Requirement Document

**VEHICLE DOCUMENTS AUTHENTICATION SYSTEM**

1. **Objective:**

* Eliminating usage of fake documents.
* To store information of the vehicle documents.
* Display the document information whenever the user requires.

1. **Scope:**

The vehicle documents authentication system considerably reduces the rate of corruption occurring in RTO department. The documents will be stored safely in the database and also reduces the burden of carrying hard copy of the documents.

1. **Application Functionality:**

The vehicle documents authentication system mainly reduces the burden of carrying all the vehicle documents while travelling but introduces a new method of document verification by accessing the document informations from the database at the time of document verification by the traffic police.In this system the documents will be stored safely in the database.Whenever an individual purchases a new vehicle the RTO admin will update all the document informations to the database and the user can view the information of the vehicle from the database by using his login credentials.Also the emission check centers and vehicle insurance companies can update the document informations regarding the pollution check and vehicle insurance.The user can check the documents whenever required.

* 1. User Login To View Documents

The user has to use the vehicle registration number as user id and also should set password inorder to successfully log in and view the vehicle documents but cannot update any document.

* 1. RTO Admin Login To Update Vehicle Documents

The RTO admin has to use the RTO user ID and password inorder to successfully log in and update the vehicle documents.

* 1. Insurance Company Admin Login To Update Insurance

The insurance company admin has to use the insurance company user ID and password to successfully log in and update the vehicle insurance.

* 1. Emission Test Center Admin Login To Update Pollution Report

The emission check center admin has to use the emission check center user ID and password to successfully log in and update the emission check report.

1. **Application User**

**User:**

The application user can be owner of the vehicle who can view all the documents related to vehicle and check for the expiry dates of any document which is going to expire in further upcoming days.

**RTO Admin:**

The RTO admin is the authority who updates the vehicle RC number,Vehicle registration number,vehicle name,vehicle model,fuel norms,vehicle owner name.

**Insurance Company Admin:**

The vehicle insurance company admin updates the vehicle insurance information.

**Emission Test Center Admin:**

The Emission test center admin will update the vehicle emission check reports.

**Back end: Oracle Database**

1. **ER Diagram:**
2. **Database Design:**

The database design mainly consists of vehicle details,RTO details,insurance company details,emission test center details .Along with these tables there are login tables for user,RTO admin,emission test center admin and insurance company admin.The vehicle details will stored in a separate table.The user has to use his login credentials to log in and view all the vehicle documents.The RTO admin can use the login credentials to log in and update certain vehicle documents.Also the emission test center admin and insurance company admin can use their login credentials to log in and update the emission test report and insurance document informations.

**7.Constraint:**

The primary key in the vehicle details table is the Vehiclereg\_id which acts as foreign key in user login table,RTO details,insurance company details,emission test center details.The Vehiclereg\_number which is the userid in user log in table is primary key in user login table.The RTOadmin\_id is the primary key in RTO details table.The RTO user id is the primary key in RTO log in table.The insurance company admin id is the primary key in insurance company details table.The insurance company user id is the primary key in insurance company login table. The emission test center admin id is the primary key in emissiontestcenter details table.The emission test center user id is the primary key in emission test center login table.The Rc number in vehicle details table is unique.The vehicle registration number in user log in table is unique.

**Table Description**

|  |  |  |  |
| --- | --- | --- | --- |
| TABLE NAME | COLUMN NAME | CONSTRAINTS | DEFAULT VALUE |
| VEHICLE\_DETAILS | Vehiclereg\_id  Vehicle\_owner  Vehicle\_name  Vehicle\_model  Fuel\_norms  Rc\_number  Emission\_upto\_date  Insurance\_upto\_date | PRIMARY KEY  NOT NULL  NOT NULL  NOT NULL  NOT NULL  UNIQUE KEY  NOT NULL  NOT NULL |  |

|  |  |  |  |
| --- | --- | --- | --- |
| TABLE NAME | COLUMN NAME | CONSTRAINTS | DEFAULT VALUE |
| USERLOGIN\_DETAILS | Vehiclereg\_id  Vehiclereg\_number  User\_password | FOREIGN KEY  PRIMARY KEY,NOT NULL  NOT NULL |  |

|  |  |  |  |
| --- | --- | --- | --- |
| TABLE NAME | COLUMN NAME | CONSTRAINTS | DEFAULT VALUE |
| RTO\_DETAILS | Vehiclereg\_id  RTOadmin\_id  City | FOREIGN KEY  PRIMARY KEY  NOT NULL |  |

|  |  |  |  |
| --- | --- | --- | --- |
| TABLE NAME | COLUMN NAME | CONSTRAINTS | DEFAULT VALUE |
| RTOLOGIN\_DETAILS | RTOadmin\_id  RTOuser\_id  RTO\_password | FOREIGN KEY  PRIMARY KEY,NOT NULL  NOT NULL |  |

|  |  |  |  |
| --- | --- | --- | --- |
| TABLE NAME | COLUMN NAME | CONSTRAINTS | DEFAULT VALUE |
| INSURANCECOMPANY\_DETAILS | Insurancecompanyadmin\_id  Vehiclereg\_id  Insurancevaliduptodate  Insurance\_company | PRIMARY KEY  FOREIGN KEY  NOT NULL  NOT NULL |  |

|  |  |  |  |
| --- | --- | --- | --- |
| TABLE NAME | COLUMN NAME | CONSTRAINTS | DEFAULT VALUE |
| INSURANCECOMPANYLOGIN\_DETAILS | Insurancecompanyadmin\_id  Insurancecompanyuser\_id  Insurancecompany\_password | FOREIGN KEY  PRIMARY KEY,NOT NULL  NOT NULL |  |

|  |  |  |  |
| --- | --- | --- | --- |
| TABLE NAME | COLUMN NAME | CONSTRAINTS | DEFAULT VALUE |
| EMISSIONTESTCENTER\_DETAILS | Emissiontestcenteradmin\_id  Vehiclereg\_id  Emissionreportvaliduptodate  Emissiontest\_center | PRIMARY KEY  FOREIGN KEY  NOT NULL  NOT NULL |  |

|  |  |  |  |
| --- | --- | --- | --- |
| TABLE NAME | COLUMN NAME | CONSTRAINTS | DEFAULT VALUE |
| EMISSIONCENTERLOGIN\_DETAILS | Emissiontestcenteradmin\_id  Emissiontestcenteruser\_id  Emissiontestcenter\_password | FOREIGN KEY  PRIMARY KEY,NOT NULL  NOT NULL |  |

**PLSQL PACKAGE DESCRIPTION:**

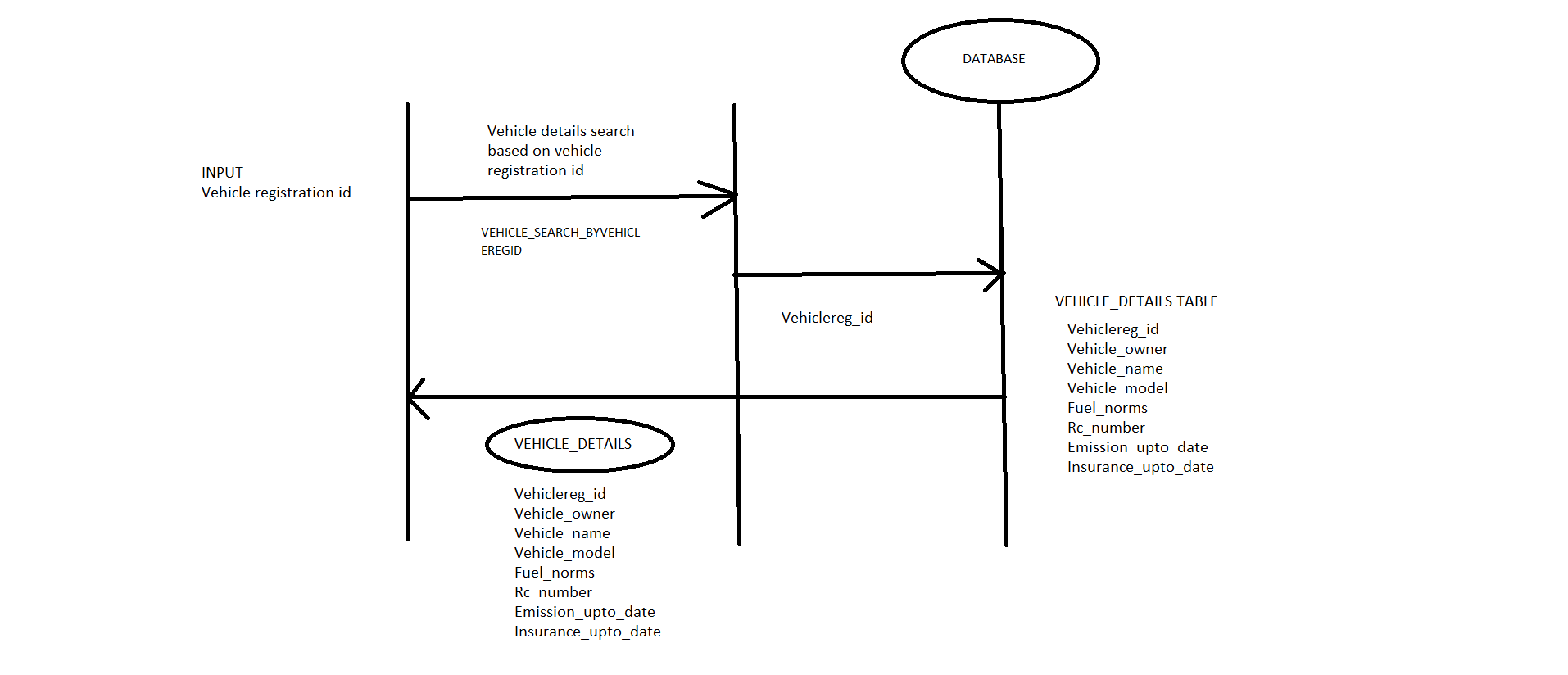
|  |  |  |  |
| --- | --- | --- | --- |
| PACKAGE NAME | PROCEDURE/FUNCTION NAME | INPUT PARAMETERS | OUTPUT PARAMETES |
| VEHICLE\_INFO\_SEARCH | VEHICLE\_SEARCH\_BYVEHICLEREGID  USER\_LOGIN\_VALIDATION | P\_VEHICLEREGID  V\_Vehicleregid2  V\_Vehicleregno  V\_userpassword | REF\_VEHI\_RECORD  V\_RESULT |
| 1.Displaying vehicle information based on vehicle registration id  i. Validating for BLANK/NULL for all the input fields.  2. validating the user login credentials and validating for BLANK/NULL values for input fields | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| PACKAGE NAME | PROCEDURE/FUNCTION NAME | INPUT PARAMETERS | OUTPUT PARAMETES |
| VEHICLE\_DETAILCLIENT\_UTIL | VEHICLEINFO  USER\_LOGIN\_VALIDATION | V\_Vehiclereg\_id  V\_Vehicleregid1  V\_USERID4  V\_PASSWORD4 | V\_R\_VEHICLE  V\_RESULT |
| 1.Client code for displaying vehicle information based on vehicle registration id  i. Validating for BLANK/NULL for all the input fields.  2. validating the user login credentials and validating for BLANK/NULL values for input fields | | | |

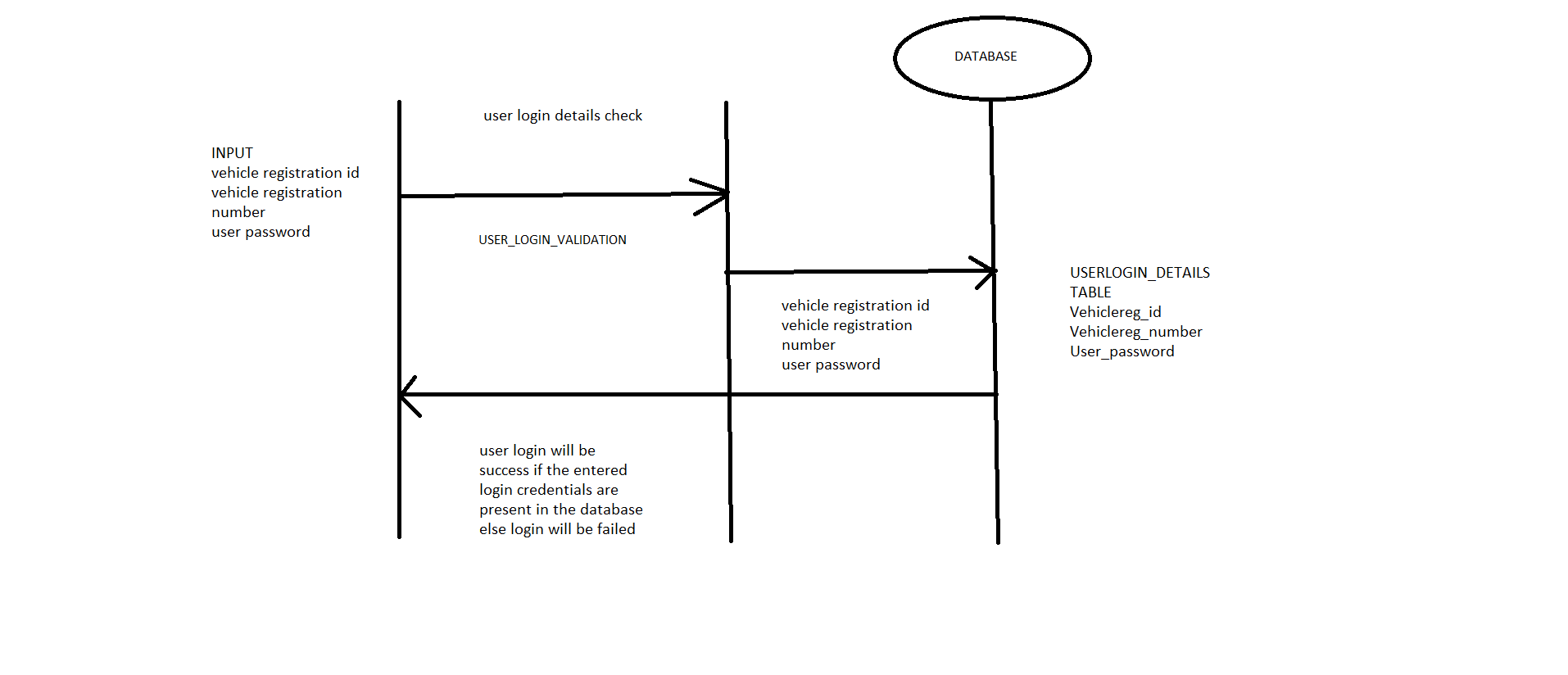
|  |  |  |  |
| --- | --- | --- | --- |
| PACKAGE NAME | PROCEDURE/FUNCTION NAME | INPUT PARAMETERS | OUTPUT PARAMETES |
| VEHICLE\_INFO\_UPDATE | VEHICLEINFO\_UPDATE\_BYRTO  VEHICLEINFO\_UPDATE\_BYINSURCOMP  VEHICLEINFO\_UPDATE\_BYEMISCOMP  RTO\_LOGIN\_VALIDATION  INSURANCE\_LOGIN\_VALIDATION  EMISSION\_LOGIN\_VALIDATION | P\_VEHICLEREGID2  P\_Vehicle\_owner  P\_Vehicle\_name  P\_Vehicle\_model  P\_Fuel\_norms  P\_Rc\_number  P\_INSUREXPDATE  P\_EMISSIONEXPDATE  P\_VEHICLEREGID3  P\_INSURANCECOMPANYADMINID  P\_INSURANCEEXPIRY  P\_VEHICLEREGID4  P\_EMISSIONTESTCENTERADMINID  P\_EMISSIONEXPDATE  V\_RTOADMINID  V\_RTOUSERID  V\_RTOPASSWORD  V\_INSURADMIN  V\_INSURUSERID  V\_INSURPASSWORD  V\_EMISSADMIN  V\_EMISUSERID  V\_EMISPASSWORD | P\_UPDATE\_STATUS  P\_UPDATE\_STATUS2  P\_UPDATE\_STATUS3  V\_RESULT10  V\_RESULT11  V\_RESULT12 |
| 1.Updating vehicle information based on vehicle registration id by RTO,Insurance company and emission test centers.  i. Validating for BLANK/NULL for all the input fields.  2. Validating the login credentials of RTO,insurance company admin,emission test center admin and validating for BLANK/NULL values for input fields | | | |

**DATAFLOW DIAGRAM PER MODULE:**

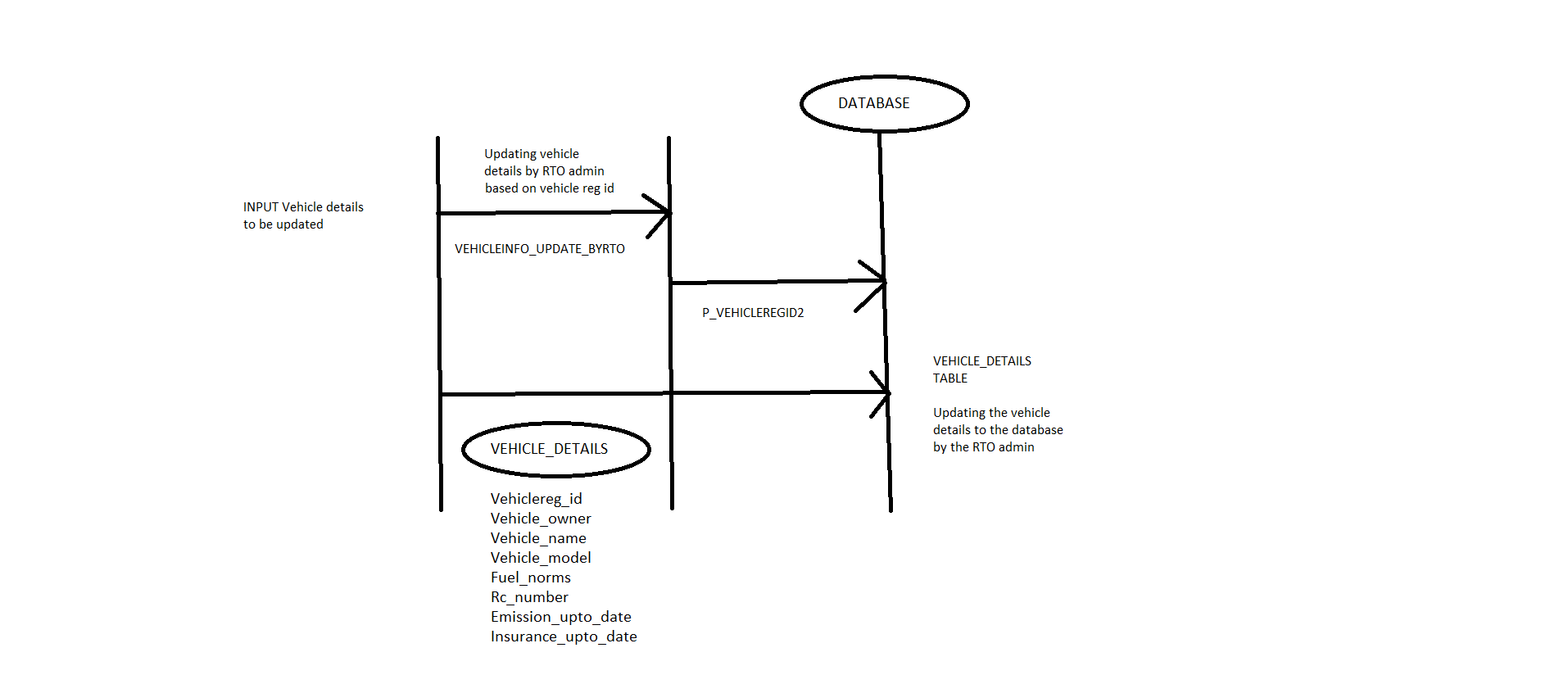
**1.VEHICLE DETAILS DISPLAY**

****

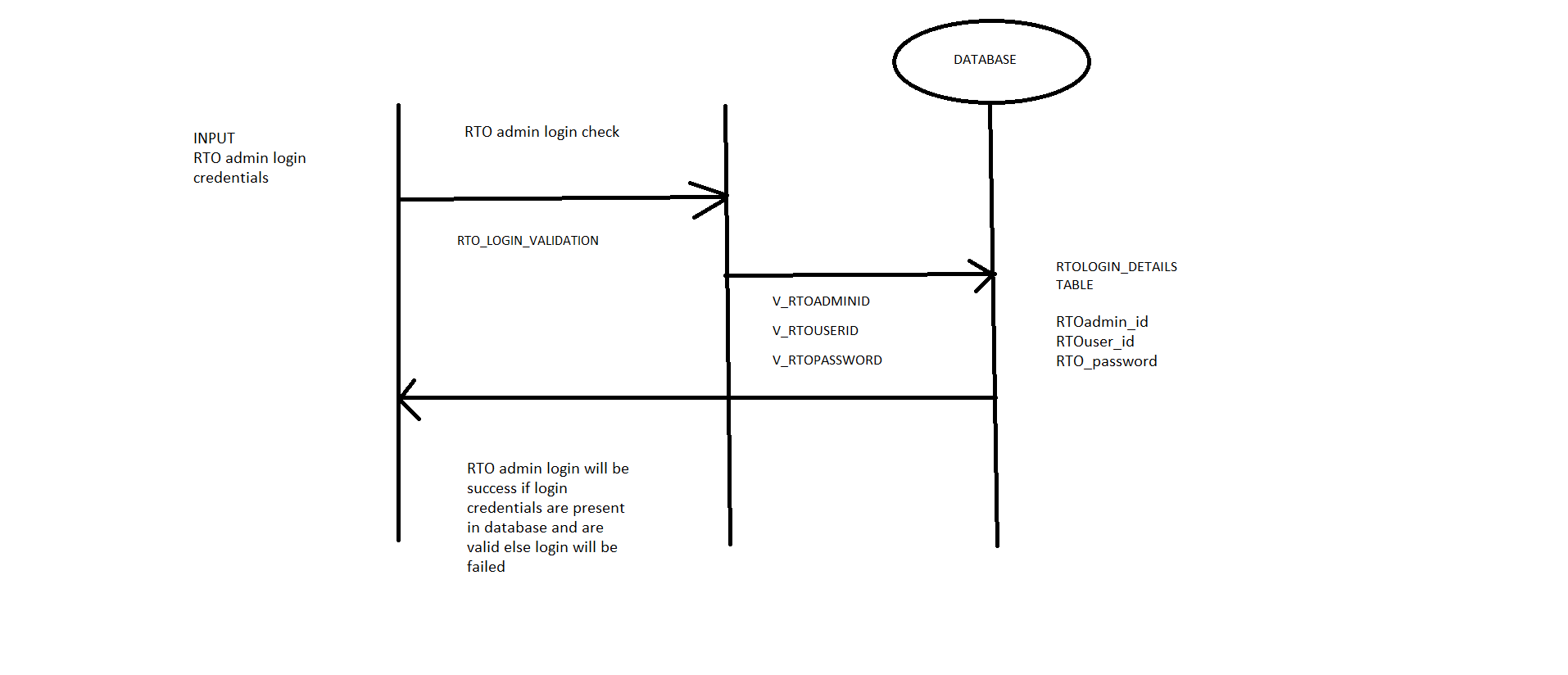
2.USER LOGIN VALIDATION



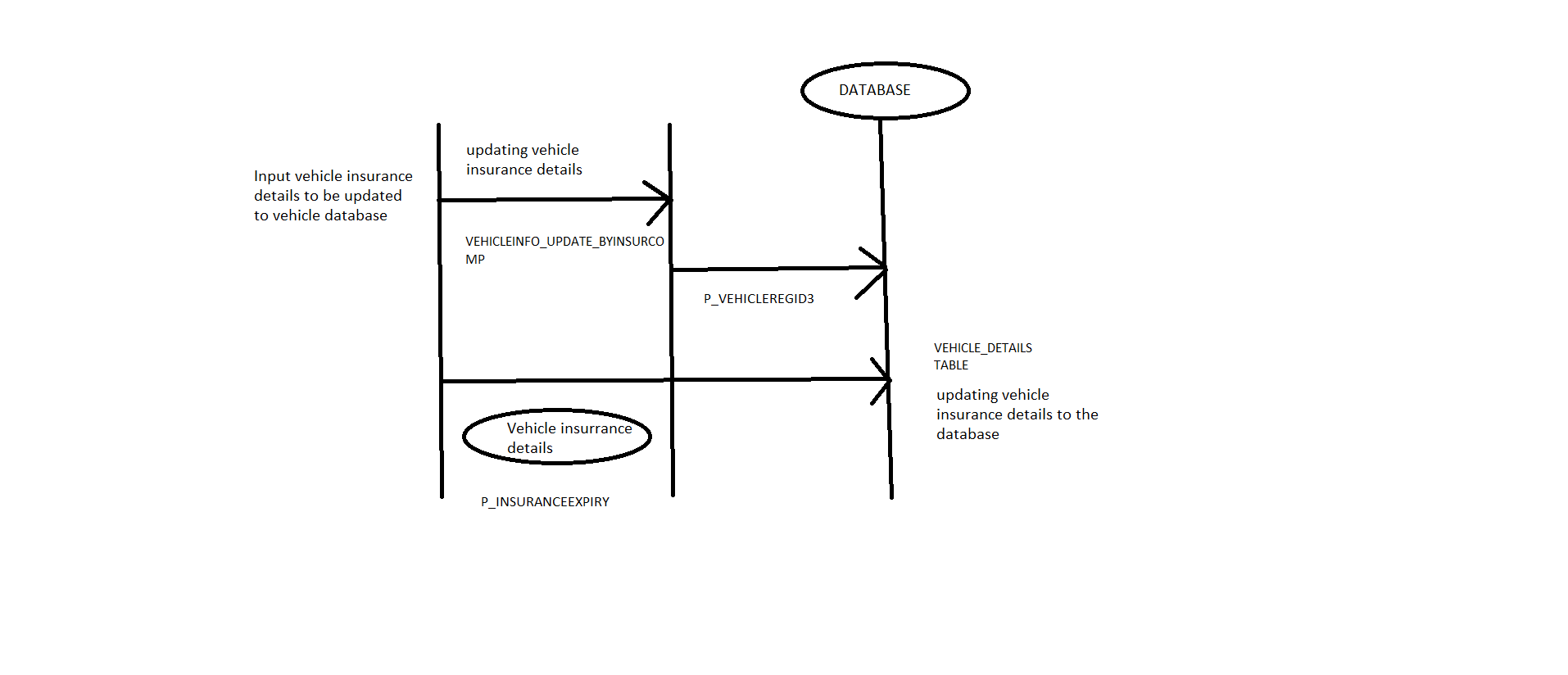
3.VEHICLE DETAILS UPDATION BY RTO ADMIN



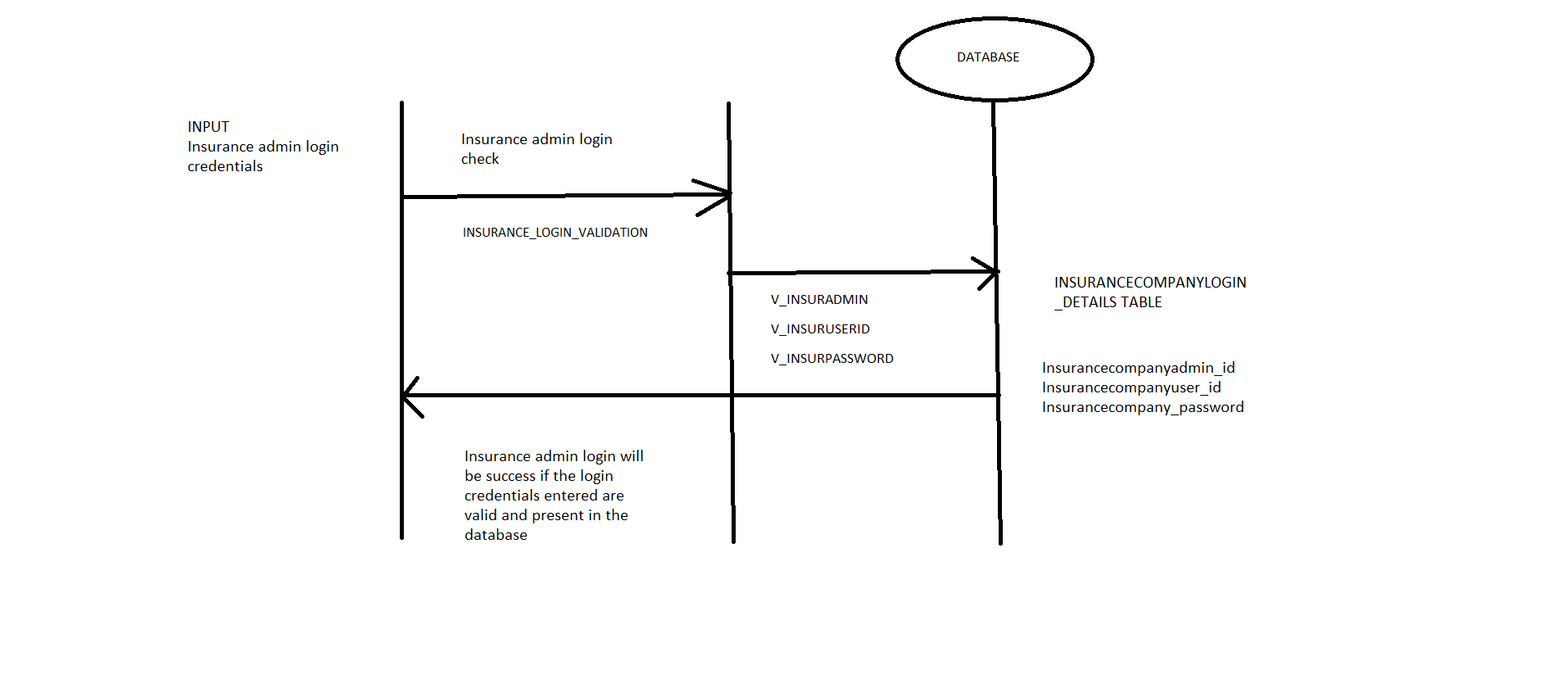
4.RTO ADMIN LOGIN VALIDATION



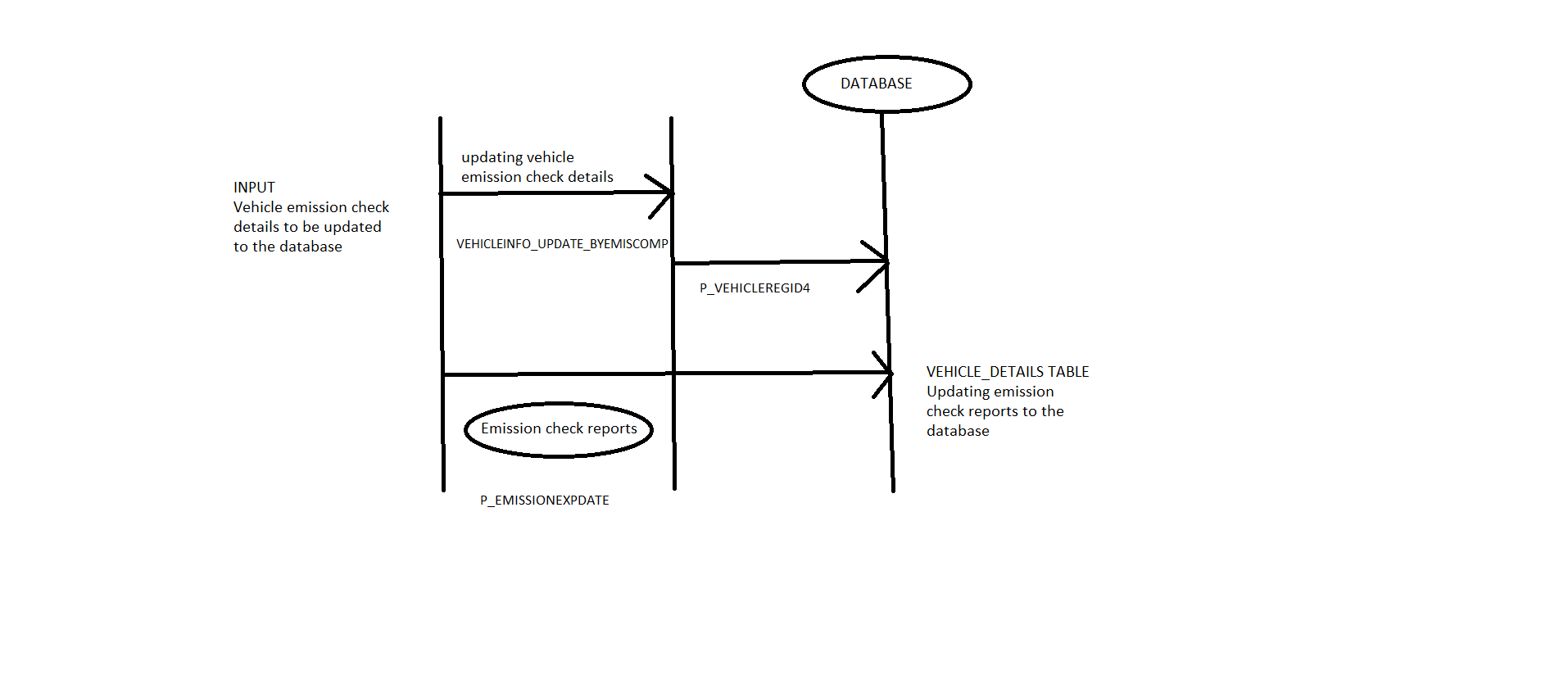
5.VEHICLE INSURANCE DETAILS UPDATION BY INSURANCE COMPANY



6.INSURANCE COMPANY LOGIN VALIDATION



7.VEHICLE EMISSION DETAILS UPDATION BY EMISSION CHECK COMPANY



8.EMISSION CHECK ADMIN LOGIN VALIDATION

