to do the same operations as the regular citizens are able to do. Some security officials with special rights given to them at the time of generating the Unique-ID will be able to see citizens details as in if they want to monitor someone movements or for any security purpose.

Scenario 3: Moderator

Moderator is the person who has been given rights by the Administrator to look at the whole system and maintain it. They are the one who will appoint other clerks below them. They themselves will be having there Unique-ID and can perform all the regular operations as normal Citizen does. If there are some technical faults then its there duty to look after the fault and fix it.

Scenario 4: Administrator

Administrator is the head of all the system and looks after the whole system sitting at the top of the tree of Unique-ID System. He will appoint Moderators and give them the rights for changes.

5.2 Student Unique-ID

As a student crosses age of 18yrs the Unique ID will get transferred from the student database to citizen database and the student will have to authenticate himself/herself on the website and start availing the facilities.

What if Unique ID is Lost?:

If the UID is lost of any citizen or student he/she will have to go to the centre and pay the fine and provide their details so that the moderator can search and check the details again and issue the existing UID.
What if any change in UID?:

If there are any changes in the details then the changes can be done at the centres, provided the person will have to go to the centre, prove his/her identities and ask for the changes to be done.

6. COMPARISON BETWEEN THE UIDM SYSTEM AND UIDAI SYSTEM

The system implemented by the government as if for now doesn’t allow the id to be used for Paying bills and booking tickets. It even doesn’t allow to vote on the basis of the Id provided, still one needs voter Id card to vote. It cannot be used for getting a sim card or in any banking sector. All the Facilities will be provided only after a large section of population gets Unique-id and at the rate at which the Government are working it will take many years to give Unique-id to each and every citizen.

According to unique-id system of government any Citizen of Indian nationality can have a Unique-id and every child from 5 to 15 years will need to have retinal scan done at some interval of time as they are bound to change between this 10 years time. The child details will be in accordance with parents/Guardians and only after 18 years he/she will have the Unique-Id.

This task seems to be fast in a way that at a time the child will also have the Unique-id along with parents and then will get their own at the age of 18 but the task is to tedious as every time the citizen will have to bring the child for retinal scan and then again for fingerprints. In order to make the things easy we will give the Ids to the students when they will be in 11th where they will have chosen theirs field and also the average age will be above 15 so no need for repeated retinal scan. The students will be provided with their Unique-id at the time of registration in school but their Ids will be blocked till they turn 18. In this way a time will come when every new batch will have their Unique-id ready.

The children between the age of 5 to 15 despite of having their details attached with the parents will have their own id from school and other institutions so there is no point in providing them the Ids or getting their details.

8. TESTING OF UIDM

We analyze the performance of UIDM system with respective to following testing phases.

1. The basic process of UID follows as if the user is already registered with UID system, then he/she simply enters his/her UID No. & logins to view his/her account details. The user is restricted to Update/delete or create any account.

2. If the user is new to UID system, he/she has to first fill the key form manually regarding all the information of his/her respective different fields and submit it to registrar to be at a later stage. This stage is an internal process and will not be shown anywhere in the Interface.

3. After the verification by the online registration the data form is given to the admin. Admin generates or allotts a UID no for the user who register validate and acknowledges.

4. a) The Admin has its own registration no., and a password so that no other person can access it (for security reasons) b) Admin has a database of its own so as to store his/her details as well. c) After login the Admin has four options: Create View, Delete, and Update.

5. Creation step: In creating account the UID allotted is entered details are added and submitted to the database with the help of a submit button in the interface.

6. Update/Delete step: In updating account the UID allotted is entered details are updated/deleted and submitted to the database with the help of an Ok/Delete button in the interface along with an acknowledgement.

7. The user account, say after creation/updating/deletion is acknowledged and the user is made aware of it.

8. The format of the UID number or the UID is generated on a pattern which looks like this: Country, State, District, Region.

9. The Internal process of this is that the user details are fetched from a database with UID No. acting as a primary key in all respective table as an attribute and also act as a foreign key in other table

CONCLUSIONS

Unique Identification System will be beneficiary to the citizens as it is a unique number which contains basic information of every person. After the ID will be issued there is no need to carry driving license, voter cards, pan card, etc. for any government or private work. For example, for opening a new account one has to show his/her Unique ID only. But to some extent it is harmful to the general public as all the data related to them is stored on computers and can be misused by hackers if the multiple security strategies will not be adopted. Causal Productions has used its best efforts to ensure that the templates have the same appearance.

The role of this system envisions is to issue a unique identification number (UID) that can be verified and authenticated in an online, cost-effective manner, and that is robust enough to eliminate duplicate and fake identities.
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REFERENCES

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