RV College of Engineering®, Bengaluru – 59
Department of Computer Science and Engineering
Database Design Laboratory (18CS53)

Synopsis

TITLE: RTO Management System		
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1. Introduction

The Regional Transport Office (RTO) is a government organisation responsible for issuing learner's licenses, driving licenses, registration of vehicles, maintaining databases of vehicles. It has been observed since years that the RTO is not able to deliver quality public services to the citizens without delay. That is, it has been a difficult job for citizens to get a driving license and to register their vehicles. Hence, we aim to develop a computerised system for the functioning of RTO. This system will reduce the manpower required in the RTO and make the existing system fast and efficient.

2. Existing System

Currently, we see people waiting in long queues at RTO offices to avail RTO services such as vehicle registration, applying for learner's license, driving license, etc. The process of availing these services is a tedious one, with a limited number of counters that cater to the requests of customers. In order to avoid the tedious process, people tend to avail RTO services through middlemen, such as agents, who charge an extra amount. Hence, there is a need for digitalizing the process and making it hassle-free.

3. Proposed System

The proposed system intends to provide quality services to the citizens by reducing the delay in services provided by the RTO through computerisation of the system. People can easily apply for licenses, register their vehicles and lodge complaints regarding their issues by providing only their Aadhar number and personal details. Upon applying for a license, the portal generates a date slot for the test. Furthermore, people can easily check the status of their application through the portal and download an e-copy of the approved license. The portal also lets RTO officials verify and approve applications.

4. Relational Database Structure

Since structured data is stored in a relational database, we have identified the following entities that will be stored in a relational database:

- Citizen
- RTO Office
- RTO Inspector
- Vehicle Registration Application
- LLR Application
- DL Application
- Issued License

The entities mentioned above are connected to each other by some kind of relations, that can be represented by a Entity-Relationship diagram (ER diagram).

5. RDBMS and NoSQL Integration

NoSQL databases are non-tabular, and store data differently than relational tables. Hence, we use NoSQL database to collect feedback and complaints from citizens regarding the RTO services. Semantic transformation and SQL parsing are two methods that can be adopted to integrate RDBMS and NoSQL.

6. Societal Concern

There is a need for digitising the process of availing services of RTO in order to maintain transparency and avoid interference of middlemen such as RTO agents. People can conveniently avail these services at their fingertips. Checking the status of applications is much easier and can be done remotely. Also, it provides a means for lodging complaints and giving valuable feedback to the RTO. Further, considering the current pandemic situation, digitalising of RTO services will play a huge role in minimising the number of people visiting RTO offices, thereby promoting social distancing. Hence the application serves the purpose of saving valuable time, as well as prioritising safety of people at the same time.