CS315 Project: Traffic Management System

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1 Project Description

In this project, we have implemented the **Traffic Management System** through a web-application. In this regard, firstly, there are three levels of authorisation while signing in: **Citizen**, **Police** and **RTO**.
On the **citizen** page, he/she can view his personal information, all his offences(if any) and their payment status. The citizen can also see all the traffic lights in his/her area on the map. He/She can also report any accidents through the app.

The **police** can verify a citizen's license, and in the process can also access all his previous offences with/without pending payments. He/She can also see his colleagues posted at other traffic signals around that area. The police also has access to all the recent accidents happened in the neighbourhood.

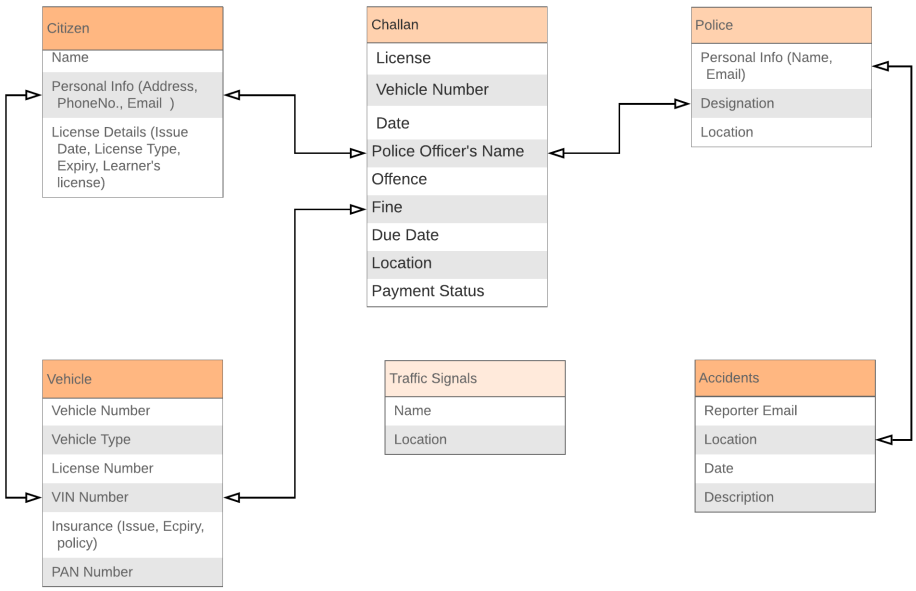
New Citizen registration happens at the **RTO** level, where the candidate is granted a license number. RTO has access to all the maps showing all the traffic lights, traffic policemen and recent accidents in the area. It also has access to the entire list of challans generated in last month.

2 Database Layout

Our Databse includes **Mongodb** collections:

- **Citizen**
  - Name
  - Personal Info (Address,Phone Number, Email)
  - Registered Vehicle Numbers
  - License (Issue Date, License Type, Expiry Date, Learner's License)
- **Challan**
  - License Number
  - Vehicle Number
  - Date
  - Police Officer's Name
  - offence
  - Fine
  - Due Date
  - Location

  - Payment Status
  - Receipt
- **Accident**
  - Reporter License Number
  - Location
  - Description
- **Police**
  - Personal Info (Name, Email)
  - Designation
  - Location
- **Trafic Signals**
  - Name
  - Location
- **Vehicles**
  - Vehicle Number
  - Vehicle Type
  - Assigned License Number
  - VIN number
  - Insurance (Issue, Expiry, Policy)
  - PAN Number



3 Tools Used

We have used **MongoDB** NoSQL database system, with **ExpressJS** framework for web applications, with **AngularJS** for front-end framework, and **NodeJS** for server side execution environment.