

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

Requirement specification

TITLE: RTO Management System		
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1. Hardware Specification

- Processor: Intel Core i3-4005U CPU@ 1.70GHz or above
- Memory (RAM): 4 GB or more
- Disk space: Minimum 2 GB of free disk space

2. Software Specification

- Operating Systems: Windows 8, Ubuntu 15.04, MacOS X 10.10 or above
- RDBMS: MariaDB through XAMPP
- NoSQL Database: MongoDB
- Server scripting: PHP
- Frontend: HTML, CSS and Javascript
- Web Browser: Google Chrome, Mozilla Firefox or Microsoft Internet Explorer

3. Functional Requirements

- **Authorisation:**

The application provides different authorisation for citizens and RTO inspectors. Citizens shall register by providing their Aadhar number and other details. Citizens shall login using Aadhar number and password. RTO inspectors shall login using their username and password. Authorisation shall be carried out using the relational database.

- **Applying for Vehicle Registration:**

Citizens shall apply for registration of newly purchased vehicles by providing the necessary details such as company, model and category of vehicle. On furnishing the details, a slot for verification of documents shall be generated by the application. The location for document verification shall be decided based on the location of the citizen. A list of documents to be produced for verification shall be displayed along with date and venue. The application shall be reviewed by a RTO inspector pertaining to the corresponding RTO office. The inspector shall approve the application after inspection.

- **Applying for Learner's License (LLR):**

Citizens seeking a driver's license should apply for a learner's license first. Citizens above the age of 18 years are eligible for applying for a learner's license. The application shall not allow citizens under the age of 18 years to apply for learner's license. Citizens shall choose the desired category of vehicle for learner's license. The application shall generate a test ID, password, date and venue for taking the LLR test. If the applicant fails the LLR test, his application shall be rejected and the applicant has to re-apply for the LLR.

- **Applying for Driving License:**

Citizens seeking a driver's license should have obtained an LLR. Citizens shall apply for a driver's license after a period of one month from the date of issue of LLR and before a period of six months from the date of issue of LLR. The application shall deny citizens to apply for a DL before one month from the date of issue of LLR. The application shall ask the applicant to re-apply for a LLR if more than six months are completed from the date of issue of LLR. The application shall check for a match of category of vehicle for which applicant tries to apply for a DL. On successful match, the application shall generate a date and venue for the test.

- **Application status check:**

The application shall allow citizens to check the status of their applications (Vehicle registration, LLR and DL). In case of licenses, if the application is approved, citizens shall be able to download an e-copy of their licenses.

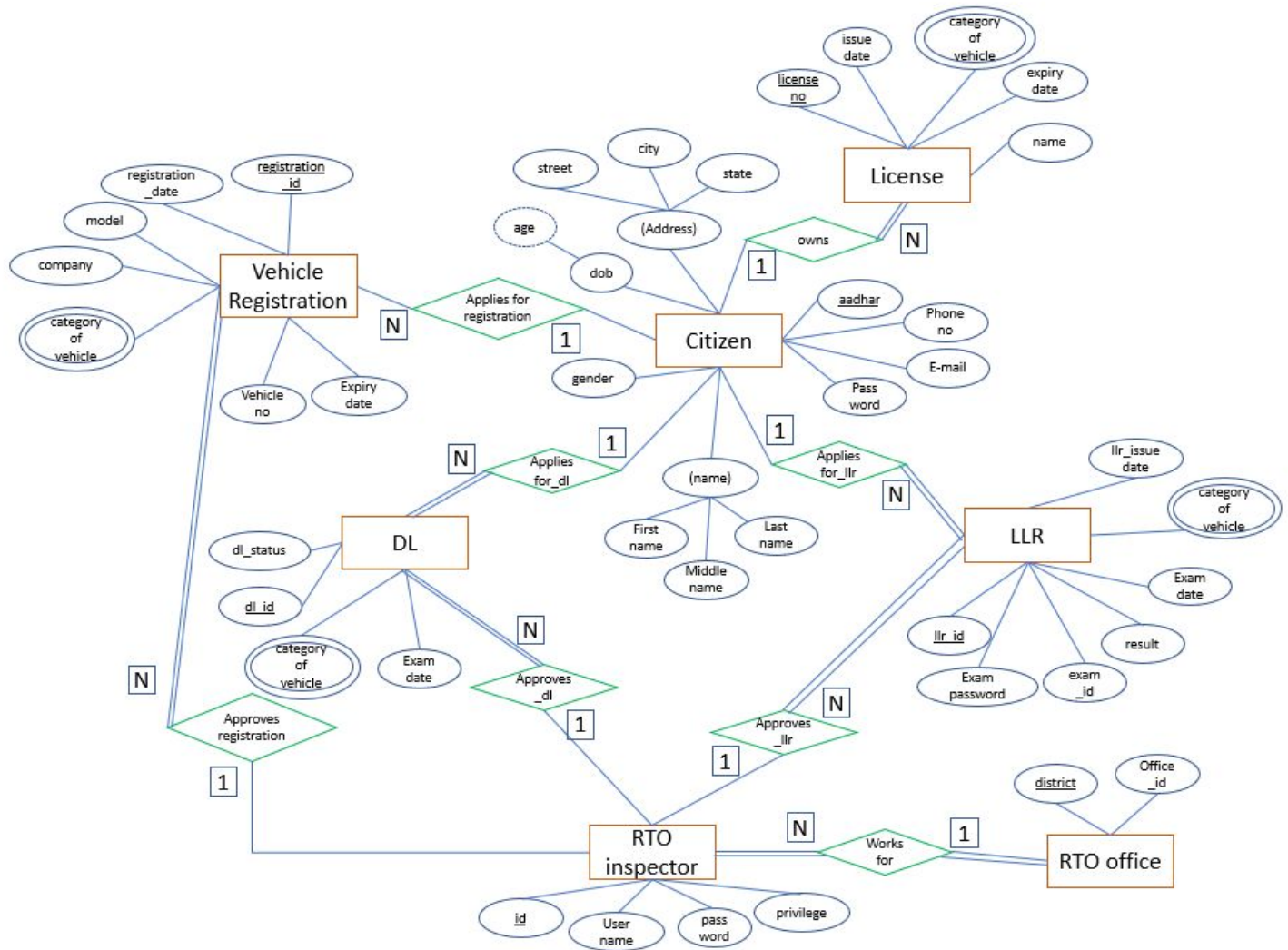
- **Complaint lodging:**

Citizens shall be able to register their complaints and describe their issues. The database administrator shall be able to respond to citizen complaints through email. The process of complaint submission shall be implemented using NoSQL database.

- **Role of RTO Administrator:**

The RTO Administrator shall have the privilege to add or remove RTO inspectors. The RTO Administrator shall also have access to the database of license holders and registered vehicles. One month prior to the expiry date of registered vehicles and licenses, he shall alert the concerned citizens through an e-mail. The RTO Administrator shall be responsible for addressing the complaints lodged by citizens.

ER Diagram



Assumptions:

- Citizens can apply for multiple categories of vehicles in a single application for LLR and DL.
- Citizens can also apply for different categories of vehicles in different applications for LLR and DL.
- If an LLR application is rejected, citizens have to re-apply. Hence multiple

applications of a single citizen can be present in the database.

- RTO inspectors have a certain privilege. Hence inspectors having the privilege of approving vehicle registrations will only approve vehicle registrations and not LLR or DL, and the same for LLR and DL.