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# 1. Problem Statement

- **Project Statement**

The project aims at managing the procedure to be followed after the violation of traffic rule(s) by a licensed driver, as well as provide other services.

If anyone violates the road rules, certain points are added to his record.

After a limit of 13 points, a warning is sent and on reaching 20, the will be suspended. (In accordance with the Motor Vehicles Bill) Every license holder will start with zero points.

- **Project Scope**

The project aims at targeting all the valid license holders, the traffic police department and the government DMV and bring them to work together under a centralized system.

Out of the total users, 90% of our users will be the drivers, 9% will be the traffic police officials and 1% will be the managing admin.

- The admin, which will be a certified government official will have the authority to add, delete or update any driver/traffic police data into the database and check their information.
- On creation of any new account, **an email will be sent to the user's respective email id**, which enables them to login.
- A traffic police official can login and check his information, add any violation to a driver and check his past records. The **violation table** is provided in every user's dashboard.
- Similarly, a driver can login and check his points, number of times he has been fined, the total amount he has paid and which official has fined him with date and time of getting fined.
- The 'Contact Us' tab provides the details of our head office as well as allows any user, without logging in, **to submit a feedback**, which can be checked by the admin in his dashboard.
- Static pages like 'Home' and 'About Us' provide general information regarding traffic rules in India, certain government procedures and guidelines to the users.

- **Project Assumptions**

Following are the project assumptions:

- The driver has given the test and holds a license. Online database entry will be done by the **admin only**.
- In case of an event of fine, it is assumed that the driver has either already paid the fine or will be doing the same in the court. Our portal only provides the service of checking the past records, i.e. the fine and points added.
- After suspension of a license, it is expected that the driver won't be further driving a motor vehicle.
- In case of change of information, or forgetting a password, the user will have to **submit an application** along with all the required documents at the DMV headquarters, where the information will be personally verified by a designated official and then, our application will be used for the implication of the same.
- The admin also holds the authority to permanently ban (depicted with 'delete') a user in case of serious malpractice by the latter.

- **Project Limitations**

Following are the project limitations:

- No defined system for the verification of documents.
- No function to pay fine online through account.
- Driver recognition process is manual, i.e. by entering license number. Biometrics not added.

## 2. Project Requirements

- **Software & Hardware Requirements**

Component	Technology	Requirement
Hardware	PHP MongoDB	OS: Windows XP and ahead Processor: 800MHz Intel Pentium III or equivalent Memory: 512 MB Disk space: 750 MB of free disk space.
Software	PHP MongoDB	PHP version: 5.0 or later OS: Windows, Apple OSx, any flavor of Linux.  MongoDB version 3.0 and above for efficient and responsive interaction.

- **Graphical User Interfaces**

Following are the GUIs included in our project:

- **Admin Login Form**

The admin is given a pre-entered ID and password which enables him to log into his dashboard and perform CRUD operations. He can also check the feedbacks submitted by the users.

- **Driver Login Form**

The driver can login to check his points, fine paid on the respective date and time and the rules table.

- **Police Login Form**

The police can log in to add violation to any drivers' record, check his own past records and refer to the rules.

- **Feedback Form**

Any user, without logging in, can submit a feedback, which can only be read by the admin in his dashboard.

- **New Driver/Police Form**

The admin has the authority to create a new driver/police, after offline verification of his documents. On creation of a new account, an email is sent to the user's respective email address which contains his login ID and password. It is assumed that the admin will enter records after thorough verification of documents, minimizing the possibility of duplication.

- **Check Details Form**

The admin can check the details of any registered police/driver by entering his/her ID.

- **Update Form**

On event of any error or forgetting password, Admin can update the details of any registered police/driver after offline verification of documents.



- **Test Case Design**

Test ID	Description	Expected Result	Actual Result
1	Login Forms	All login forms should validate the user with his/her ID and password.	All login forms validate the user with his/her ID and password.
2	Automated Emails	On creation of a new account, an automated email should be sent to the registered mail ID containing the login details.	On creation of a new account, an automated email is sent to the registered mail ID containing the login details.
3	Submit button: ADD record	The details entered by admin should be added to the respective collection.	The details entered by admin are added to the respective collection.
4	Submit button: DELETE record	The document corresponding to the entered login ID should be removed	The document corresponding to the entered login ID is removed
5	Submit button: UPDATE record	The corresponding record should be updated with the new details	The corresponding record is updated with the new details
6	Submit button: CHECK details	The details corresponding to the entered login ID should be retrieved	The details corresponding to the entered login ID are retrieved
7	Button: Add Violation	Police should be able to add a violation record to the driver, by entering his ID and violation code	Police is able to add a violation record to the driver, by entering his ID and violation code
8	Check History	The user should be able to check his past records	The user is able to check his past records