User Manual of Mobile/Web Based Transport Challan System

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National Informatics Center

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1 About e-Challan Project

Background:

NIC in collaboration with Transport department of various states of the country is working together to explore the possible ways of making online and office Challan facility with the cutting age technologies. After deliberation and discussion with transport department, it is noted that online booking of challan and updation of its data authentic challan collection and update from field on continuous basis is a challenge for department.

In order to address the above issue it is proposed to develop a comprehensive Android platform based on mobile application and web based challan system with following functionalities:

- An Android based mobile application for booking of challan for online and offline modes. For the location with poor signal quality mobile application with function in off-line mode and data will be stored in local database of device. Once the connectivity is established then the challan data will be synchronized with central server.
- Feature to capture geo-tagged photographs of vehicle, document and location of challan booking using camera of mobile device. Same photographs needs to be displayed on map with relevant information.
- A web based interface with feature of challan details view, Challan printing and payment of challan for Public User and RTO/ Department user.
- A web based interface for consolidated over view of system using MIS and dashboard features for state transport department / Admin user and Central Ministry User.
- Additional functionalities like e-payment for services, alerts through SMS and emails

2 e-Challan Mobile and Web Application:

e-Challan is a sophisticated software application comprising Android based mobile app and web interface, developed for the purpose of providing an comprehensive solution for Transport Enforcement Officers and Traffic Policemen. This app-cum-application is integrated with Vahan and Sarathi applications and provides a number of user-friendly features while covering all major functionalities of Traffic Enforcement System.

This is an end to end automated system with digital interface for all the stakeholders in purview of challan eco-system. The application offers customized interfaces for the following stakeholders:

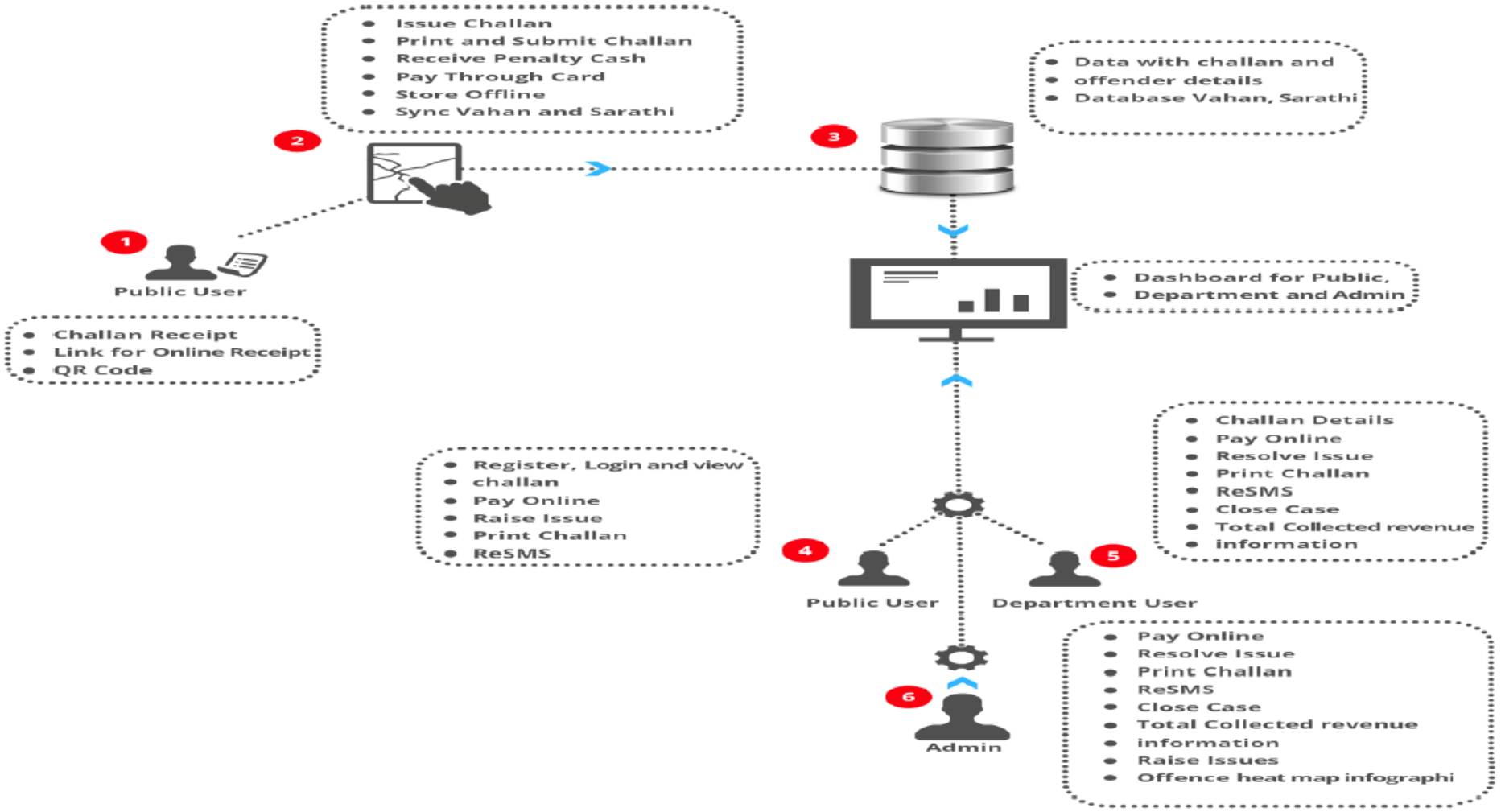
- Enforcement officers
- Citizens (private or commercial car owners/drivers)
- State transport office
- Regional transport office
- NIC admin
- Ministry of Road and Transport

The application introduces a novel concept of using mobile based app for issuing e-Challan. The mobile based access to the system is available only to enforcement officers through android smart phones. While the web based access is available to all the rest of the stakeholders, mobile based access ensures the services are available anytime anywhere. This application is built in line with the requirements of Vahan 4 and Sarathi 4 and shall be accessing and updating data from/to national databases.

Connecting all the stakeholders through a common system will ensure data integrity, reliability and transparency. End to end automation of the process will minimize the corruption and bad practices to minimal while enabling efficiency at each level of users. 100% digitization and documentation of records will help in improving the visibility on offenders, types of offences frequently committed, payments received on time etc.

The system aims to provide a perfect solution for the current challenges which the transport departments is facing with respect to tracking the challan records, payments, reports etc. by leveraging latest technologies which are easy to use, adapt and implement at the ground level.

3 Architecture of the application



4 Features and Functionalities of e-Challan Application

The system offers range of features and functionalities across two different platforms:

I. Android based smart phone / tablet

- The system provides for automatic location logging (place name, Lat-Long) through GPS.
- There is an in-built function to click and store photos of vehicle, documents and number-plate.
- The app can fetch vehicle/driver details from Vahan - Sarathi database by entering DL and/RC
- System can automatically calculate the challan amount based on the type of offence selected by the enforcement officer against the defaulter and the challan history of the defaulter
- The system offers synchronization of offline mode of challan issuance with online system
- The system enables onsite payment of challan through credit cards or cash
- Automatic alerts and notifications sent to relevant stakeholders at predefined stages of challan process
- Challan receipts are printed through a handy and portable thermal printer
- The receipt have the QR code which the defaulter can scan through his/her mobile to navigate to challan website for online payment of challan amount later
- The Enforcement Officers are able to search for any challan anytime anywhere
- The system allows for evidence to be collected through uploading the photo/video of the receipt and situation
- The system provides the work scheduling tool for Enforcement Officers which allows the admin to allocate work schedules through web while EOs can check theirs online on app
- Enforcement Officers can get details of sections under ACT through mobile app
- Enforcement Officer can give feedback to the NIC staff on the performance of the application through mobile app
- Currently the system is bilingual i.e it supports English and Hindi

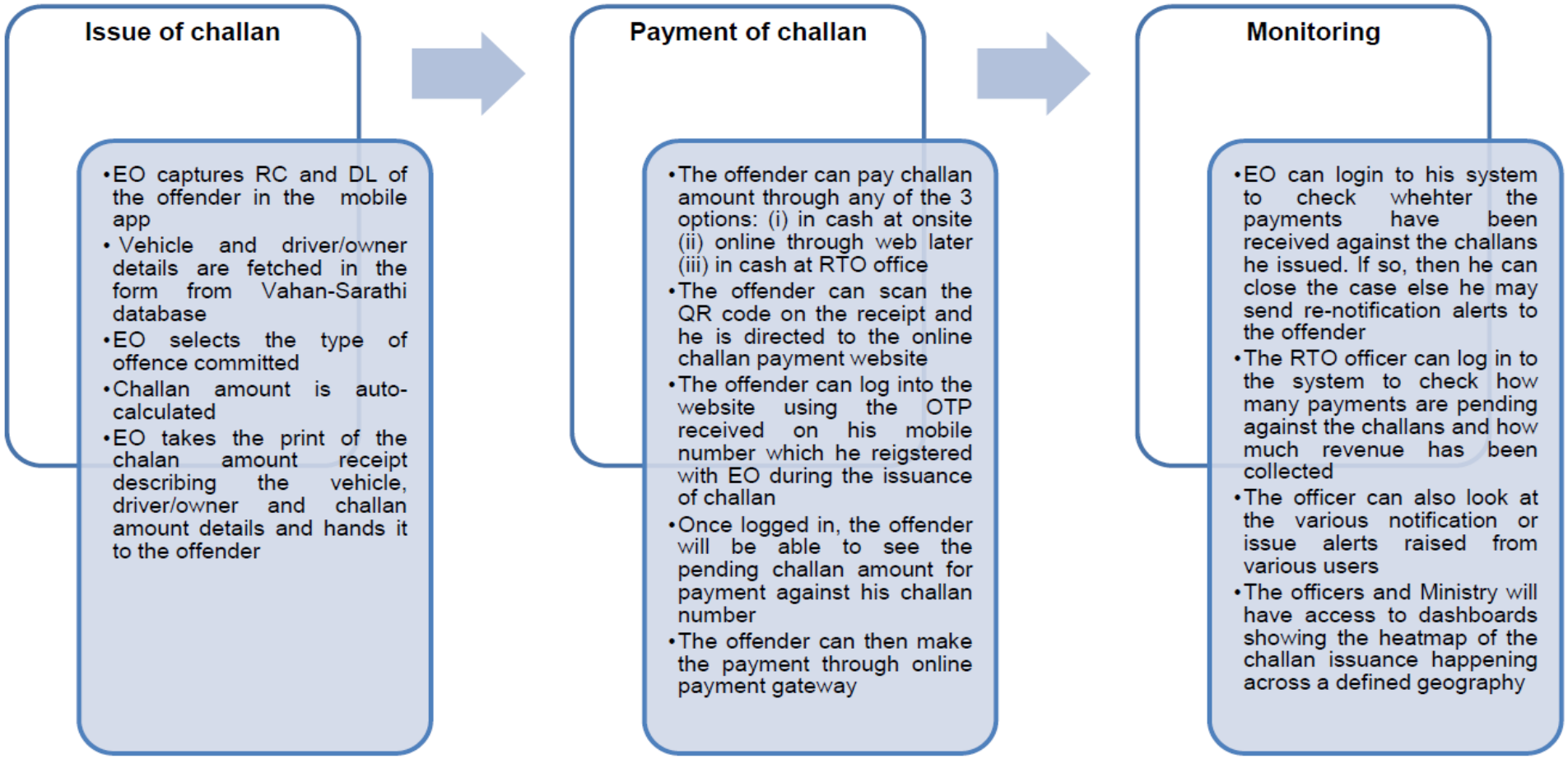
II. Web based

- The application can help in planning, based on the distribution pattern of challans across the city. It provides the user with a heat map showing areas with higher challan numbers in red. Moreover, the availability of numerous graphs would depict the revenue earned based on state, zone, district etc.
- Various privileges of the application such as Analytics, Job allotment, My Assignment, Vehicle / document Disposal etc. would be managed by the role management feature of the application
- User management feature of the application help in creating and managing users in department and with this module admin shall assign specific roles to other users.
- The application is let the department head allot job assignments for on road challan collection and the officer on the other side would receive the allotted duty sheet with address overlaid on actual location map.
- This application allow user to pay pending challan amounts online
- The notification mail box feature in the application can allow the departments to manage and track various notifications and issues raised by users or citizens
- Search facility is there to help the department search through challan/offence history
- Robust MIS dashboard for management to monitor and track progresses on cases
- Management tool for fleet owners to add their multiple vehicles and track their offence history

III. Upcoming features

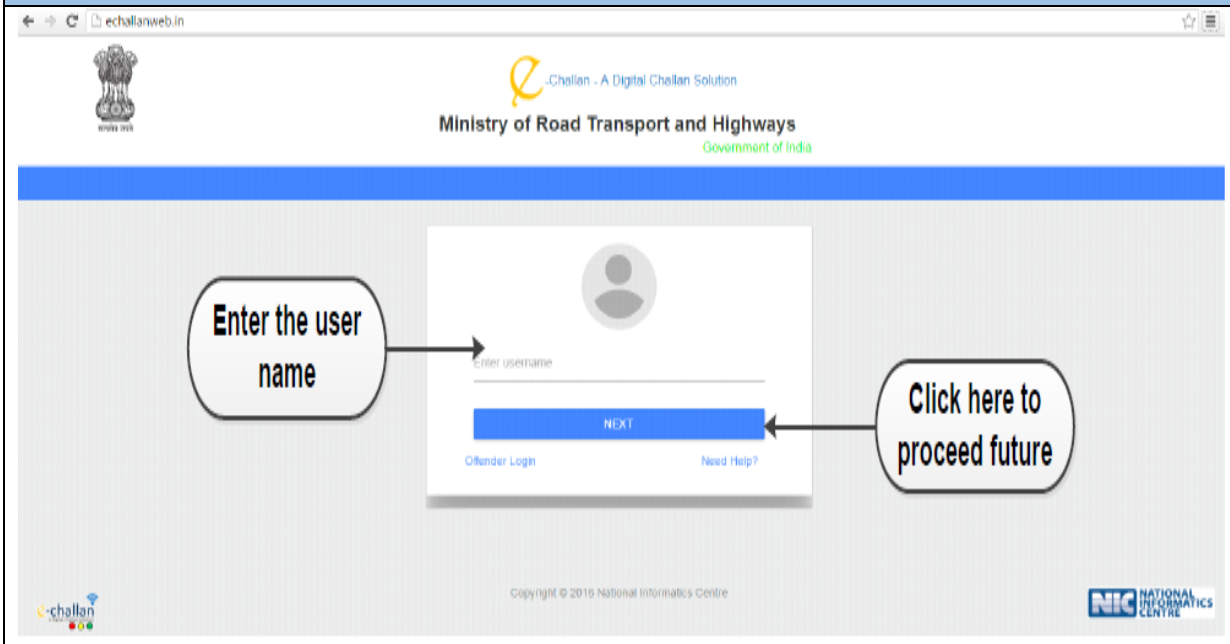
- The system plans to upgrade to support **multilingual** feature to support state languages
- The concept of **dynamic QR code** may be implemented, scanning which will take the user directly to his/her own customized profile on website
- Options to search for **nearby RTO offices** and officers on duty
- Chat room and **training** module for Enforcement Officers
- **Theft control** through automatic location tracing via GPS
- **Voice communication** tools for Enforcement Officers to communicate urgent messages
- **360* feedback** from various stakeholders involved in issuing and receipt of echallan
- **Chrome app** for quick and easy access of website
- **E-Challan wallet** for quick and easy payment of challans and also generates surplus money for the transport department

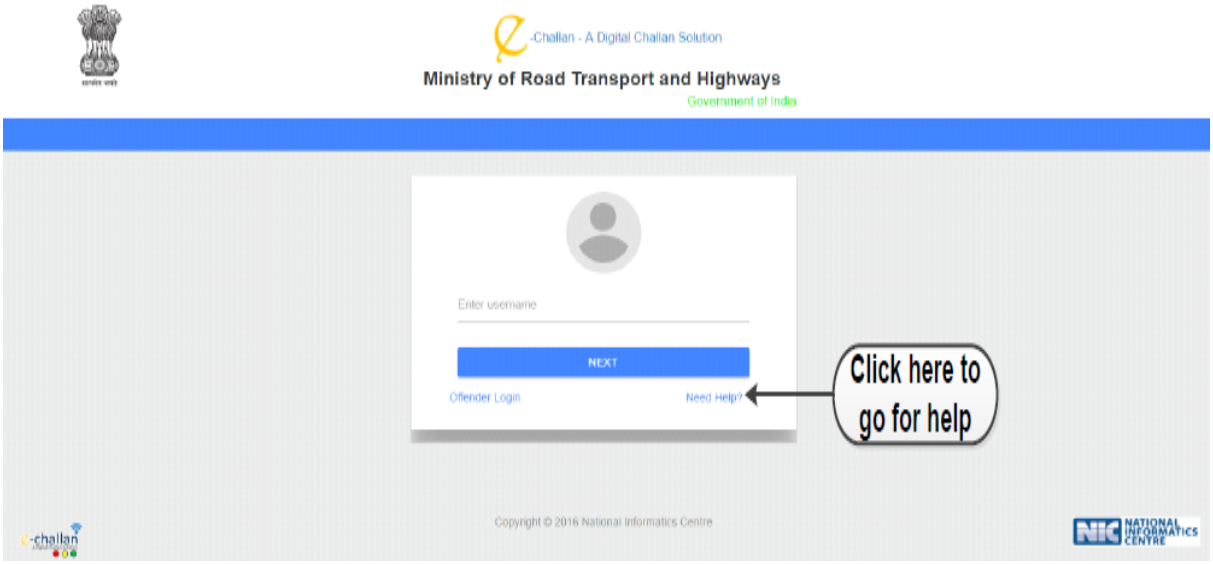
5 e-Challan Process Flow



6 Tooltips of e-challan web application

6.1 Admin User :

Login Page for accessing the web application

Enter user id and click on “NEXT” to proceed future

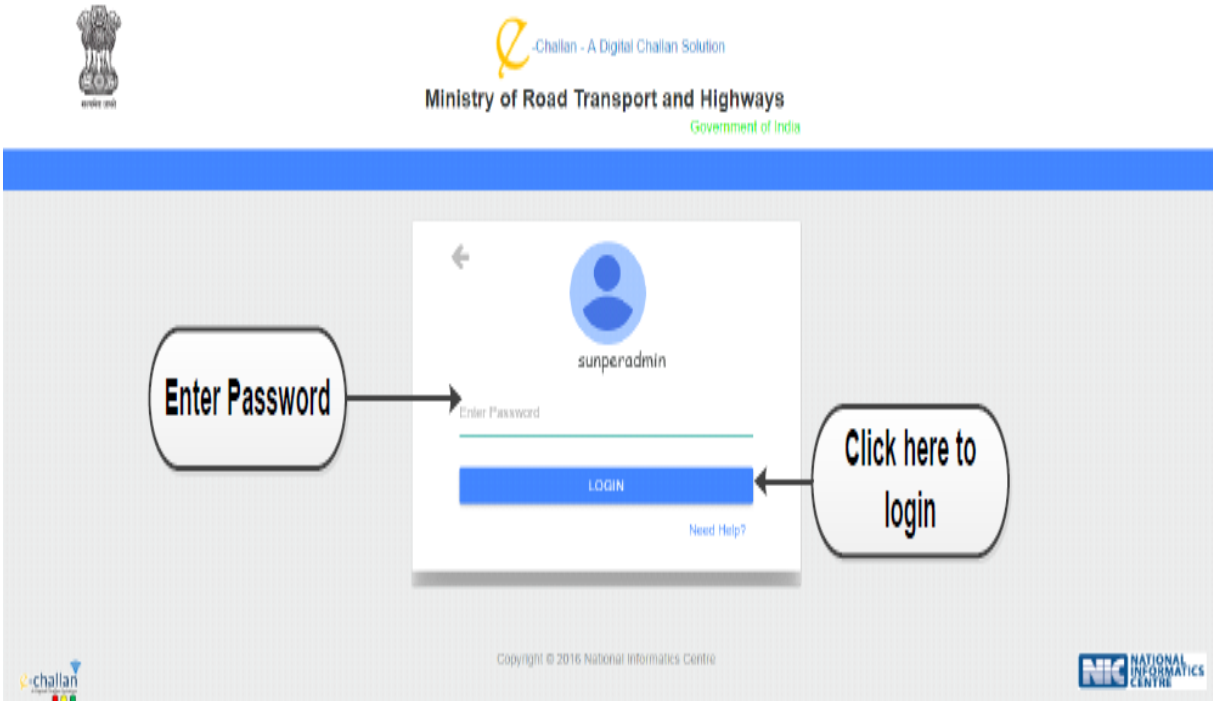
Screen for ‘Need help?’

Click on ‘Need Help? ‘, In case of required any assistance.

Screen for any assistance related to password reset

Upon clinking on “Need Help?” a new screen appear where the system from the user “Having trouble signing in ?”

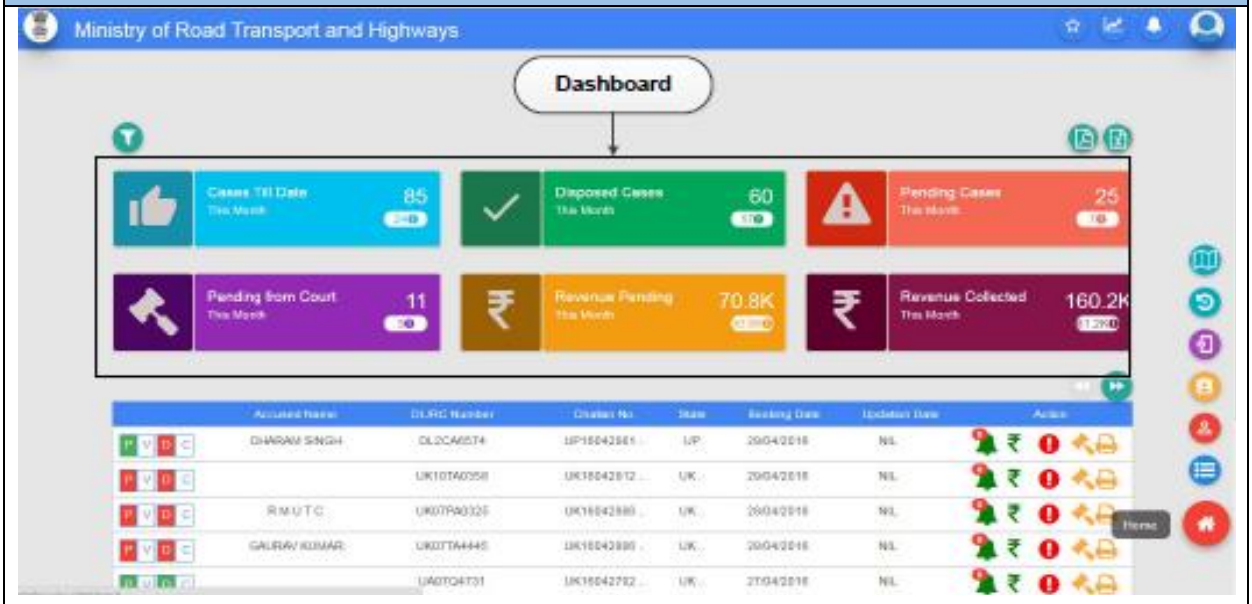
The user shall enter user his email id and click on ‘Confirm’ to proceed for reset the password else click on “Cancel” for back to the home page.

Login Page for entering the password



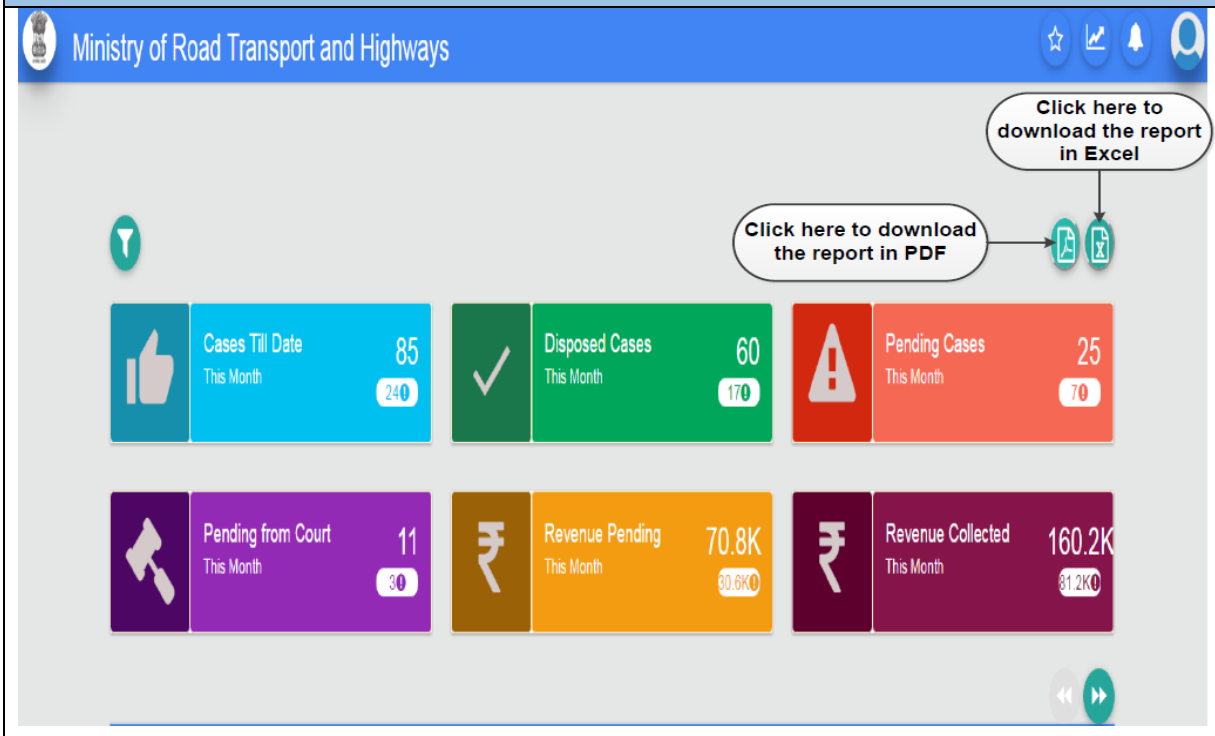
Upon clicking on “Next” the system ask from user to enter the password and click on ‘Login’ to access the system.

Web application home page screen, where the admin user can able to check the dashboard, manage cases (Pending/ Completed), manage offence, History, Device, roles, users and job allocation.



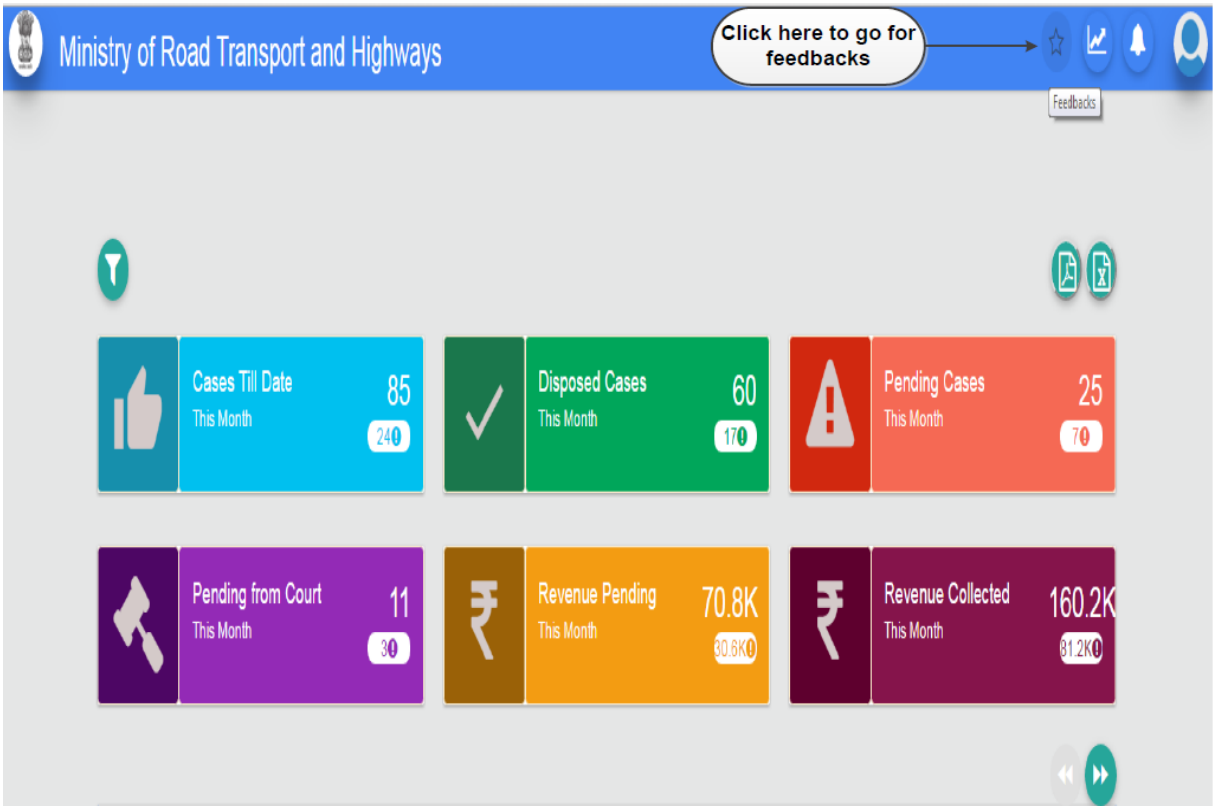
Once the user logged into his page, a new screen appear where the user manage his Cases (Pending/Completed) ,check revenue status, manage offence, manage history, manage device, manage roles, manage users and job allocate.

Screen for downloading the report in 'PDF' or 'Excel' format



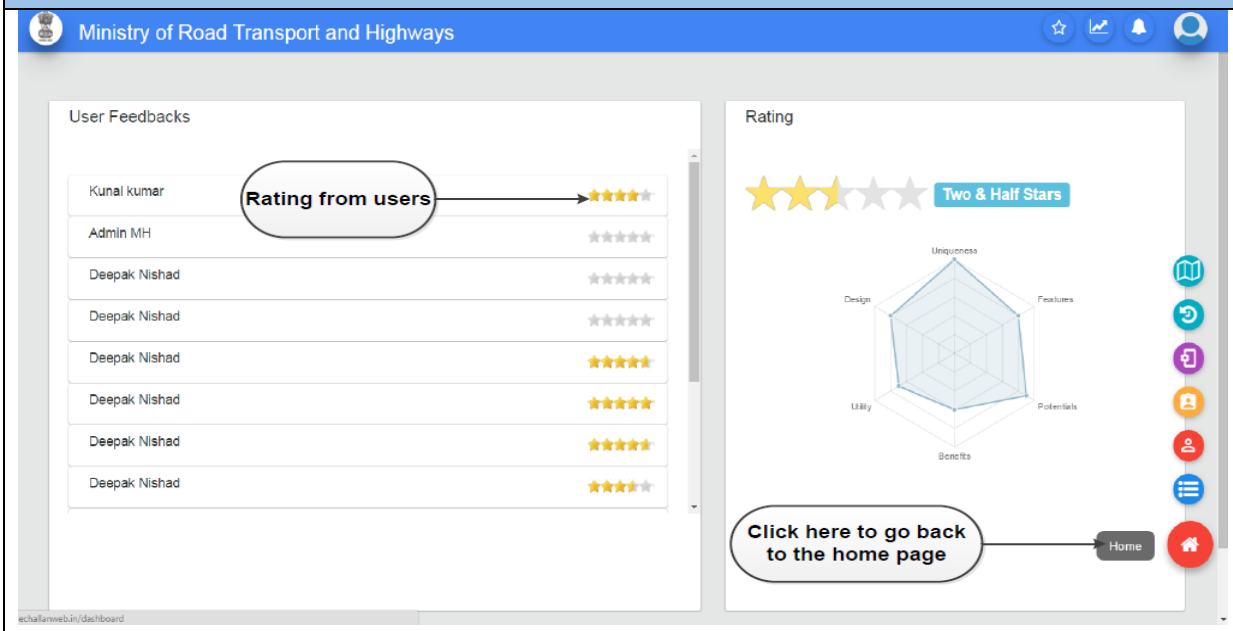
Click on " " icon to download the report in PDF format or Click on " " icon to download the report in excel format.

Screen for viewing the feedback from other the users



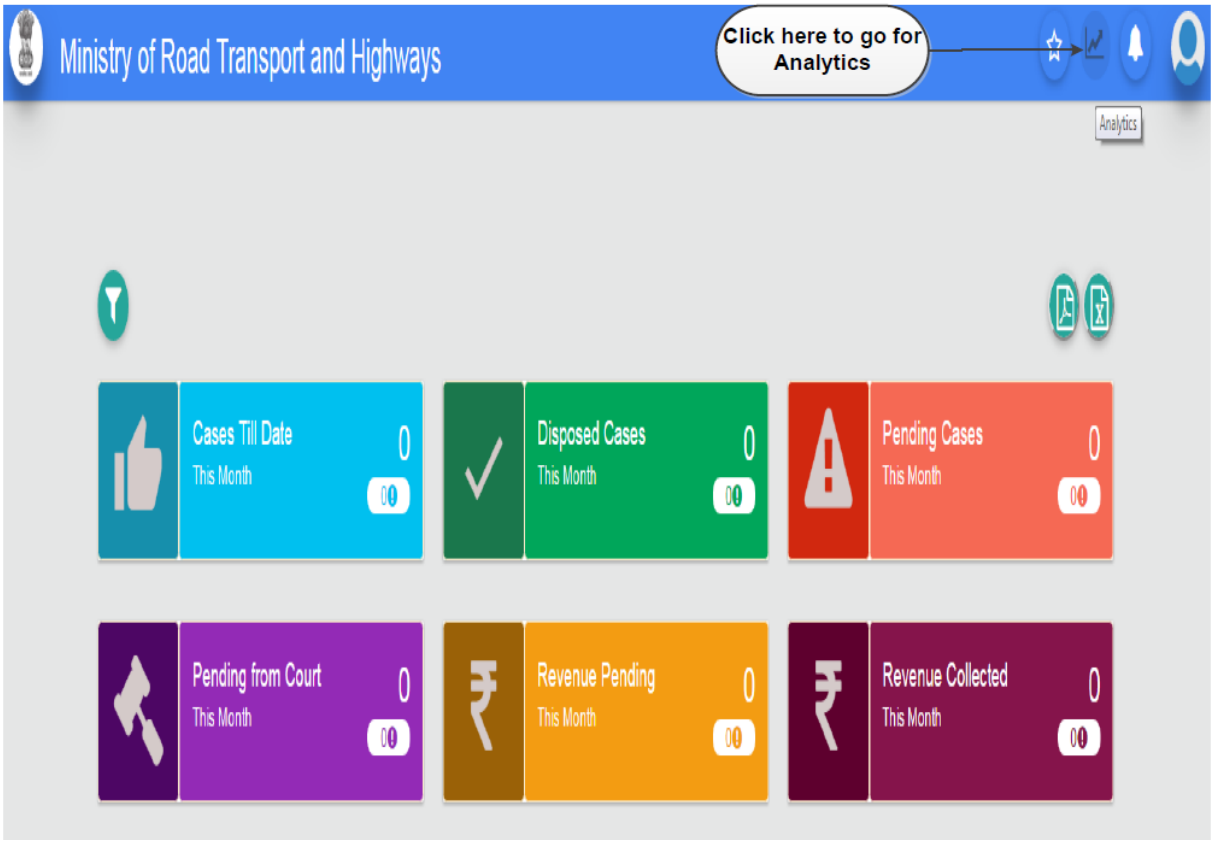
Click on "☆" icon to check the feedback from the other user.

Feedback home page screen where the admin user can able to check the other user feedbacks and their rating about the application



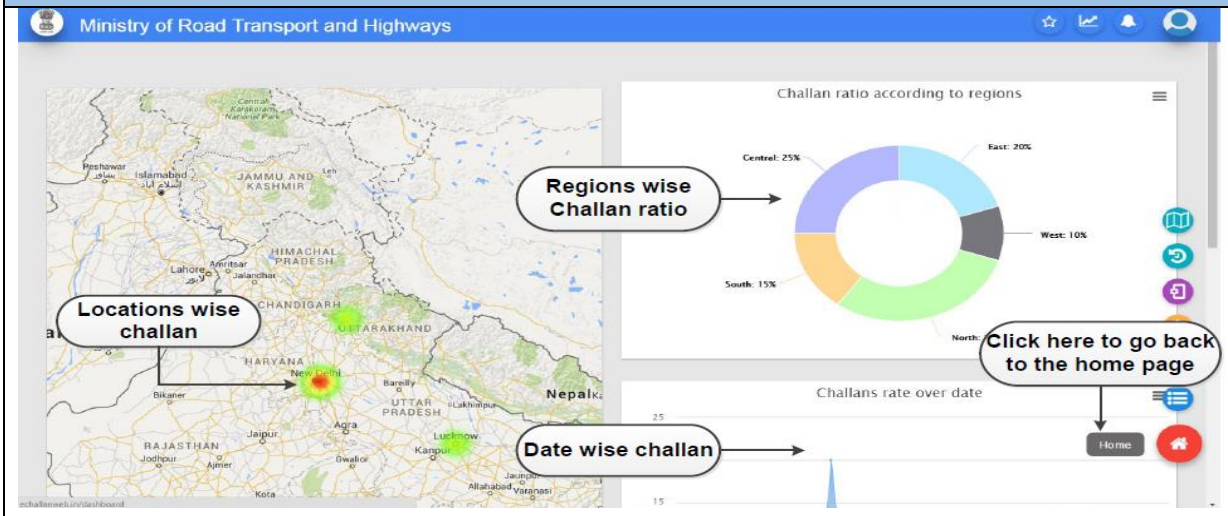
Upon clicking on "☆" icon, a new screen appear where the user check the feedbacks from other user and check their rating else click on 'Home' to return back to the home page.

Screen for analyzing the challan data



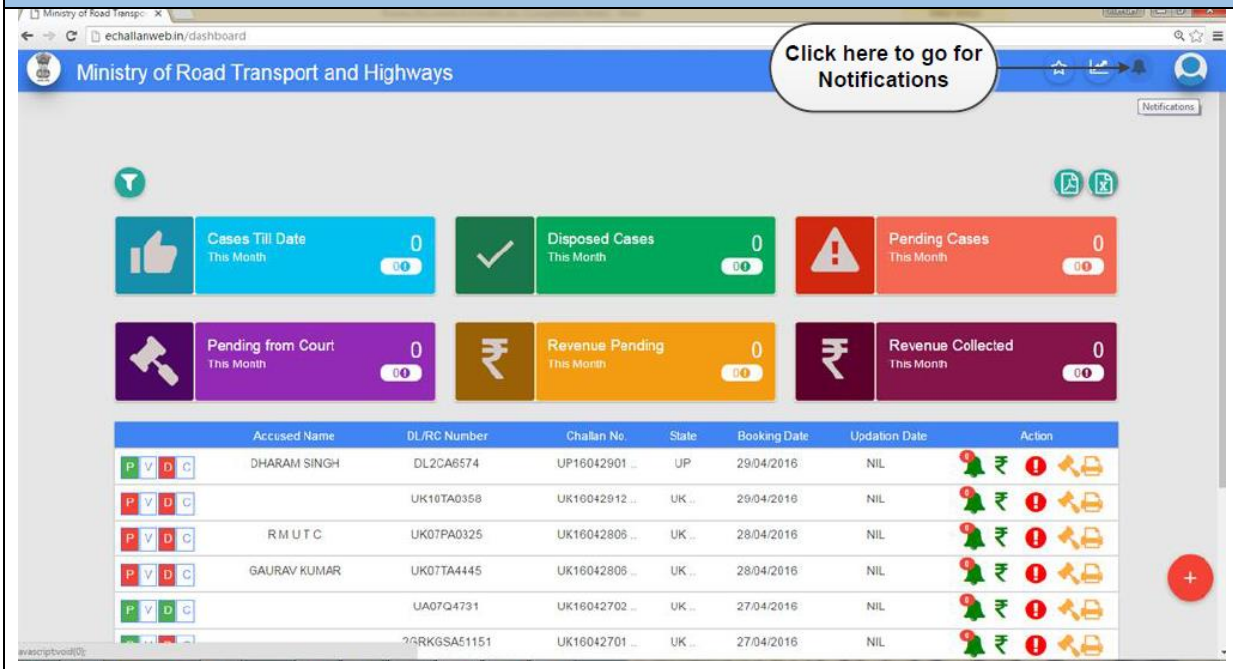
Click on "" icon to analysis the challan data across the city.

Analysis Challan home page screen where the admin user can able to analysis the challan data as per their requirement such as Challan ratio state wise, Challan rate over date etc



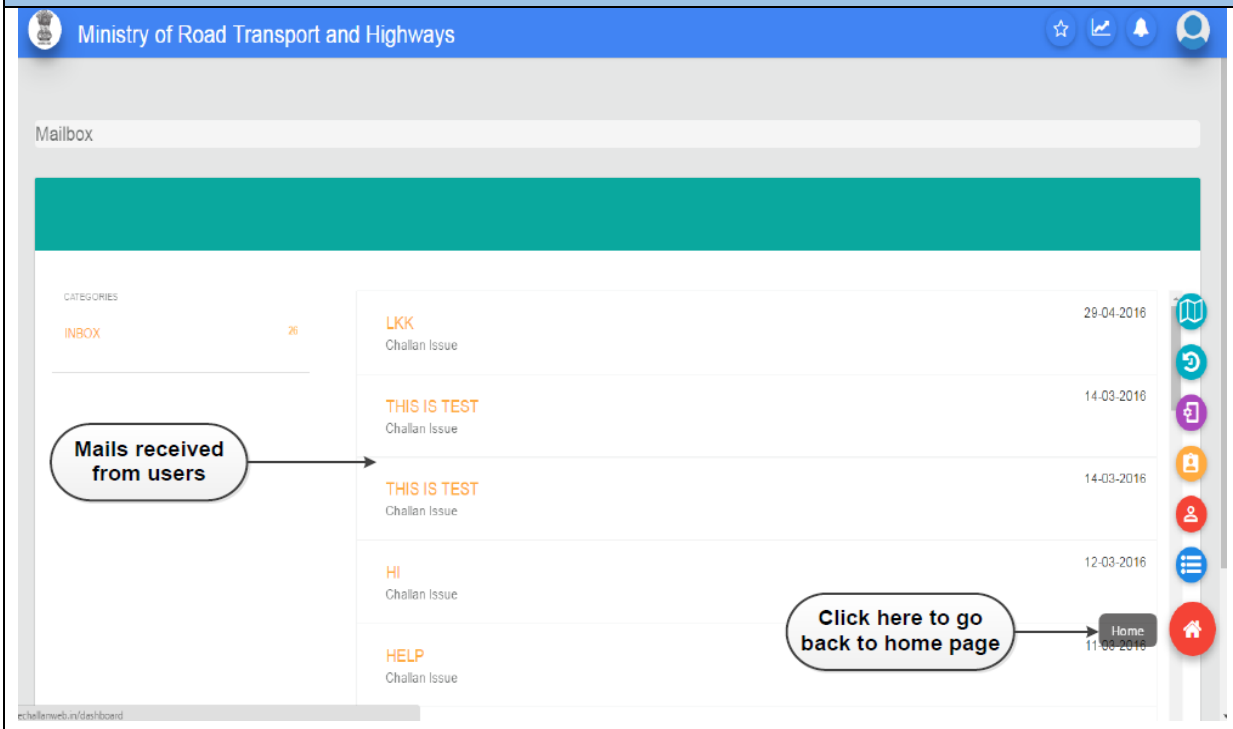
Upon clicking on "" icon, a new screen appear where the user analysis the challan ratio according to regions, challan rate over date and challan by officer ; else click on 'Home' to return back to the home page.

Screen for accessing the Notification



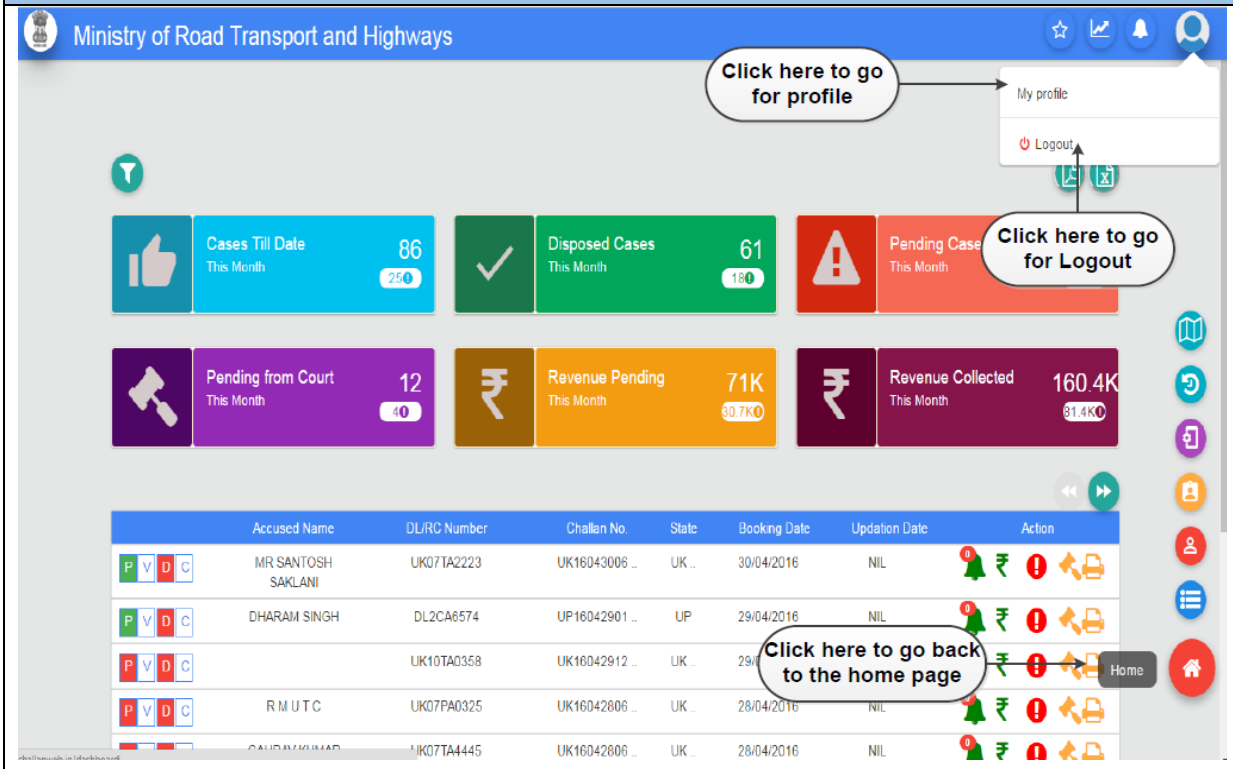
Click on " " icon to check the notifications and issues raised by the users.

Notifications home page screen where the user can able to check the mails received from other users.



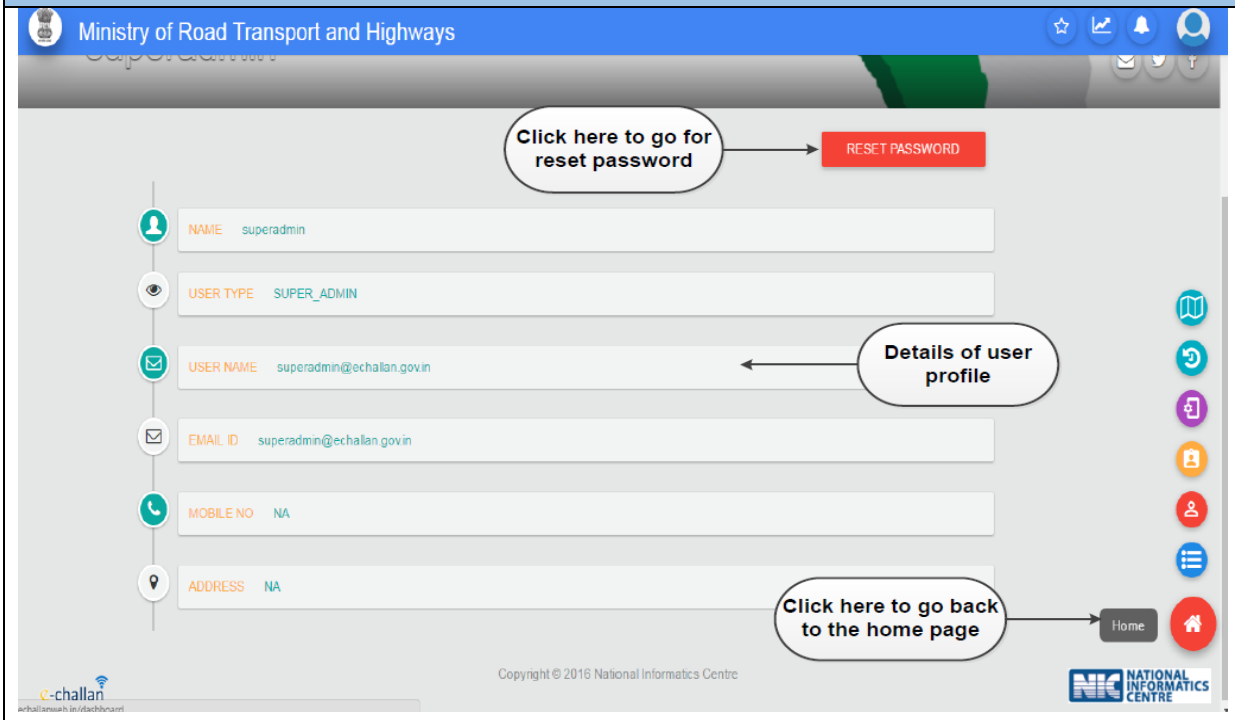
Upon clicking on " " icon, a new screen appear where the user check the detailed notifications and mails of the other users; else click on 'Home' to return back to the home page.

Screen for viewing the user profile or logout from the web application



Click on " " icon to view the user profile on clicking on 'My Profile' or click on 'Logout' to switch from the application or click on 'Home' to return back to the home page.

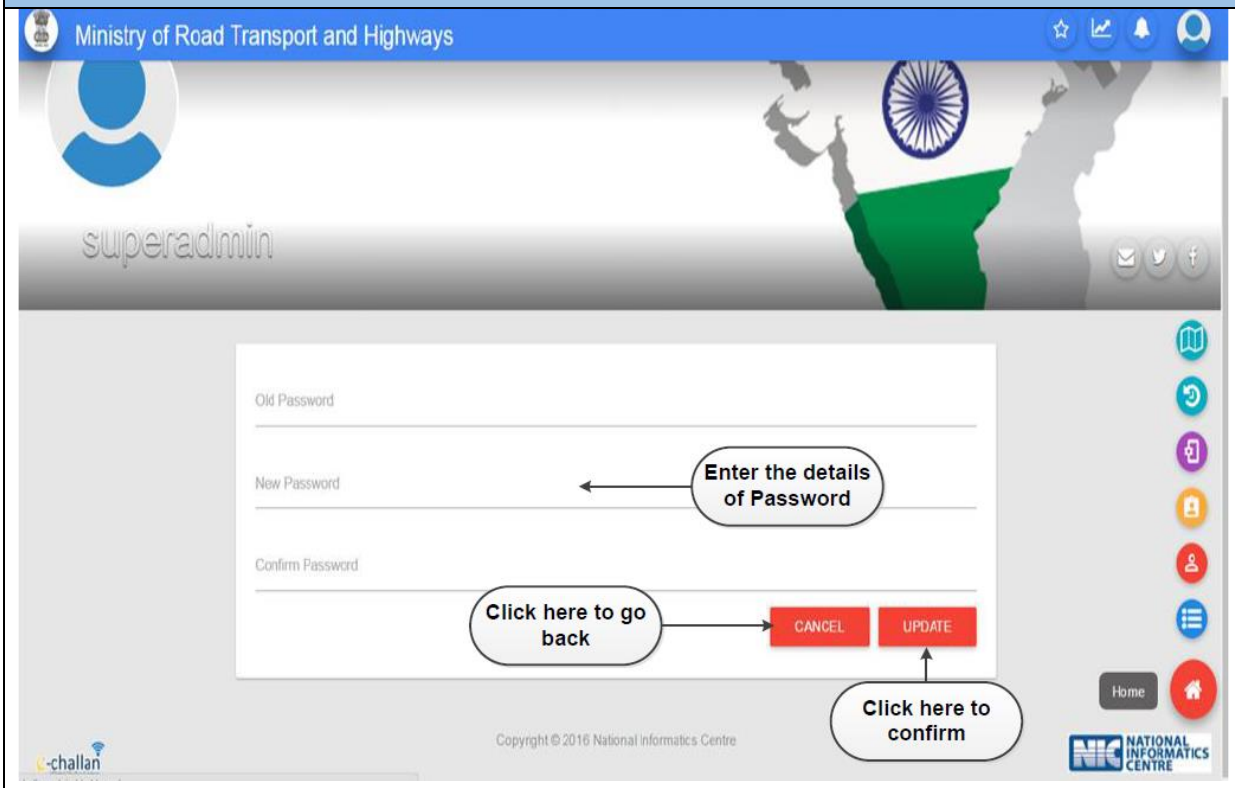
Profile Page screen for viewing the profile information's



Upon clicking on 'My Profile', A new screen appear where the user view the profile of his own or click on 'Reset Password' to rest his user id password ; else click on 'Home' to return back

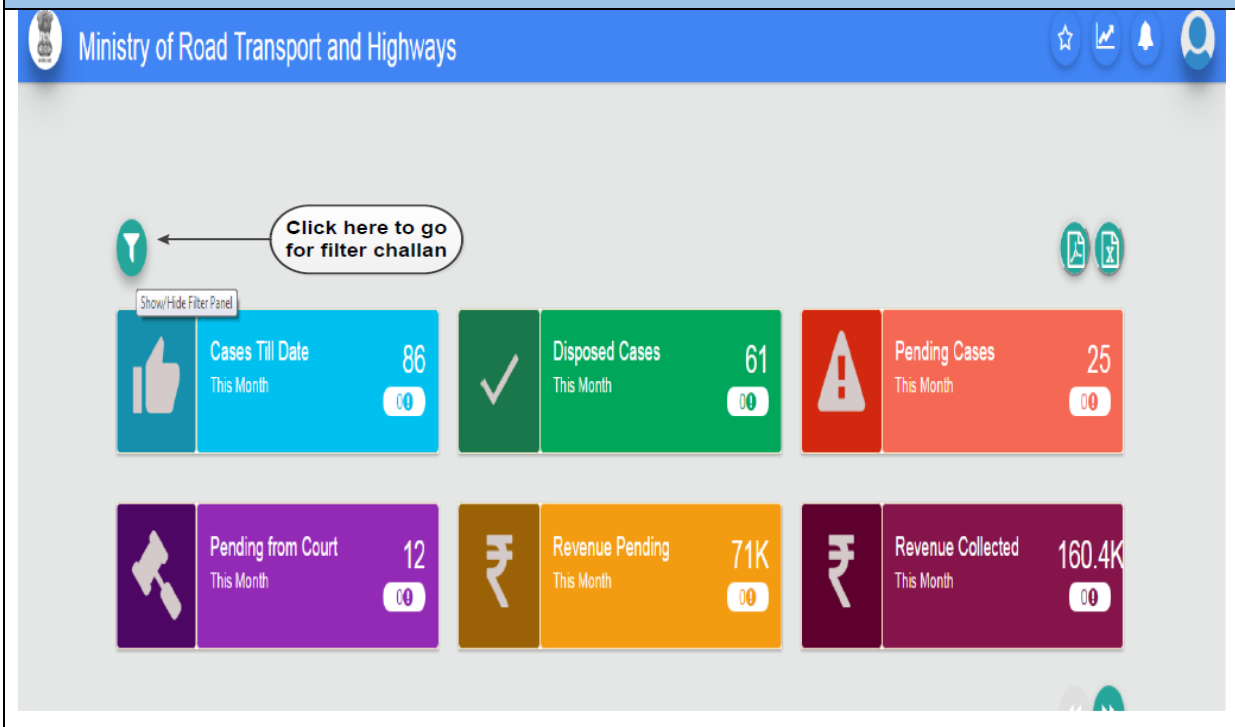
to the home page.

Screen for Password Resetting



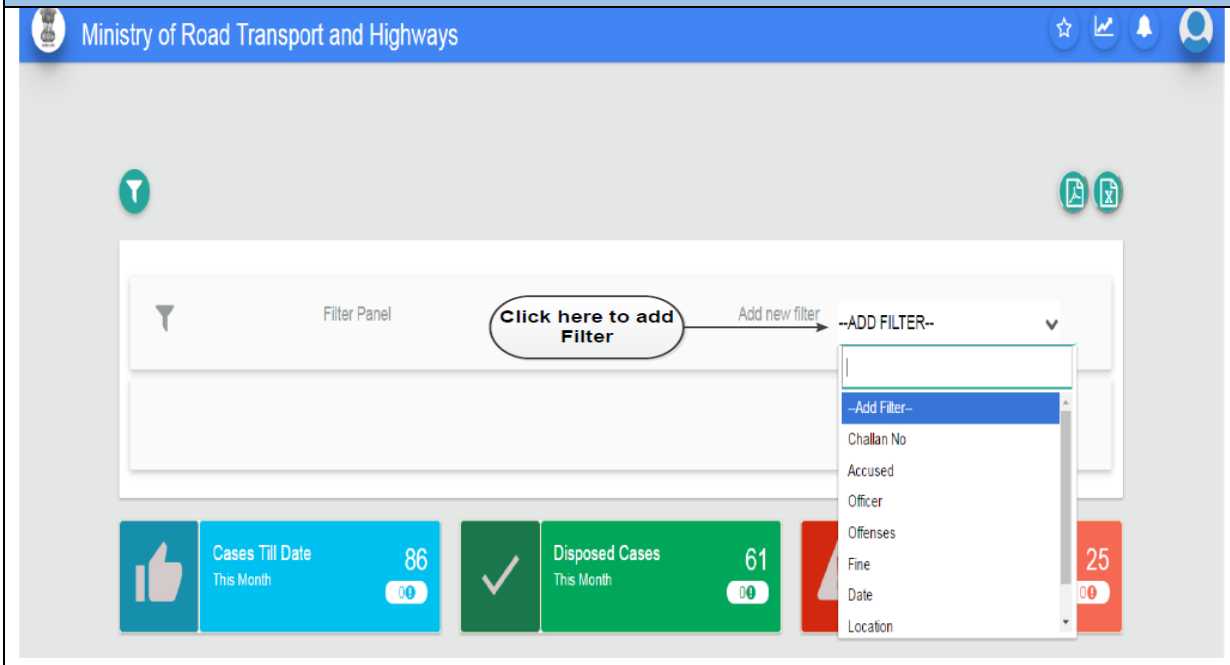
Upon clicking on 'Password Reset', A new screen appear where the user enter his old password, new password & confirm password and click on 'update' to generate a new password or click on 'Cancel' to return or click on 'Home' to return back to the home page.

Screen for searching the challan through filter



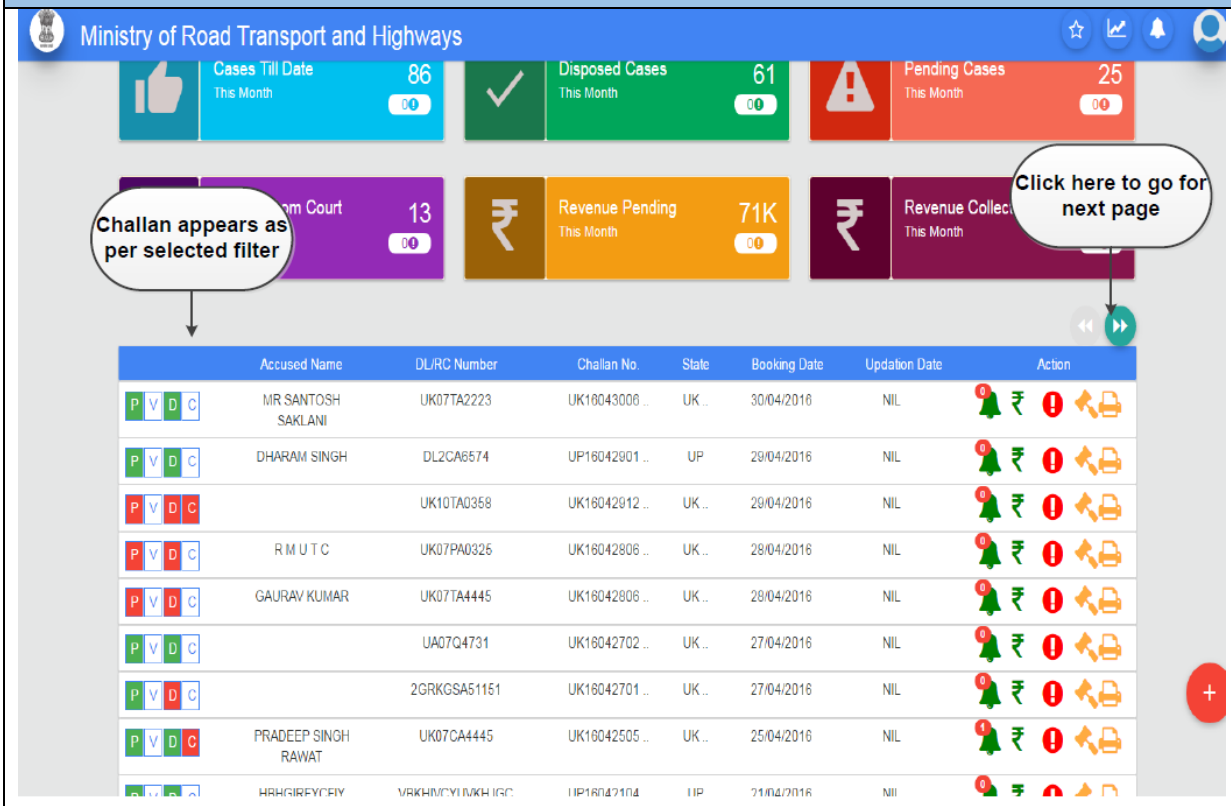
Click on ‘ ’ icon to show or hide the filter panel.

Screen for Challan filtering



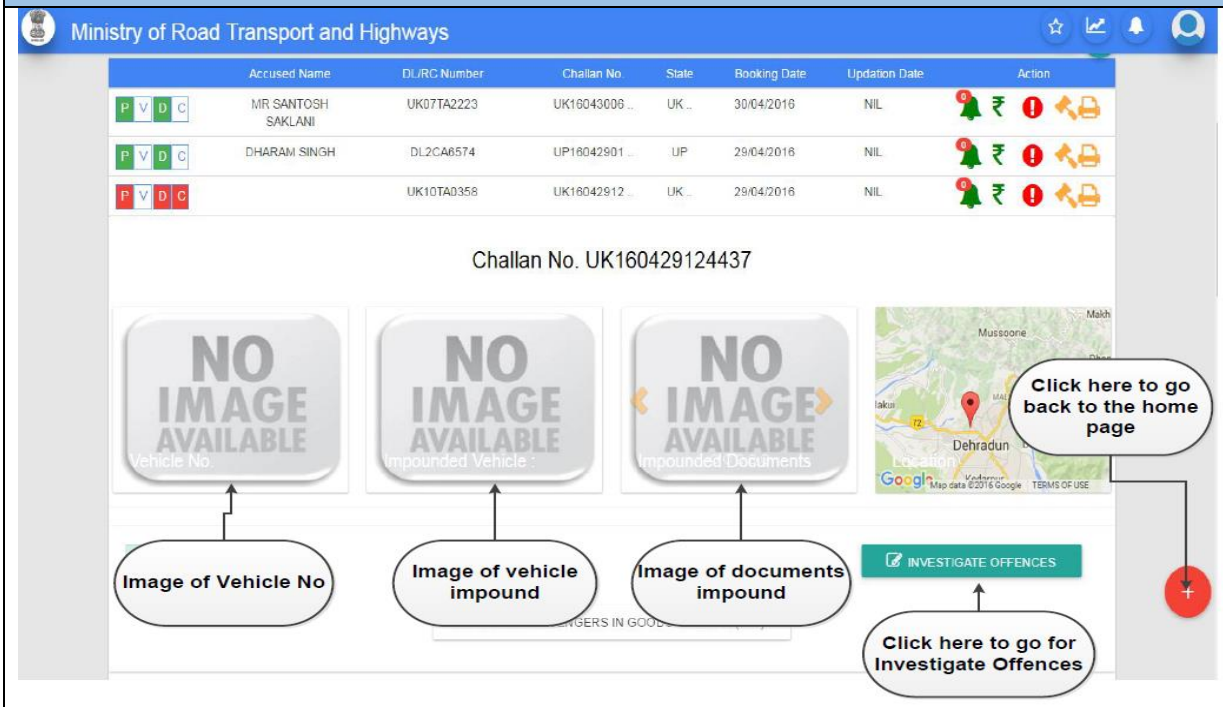
Upon clicking on ' ' icon , a new window appears where the user can search the challan from the drop down options such as challan number, accused, officer, offenses, fee, date, location and location.

Screen of Challan Filtered



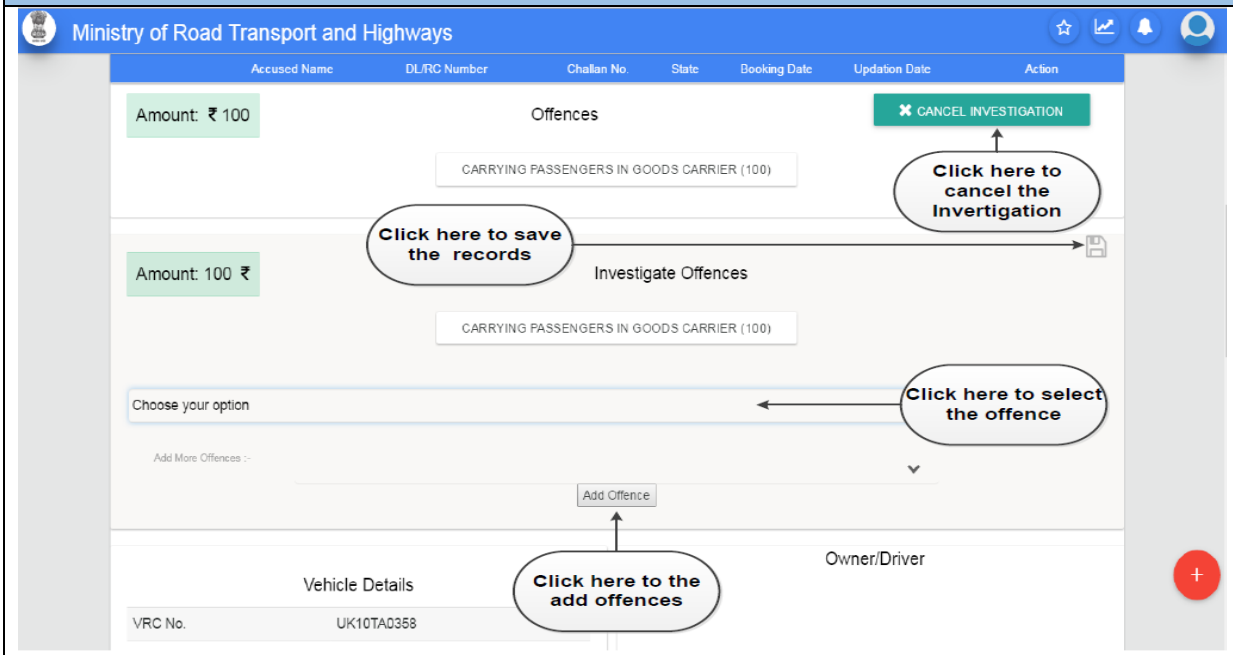
On home page of the web application screen, list of all/filtered pending challan displayed.

Challan Details screen where the admin user can able to view the image of RC, Impounded vehicle, Impounded documents uploaded by the officer



Upon clicking on 'Challan No', A new window appears where the user check the images uploaded by the enforcement officer such as images of Vehicle No., Impounded Vehicle and Impounded Documents or click on ''Investigate Offences'' for verification

Investigate Offences home page screen where the admin user can able to verify the offences and their penalties



Once the user clicked on 'Investigate Offences', A new window appears where the user click on 'Add offence' form the list of offences for addition of any other offences and click on

‘ ’ icon to save the offence details or click on ‘Cancel Investigation’ to get return back to the page without the additions

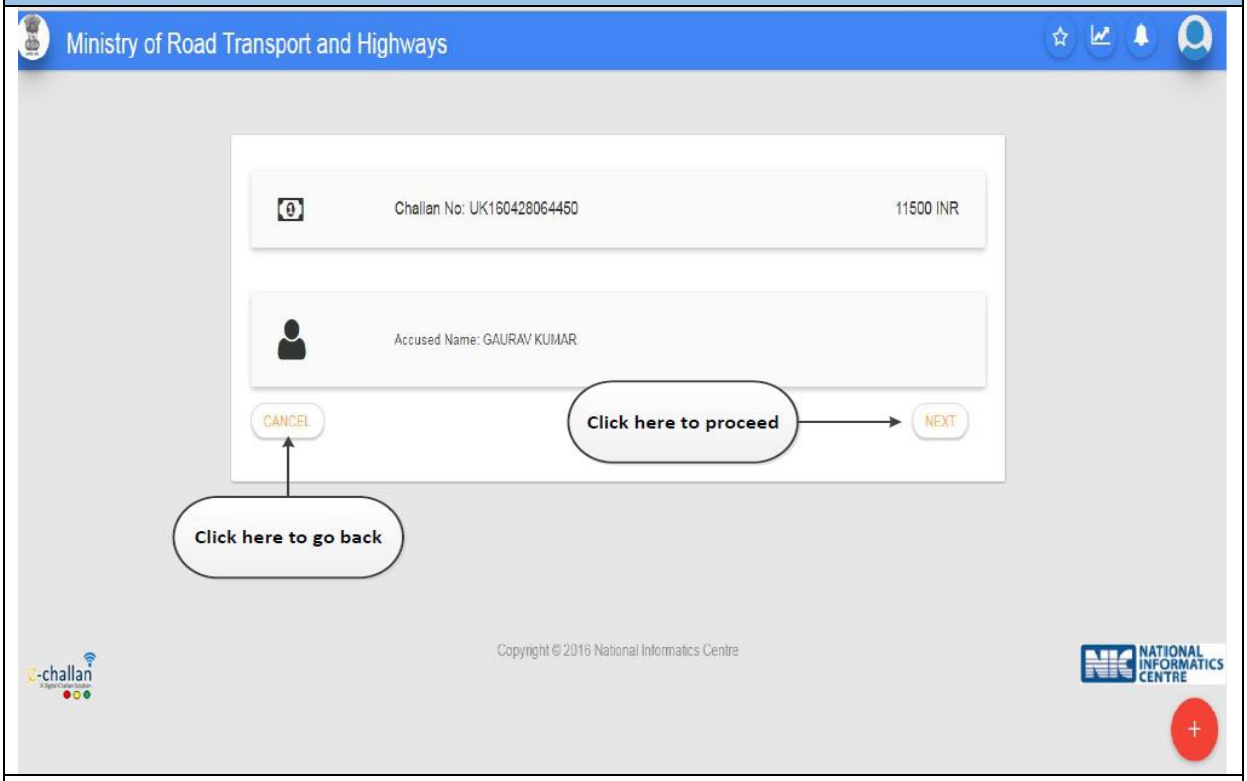
Screen of Notification received from the offender

Click on ‘ ’ icon to check the notification from the offender

Screen for accessing the Payment of challan

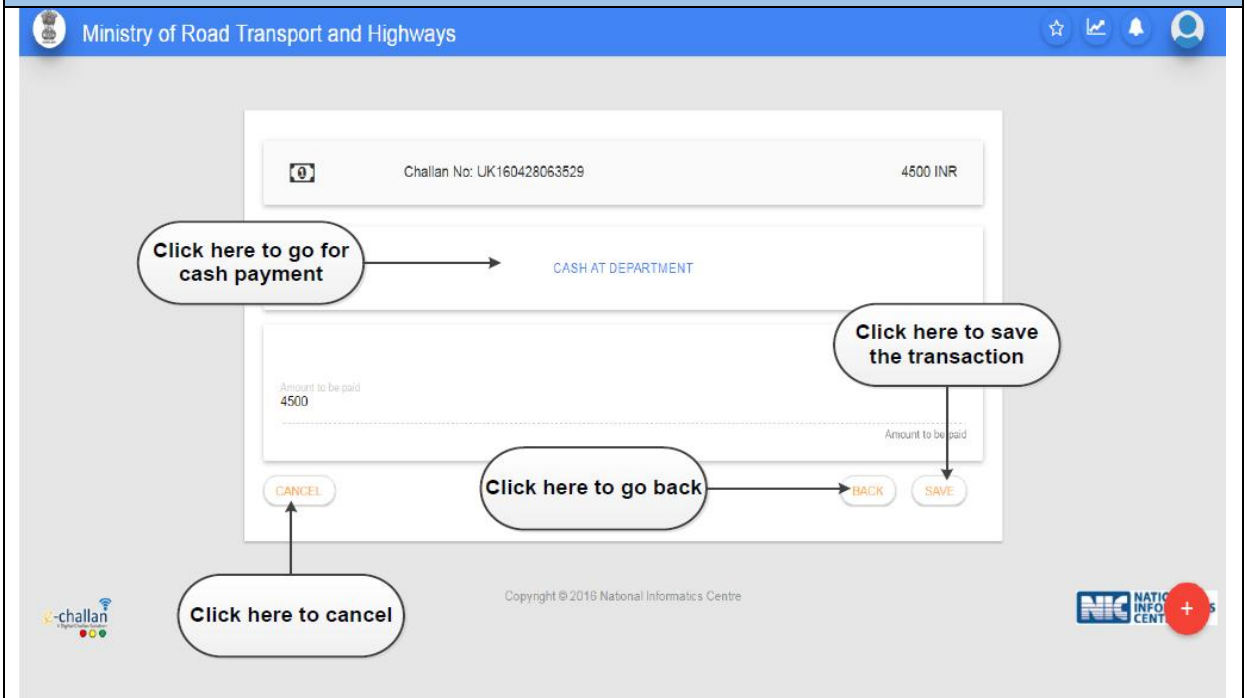
Click on ‘ ’ icon to proceed the pending payment of the challan

Screen for initiating the payment of challan



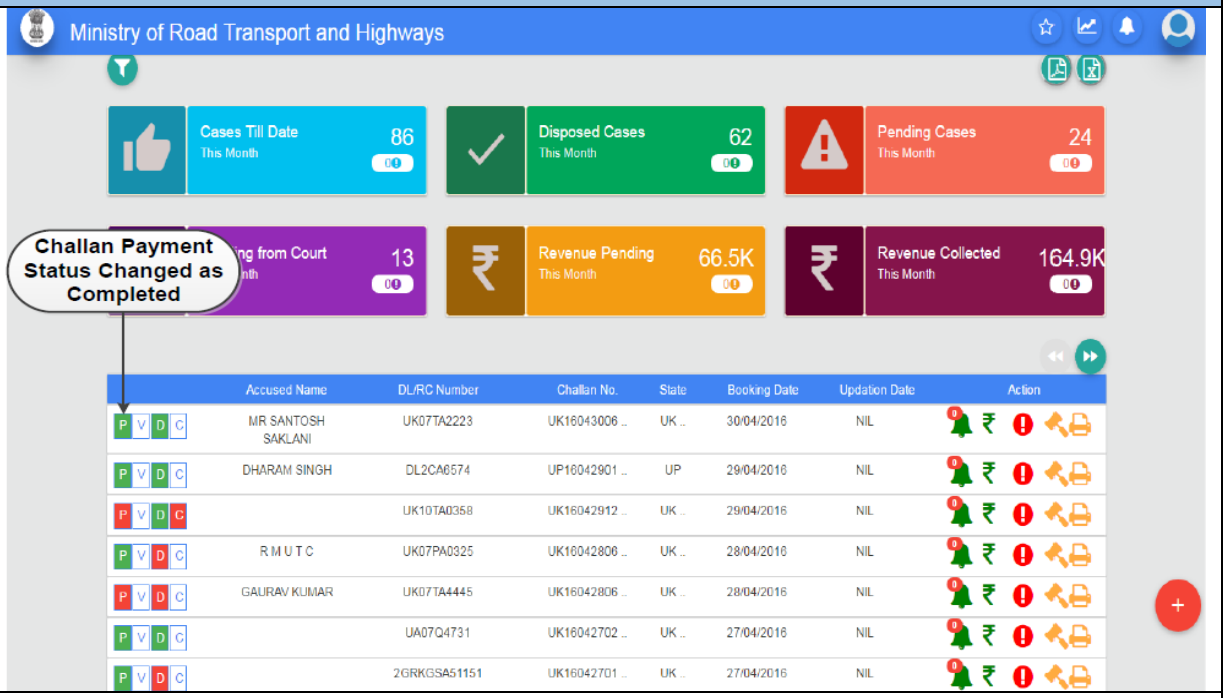
Upon clicking on ‘ ₹ ’ icon , A new screen appears where the user click on ‘NEXT’ to proceed future or Click on ‘Cancel’ to return back to the page

Screen for selecting the mode of payment



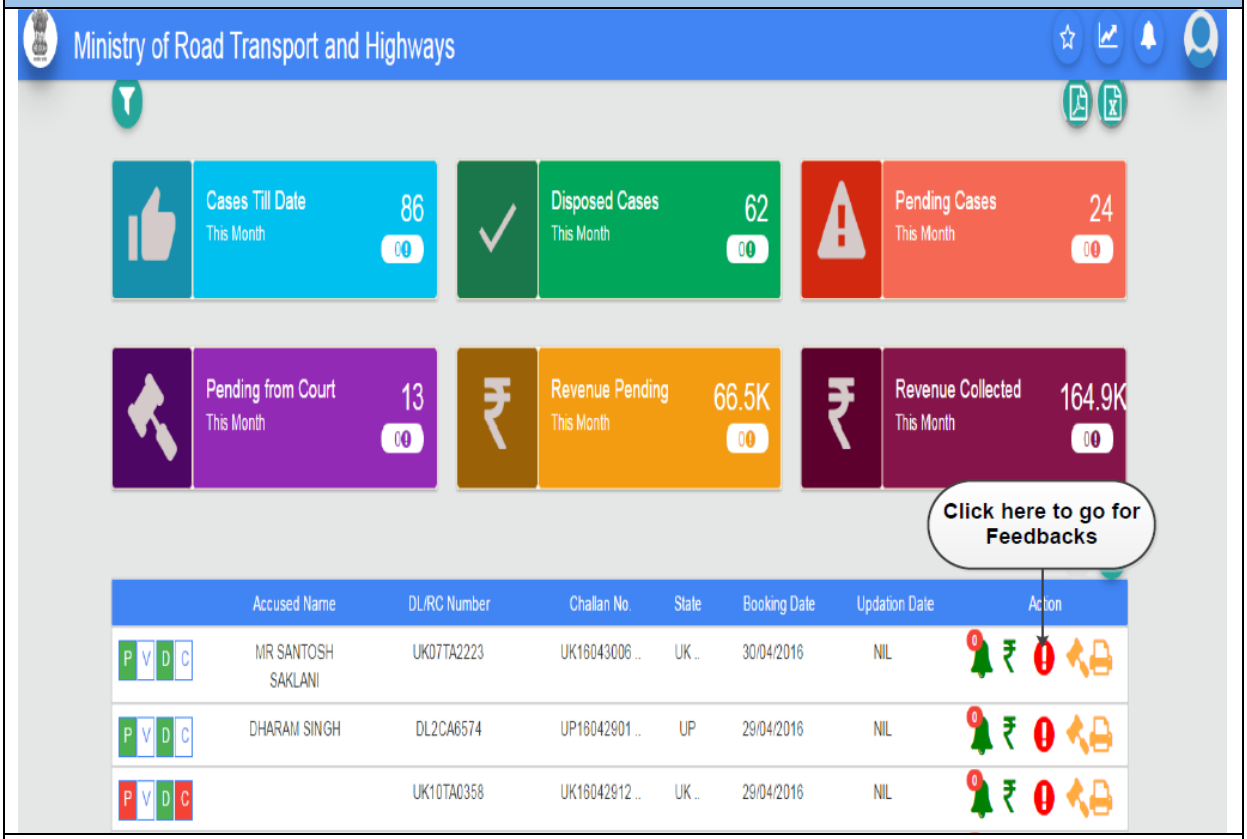
Once the user clicked on ‘NEXT’, Again a new screen appears where the user click on ‘Cash at Department’ then click on ‘Save’ to proceed the payment or click on ‘BACK’ to return back or click on ‘CANCEL’ to cancel the transaction

Payment completed home page Screen



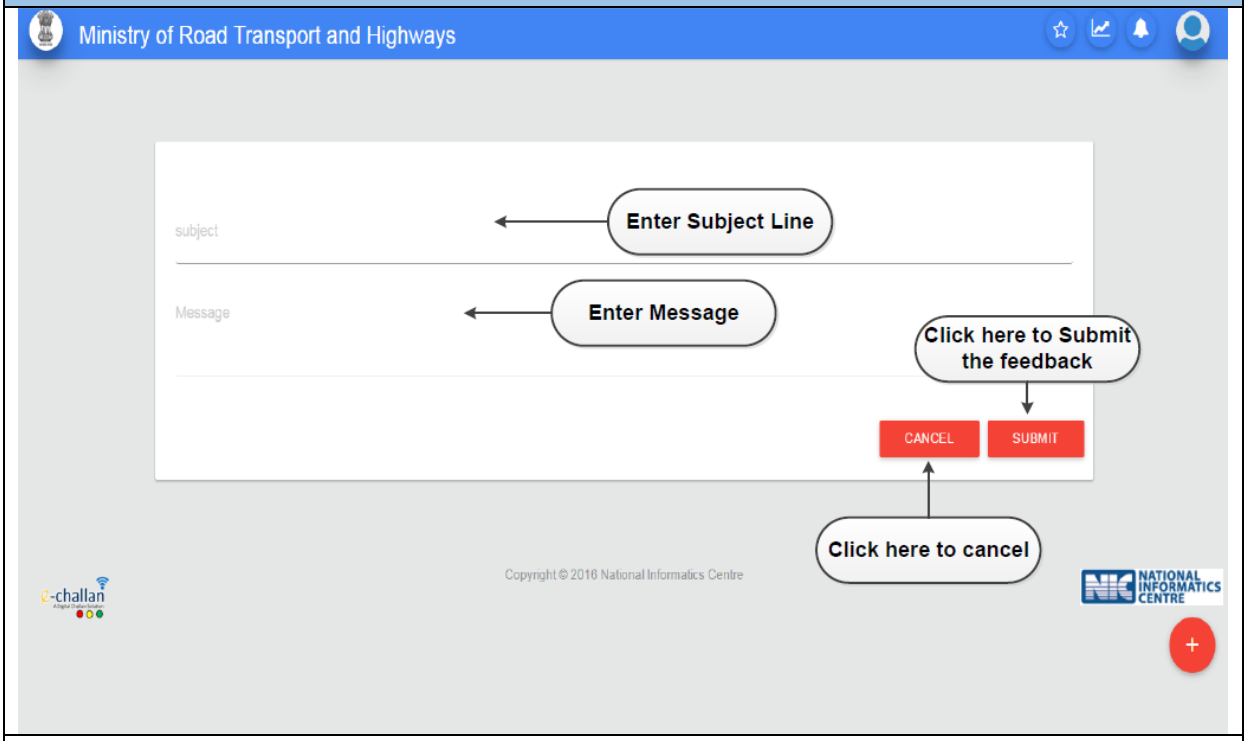
Upon clicking on 'SAVE' , Home page screen appears where the status of the challan is changed as 'Payment Completed'

Screen for accessing the feedback



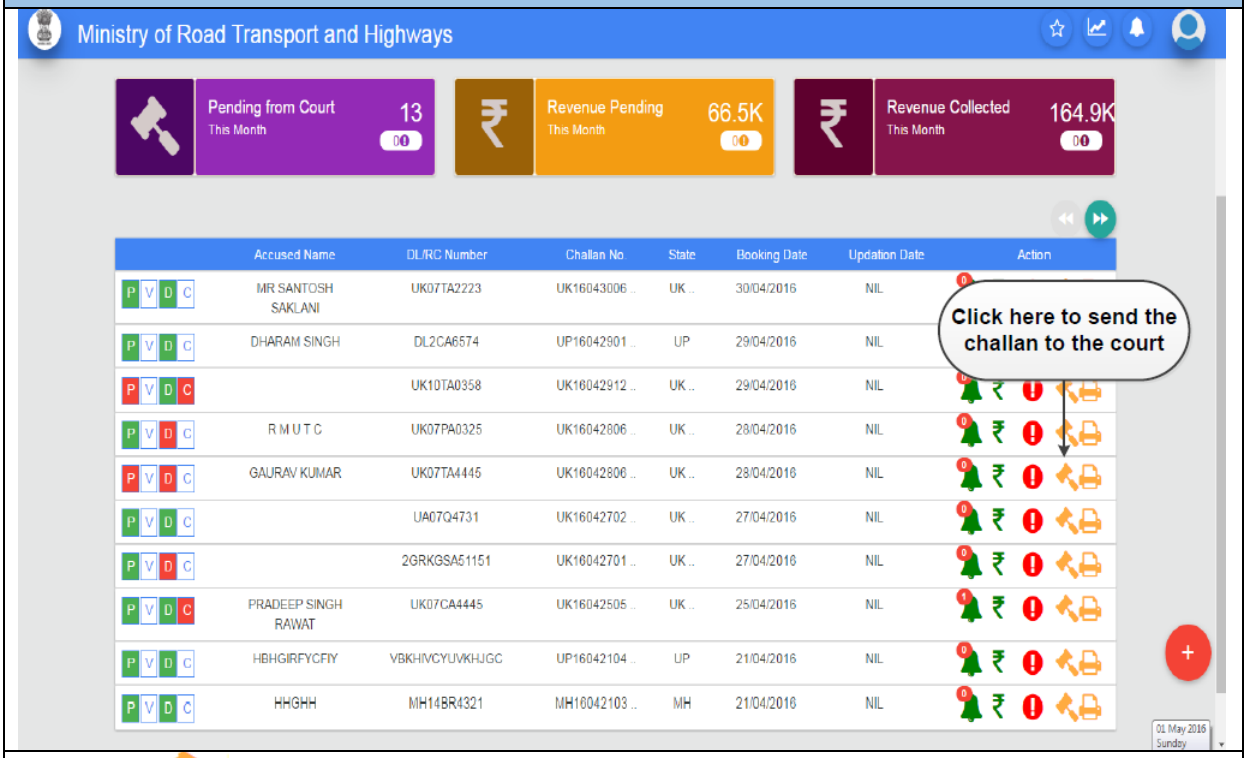
Click on ' ' icon to give any feedback to the user/ offender

Screen for sending the feedback to the user/ offender



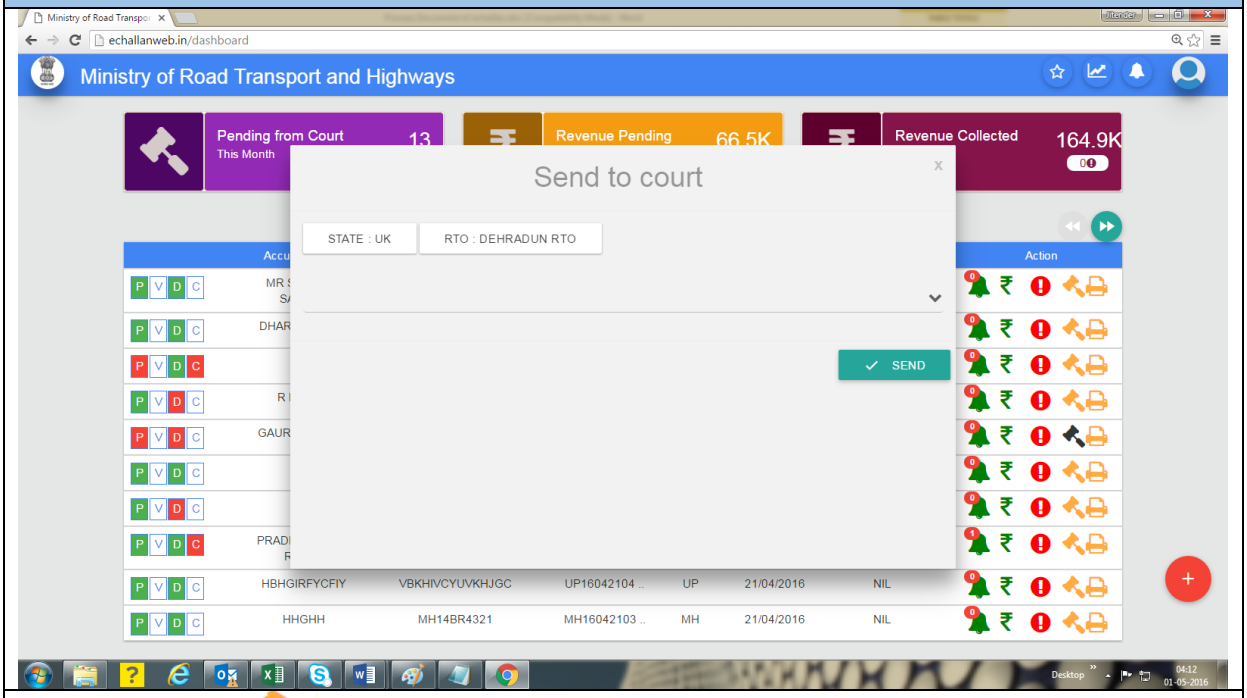
Upon clicking on ‘ ’ icon , a new screen appears where the user write his feedback and click on ‘SUBMIT’ for submission or click on ‘CANCEL’ for return back or click on ‘home’ to go back to the home page.

Screen for initiating the challan to the court



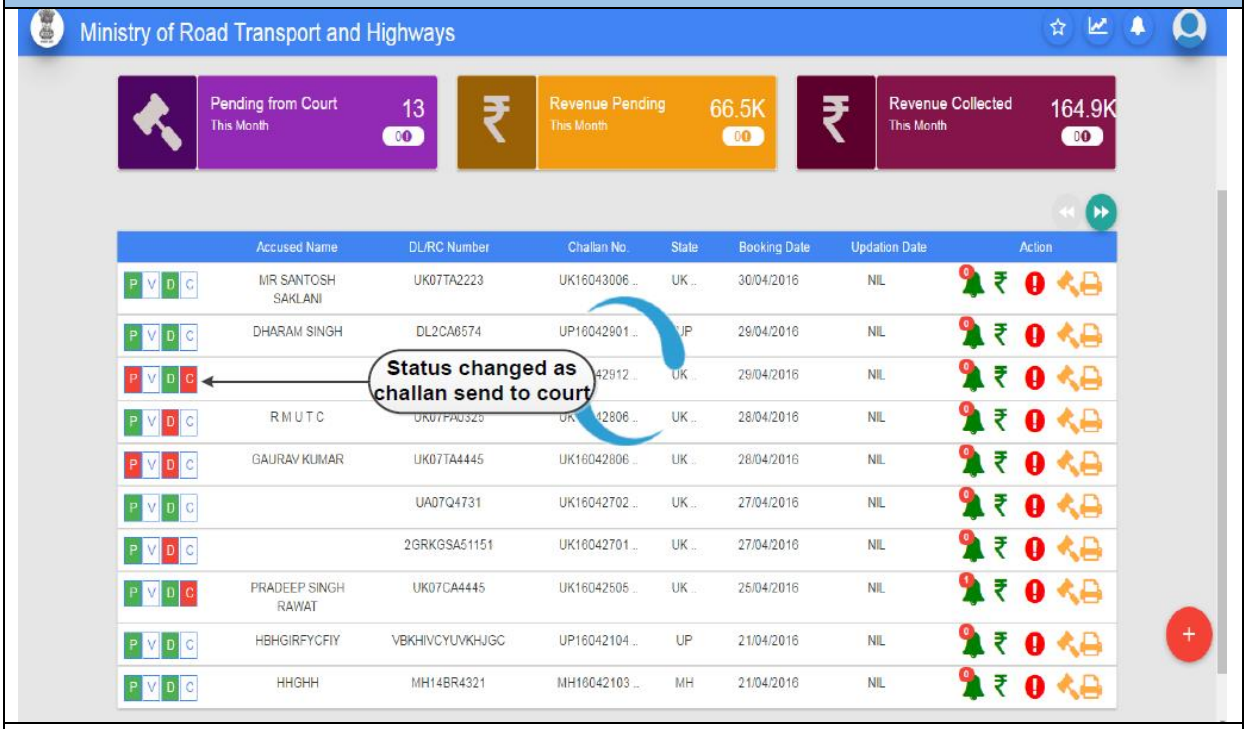
Click on ‘ ’ icon to send the challan to court

Screen for assigning the court from the list of courts



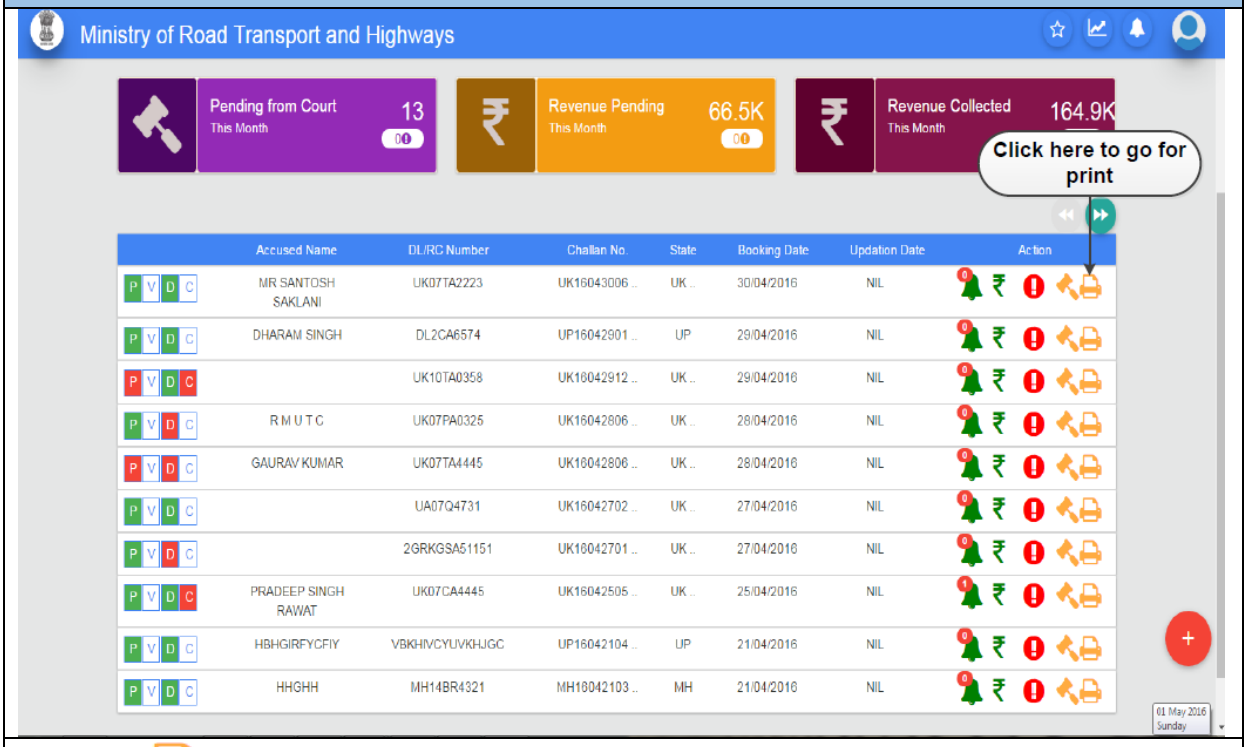
Upon clicking on ‘ ’ icon, a new window appears where the user select the court from the list of court and click on ‘SEND’ for submission

Challan sent to court confirmation home page screen



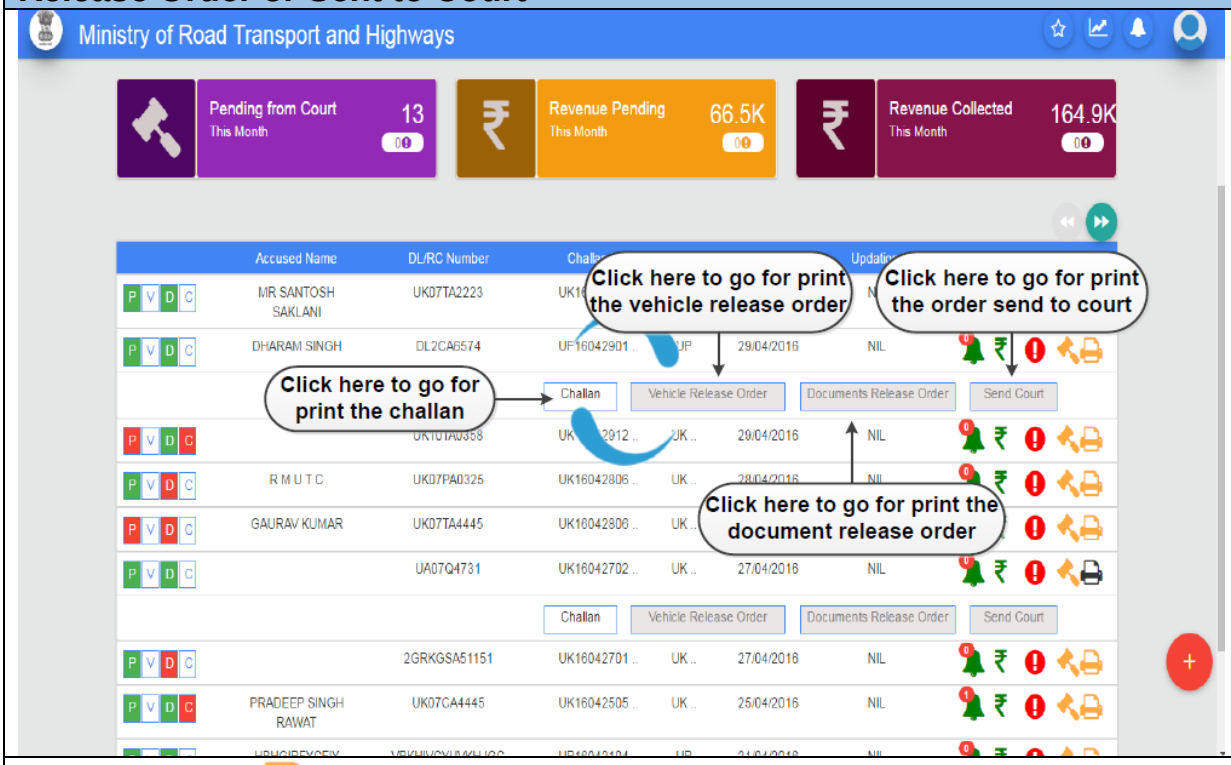
Once the user clicked on 'SEND', Home page screen appears where the status of the challan is changed as 'SENT TO COURT'.

Screen for initiating the Print



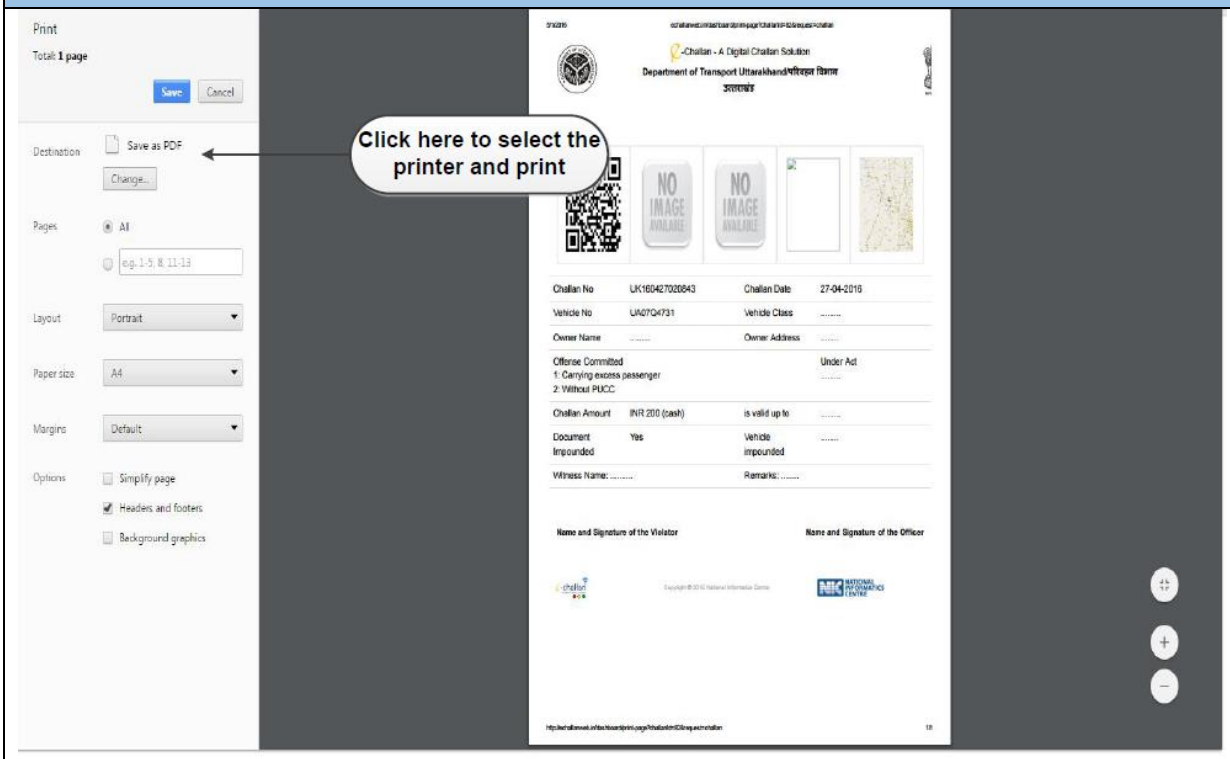
Click on ' ' icon to print the challan/ vehicle released order/ Document released order or Challan sent to court

Screen for printing the Challan, Vehicle Release Order, Document Release Order or Sent to Court



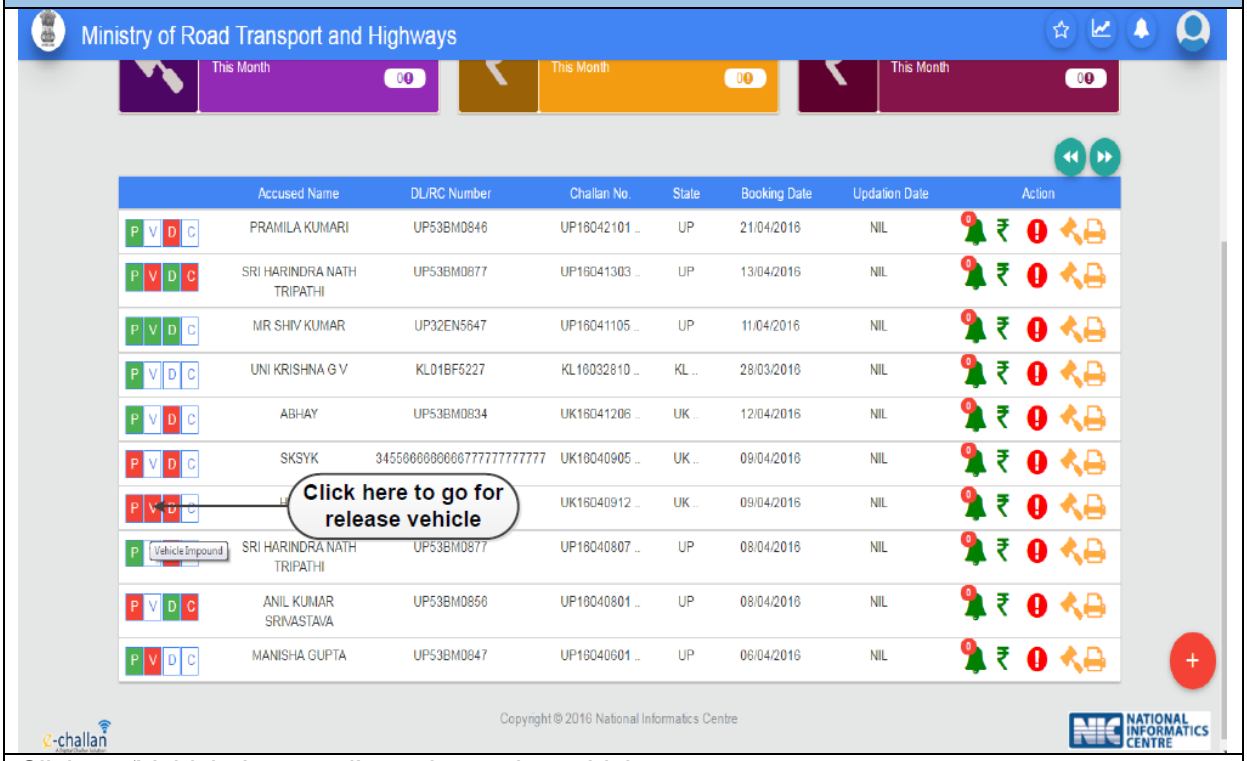
Upon clicking on ‘ ’ icon, a new window appears where the user print the ‘Challan’, ‘Vehicle Release Order’, ‘Document Release Order’ or ‘Sent to Court’

Screen for selection of printer



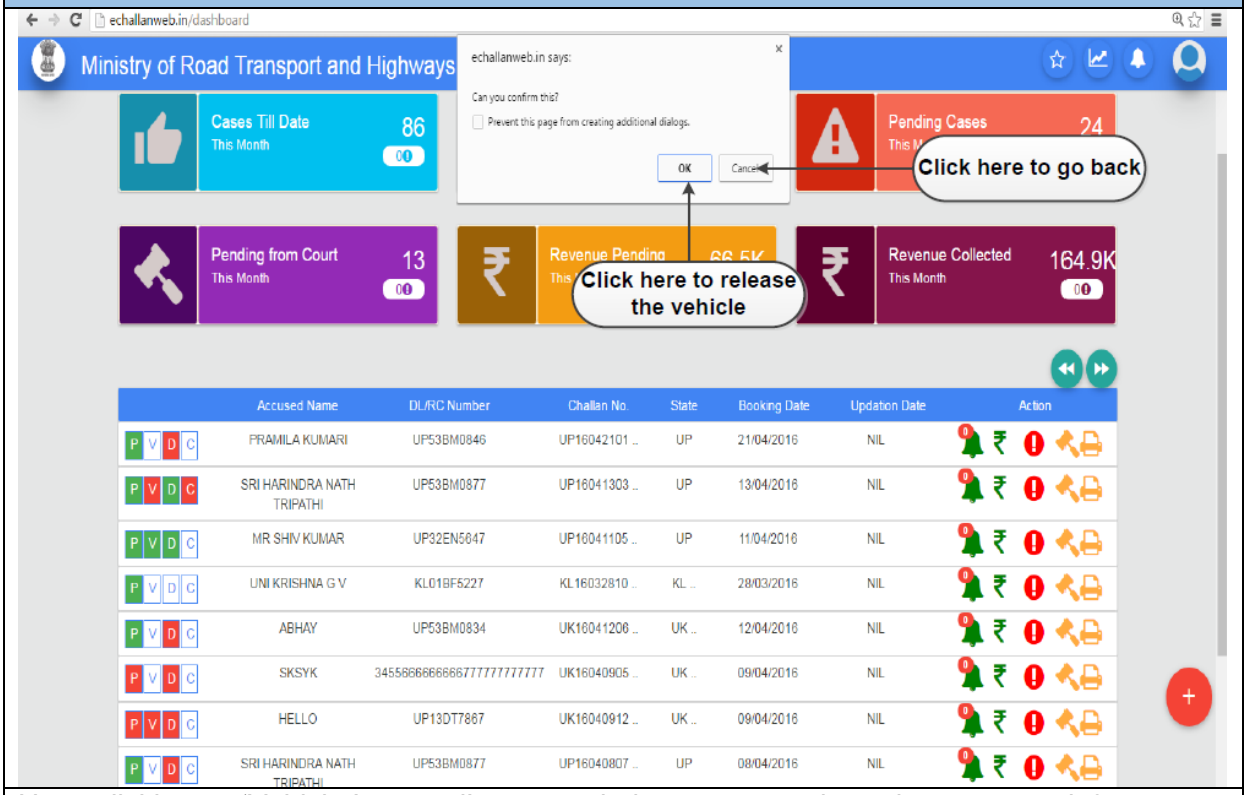
Once the user clicked on the list to options to print, a receipt of the challan is generated. The user can take a print of this.

Screen for initiating the command of releasing the vehicle



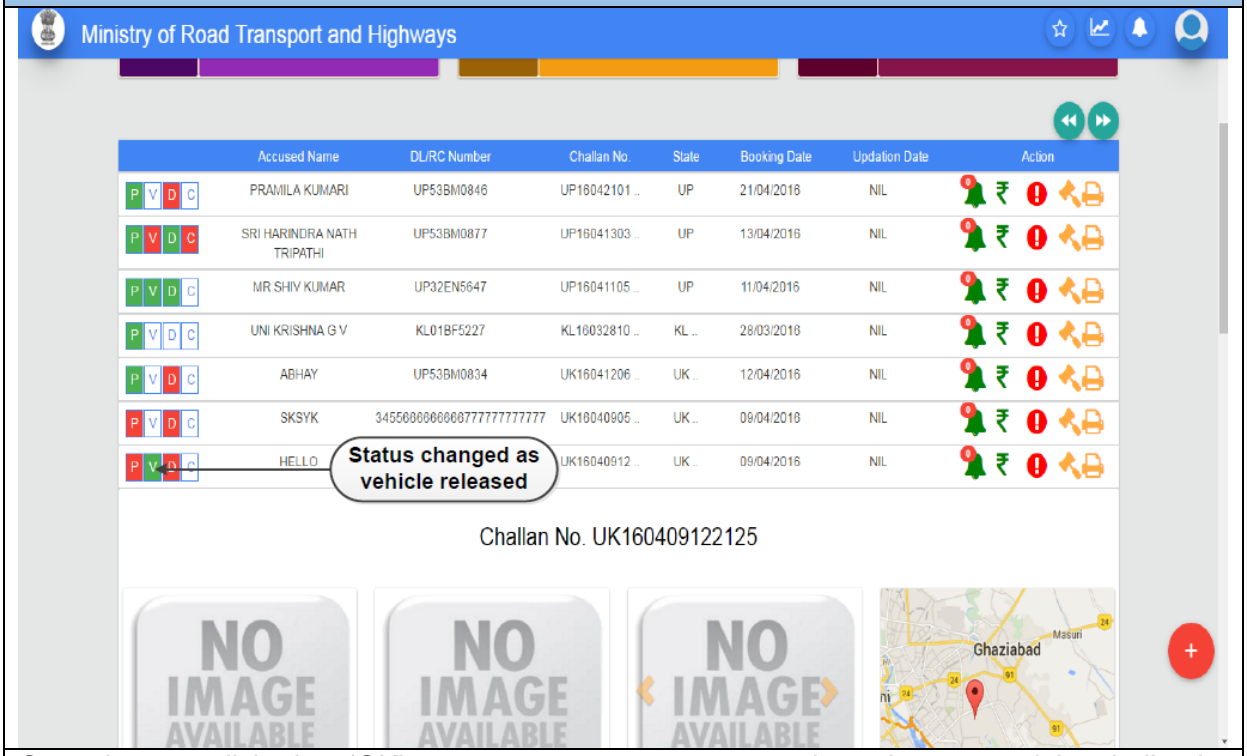
Click on 'Vehicle Impound' to release the vehicle.

Confirmation for releasing the Impounded Vehicle



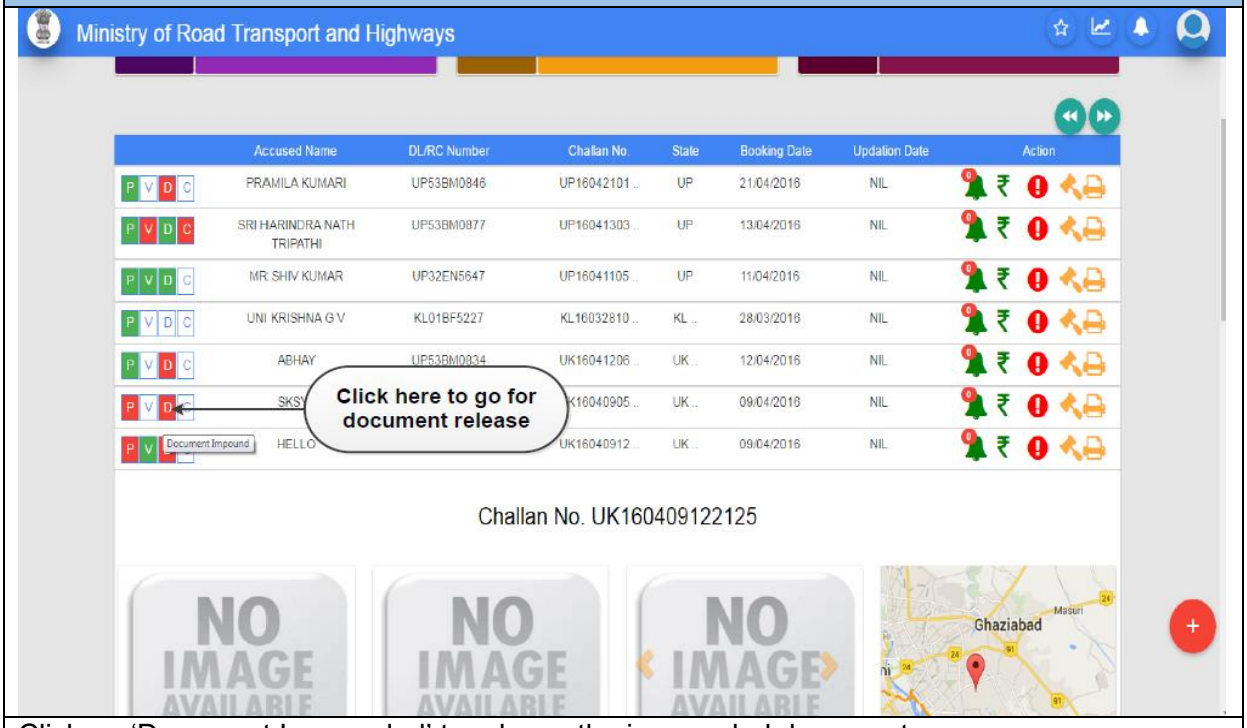
Upon clicking on 'Vehicle Impound', A new window appears where the system ask from user to 'Confirm' to release, Click 'Ok' to proceed or click on 'Cancel' to return back.

Status changed as 'Vehicle Released' home page screen



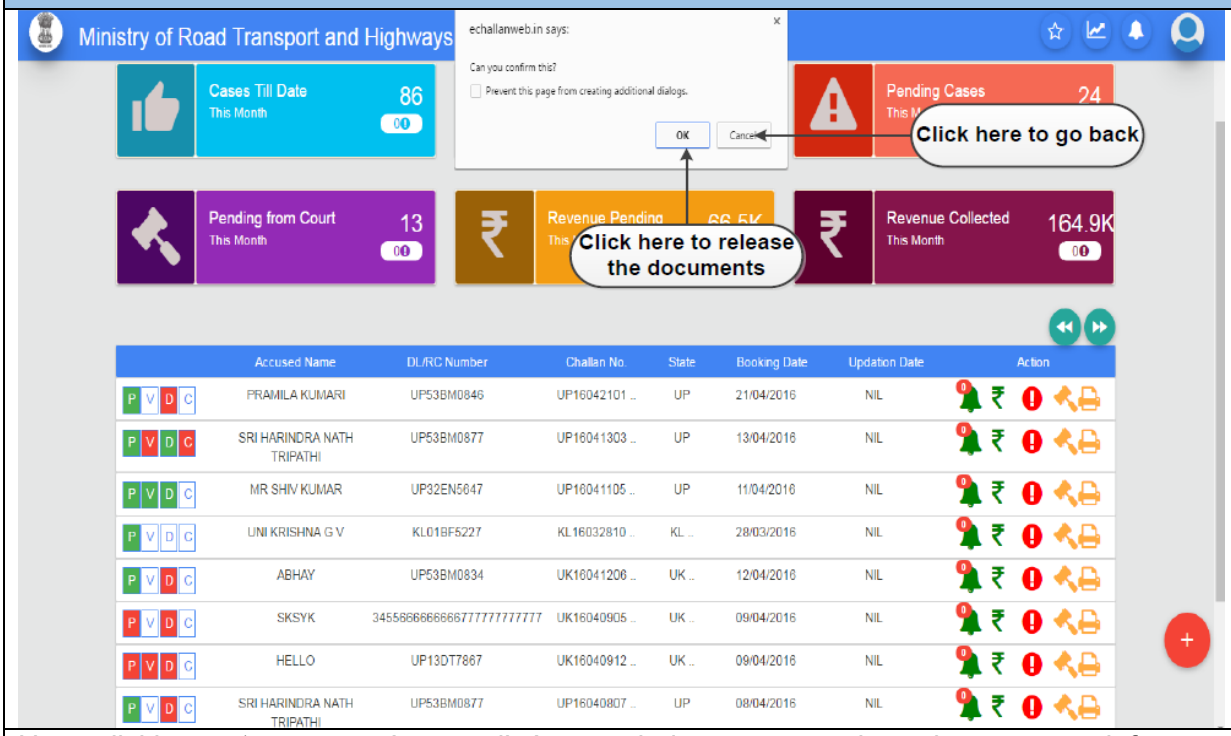
Once the user clicked on 'OK', Home page screen appears where the status of the challan is changed as 'Vehicle Released'

Screen for initiating the command of release the impounded document



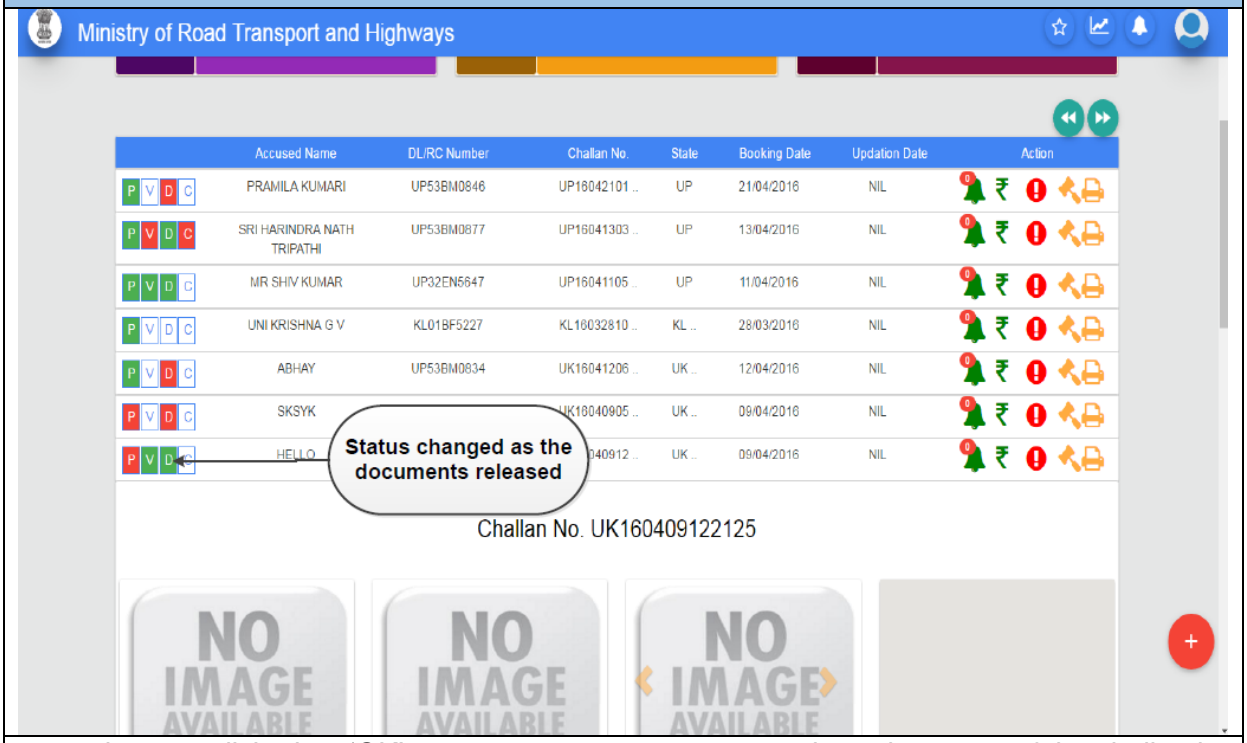
Click on 'Document Impounded' to release the impounded document

Confirmation for Releasing the impounded document screen



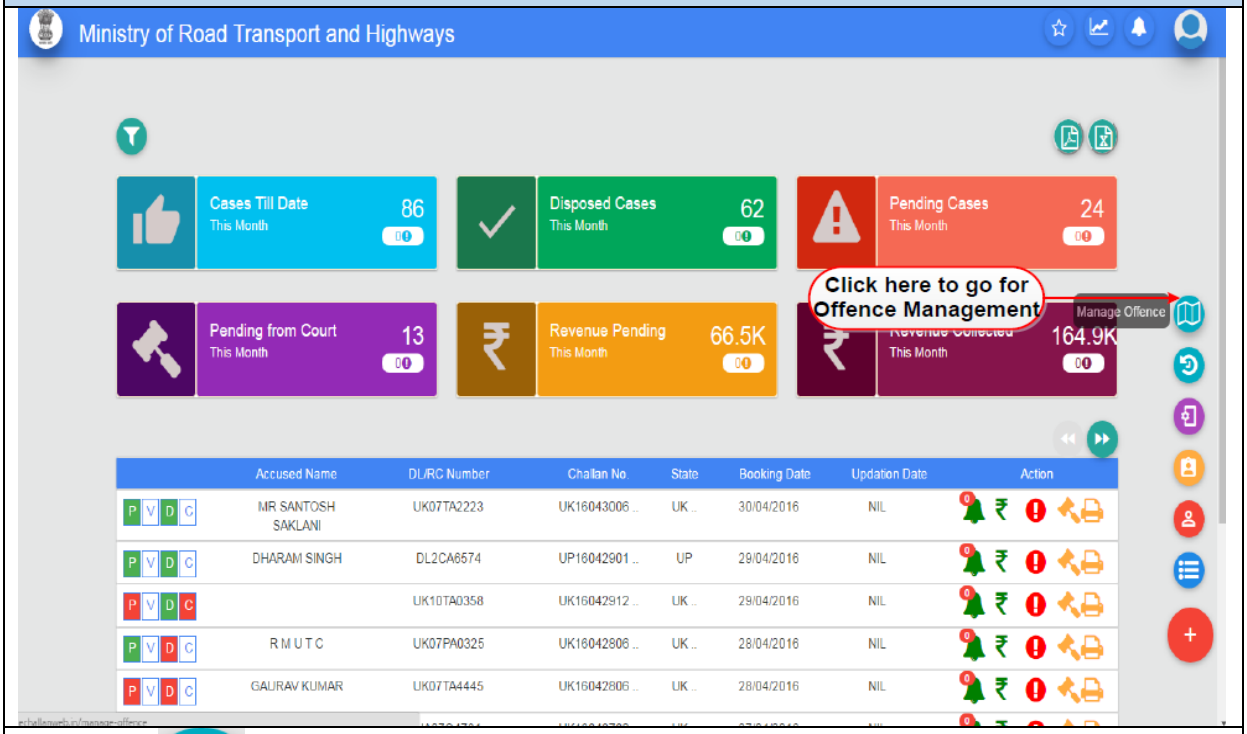
Upon clicking on 'Document Impound', A new window appears where the system ask from user to 'Confirm' to release, Click 'Ok' to proceed or click on 'Cancel' to return back.

Status changed as 'Document Released' home page screen



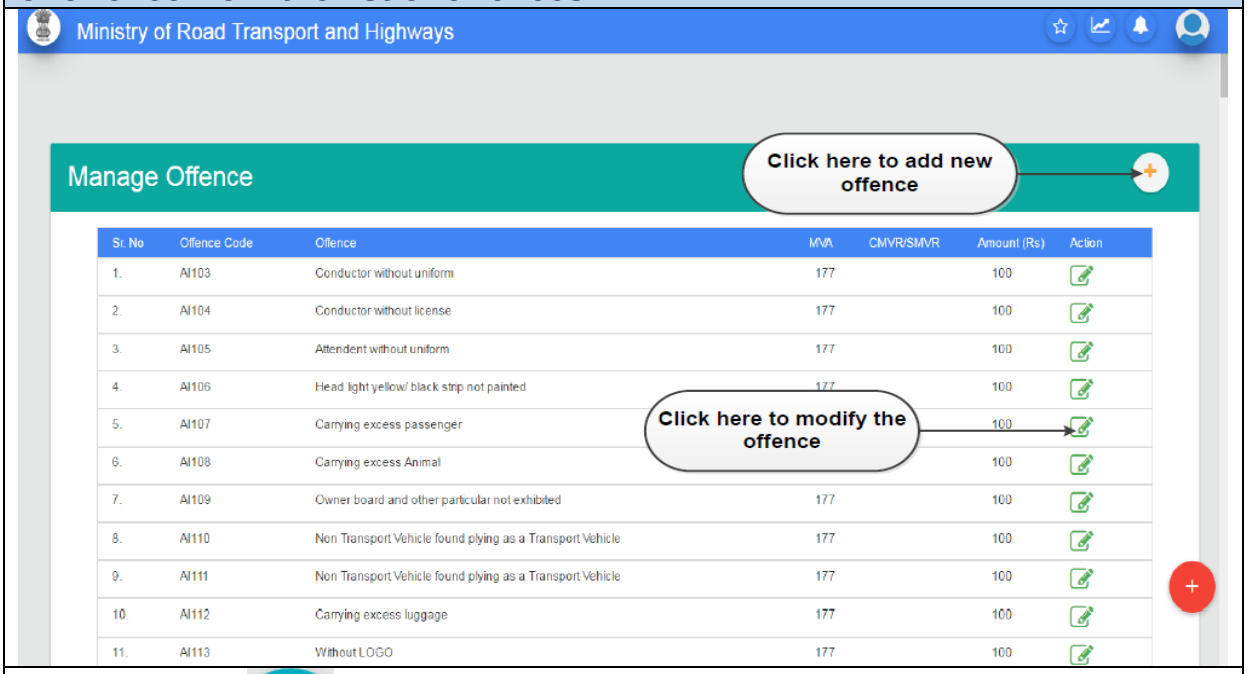
Once the user clicked on 'OK', Home page screen appears where the status of the challan is changed as 'Document Released'

Screen for accessing the Offence Management



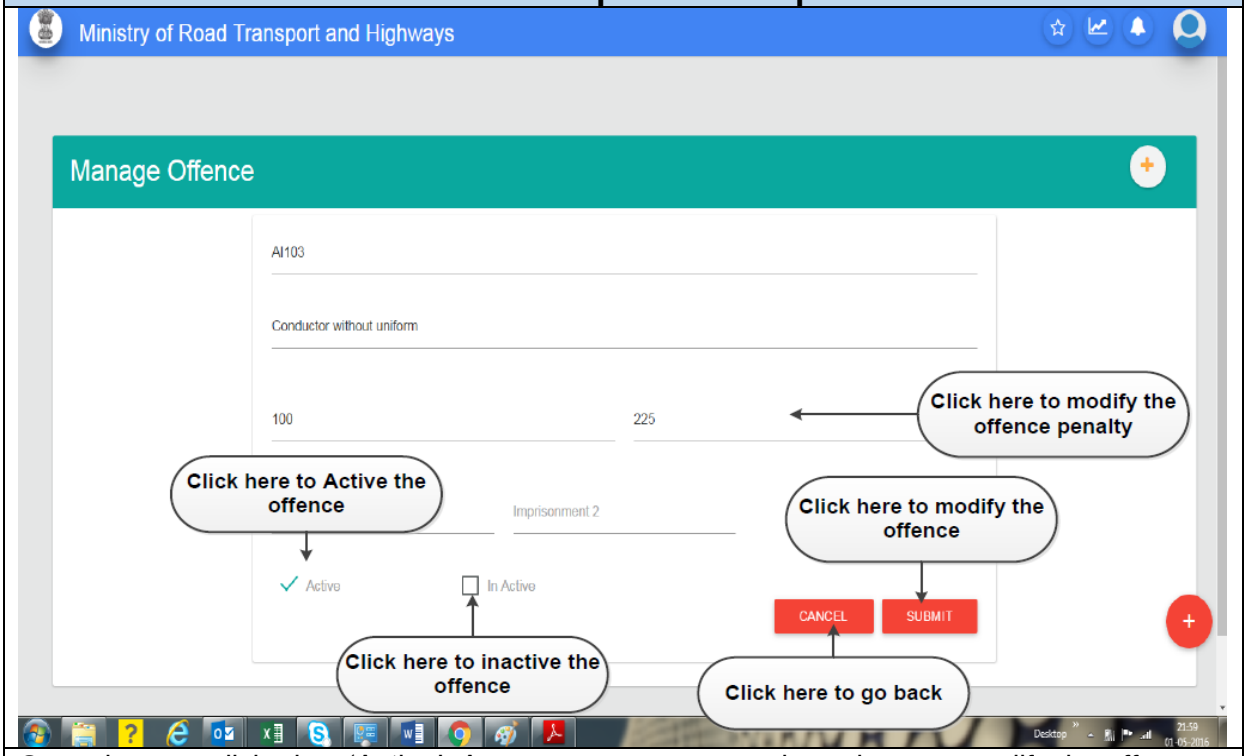
Click on ' ' icon to manage the offence.

Screen for selecting of actions such as addition, deletion or fee editions of offence from the list of offences



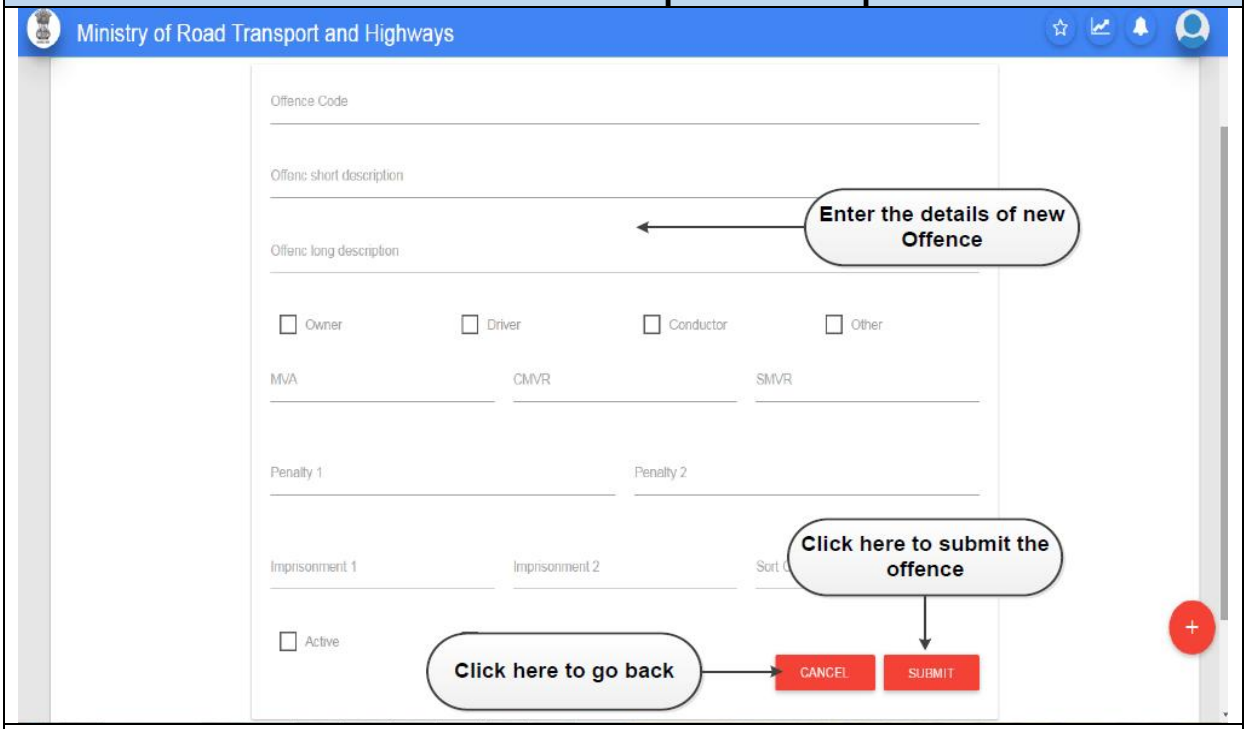
Upon clicking on ' ' icon, A new screen appear where the user click on 'Action' to modify the offence penalty or click on (+) icon for addition of new offence.

Screen for managing the offences such as modification of offences fee or Active / Inactive the offences as per state requirement



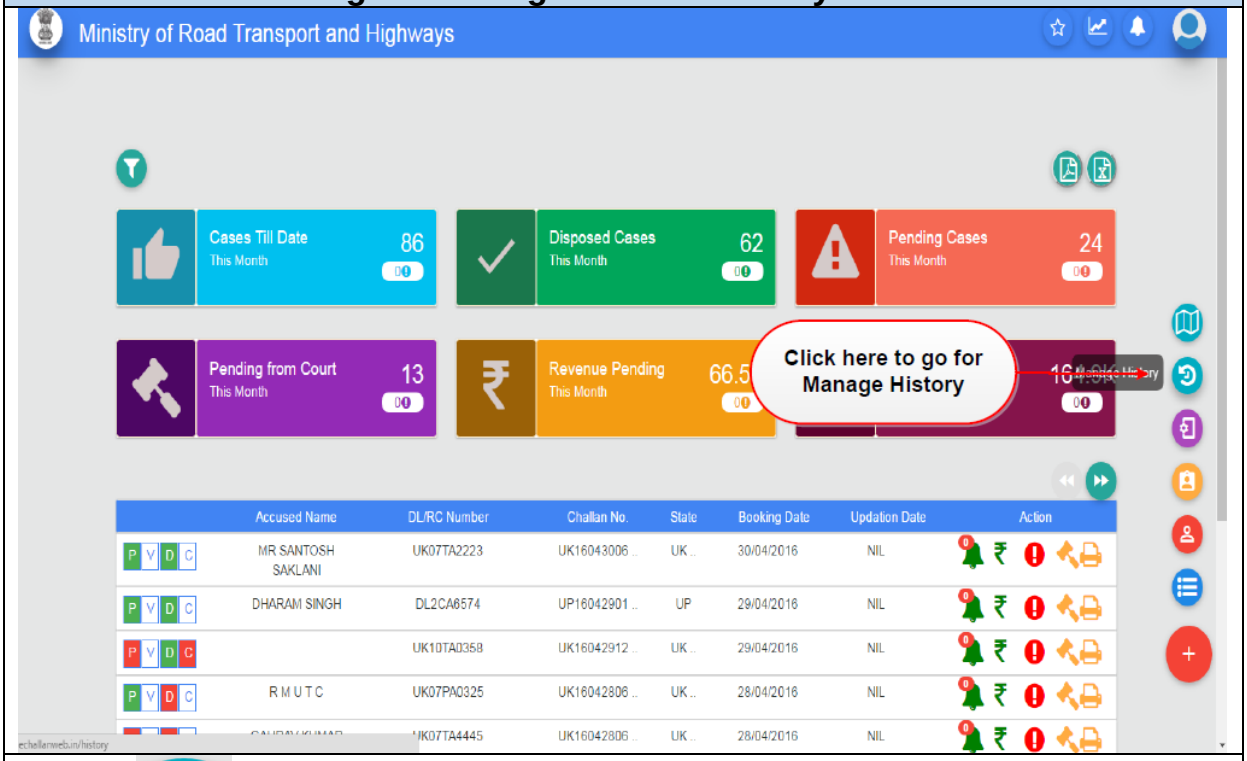
Once the user clicked on 'Action', A new screen appears where the user modify the offence penalty range and click on 'Active' to implement the selected offence for a particular state or Click on 'Inactive' to inactive the selected offence for a particular state or click on 'Submit' to submit the modified offence or click on 'Cancel' to return back to the offence manage page.

Screen for addition of new offences as per state requirement



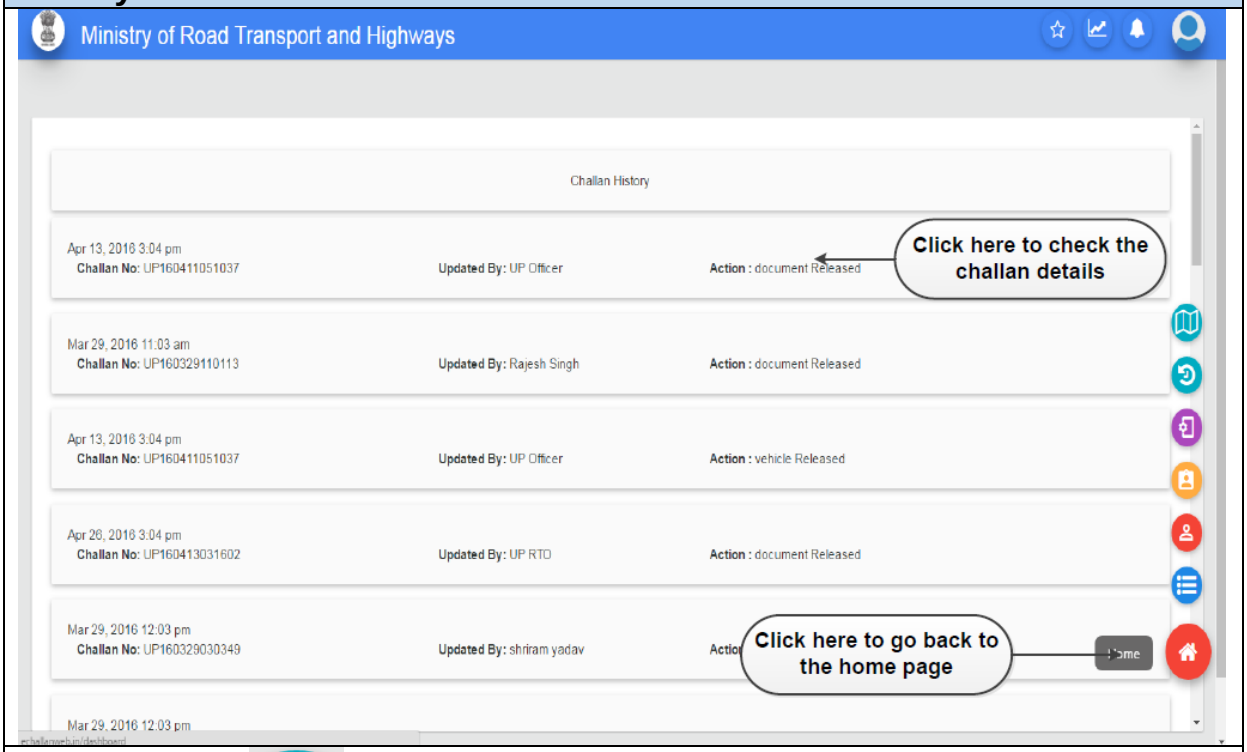
Upon clicking on (+), A new screen appears where the user update the new offences and click on 'Active' to implement the new offence for a particular state or Click on 'Inactive' to inactive the new offence for a particular state or click on 'Submit' to submit the new offence or click on 'Cancel' to return back to the offence manage page.

Screen for accessing the Manage Challan History



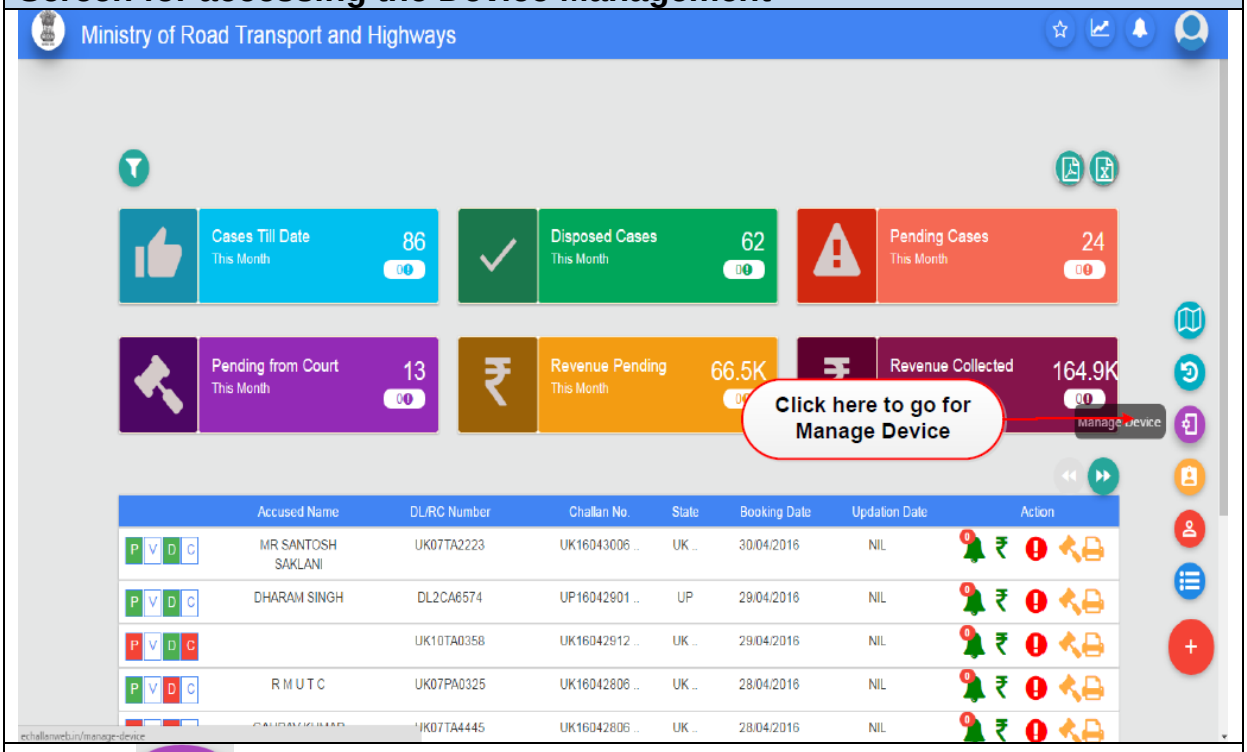
Click on ' ' icon to check the history of challan

Manage History home page screen where the admin can able to view the history of challan



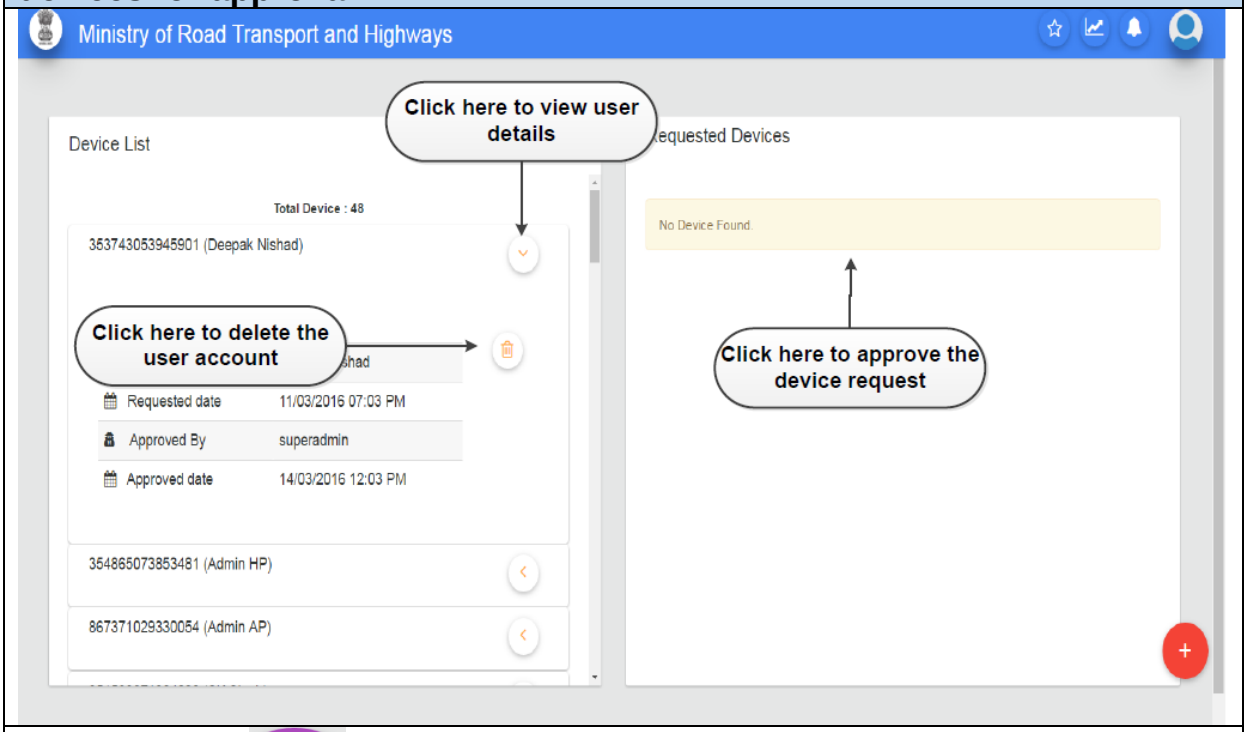
Upon clicking on ' ' icon, A new screen appear where the user check the history of challan or click on 'Home' to return back to the home page.

Screen for accessing the Device Management



Click on ' ' icon to manage the devices

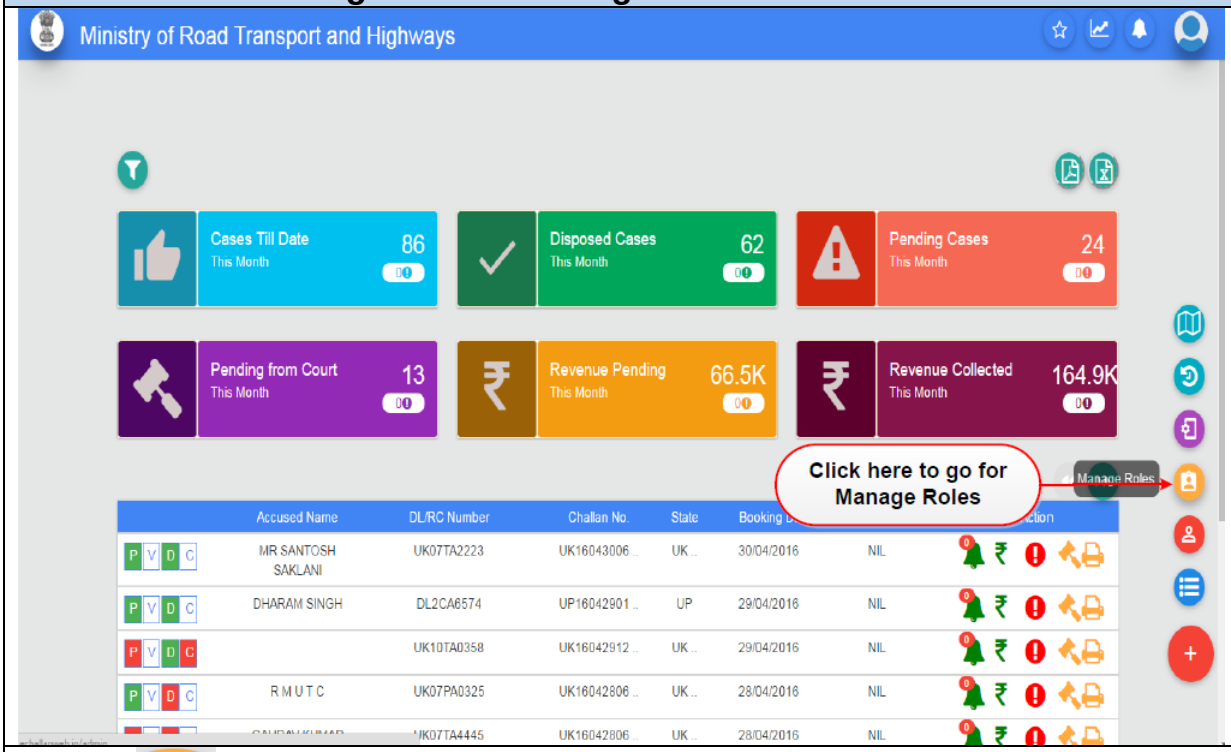
Manage Device home page screen where the user admin can able to manage the list of devices and receiving the notification for requested devices for approval



Upon clinking on ' ' icon, A new screen appears where the user check and approve

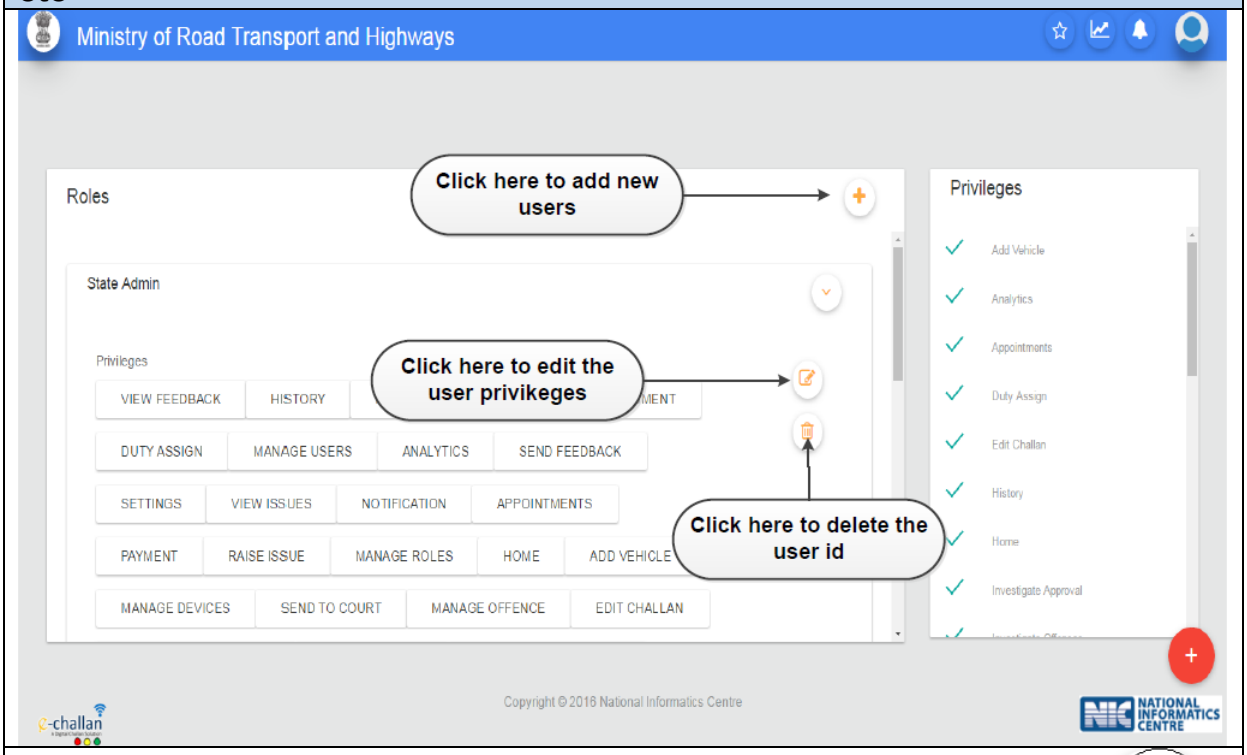
the requested devices from other users or click on ‘ ’ icon to view the details of the user and click on ‘ ’ icon to delete the user id or click on ‘Home’ to return back to the home back.

Screen for accessing the Role Management



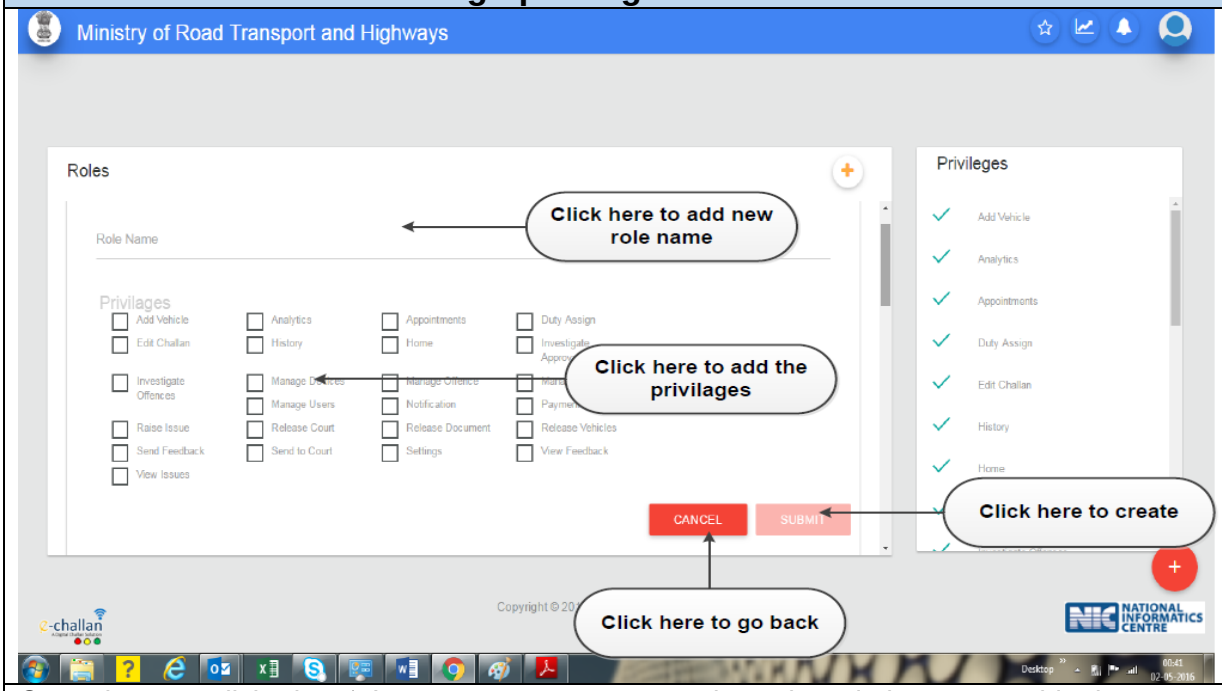
Click on ‘ ’ icon to manage the role of other users.

Role Management home page screen where the user admin can able to manage the privileges/roles of other user's such as view feedback, history, release vehicles, release documents, manage users, analytics etc



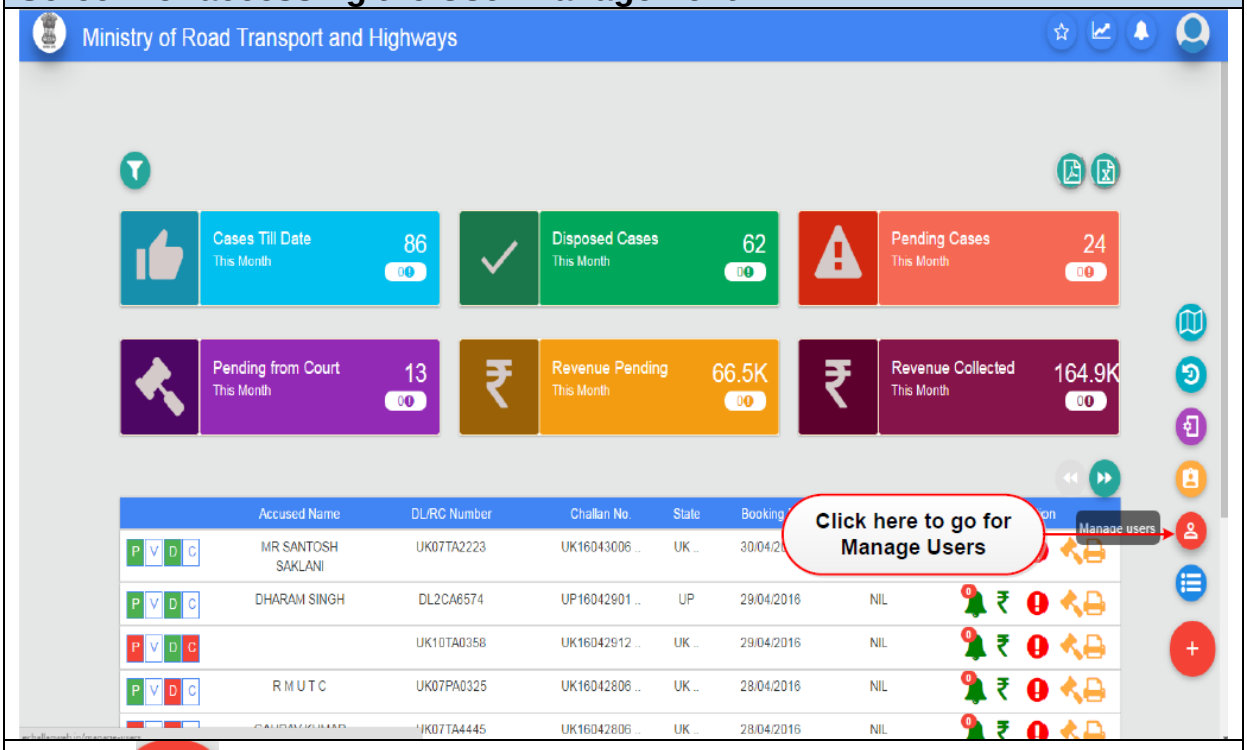
Upon clicking on ' ' icon, A new screen appears where the admin user click on ' ', icon to check the details of privileges of the other user id's or click on 'Edit' for any editions or click on 'Delete' for deletion of user id or click on '+' for add privileges to the new user id

Role Management home page screen where the admin user can able to create a new roles and assign privileges



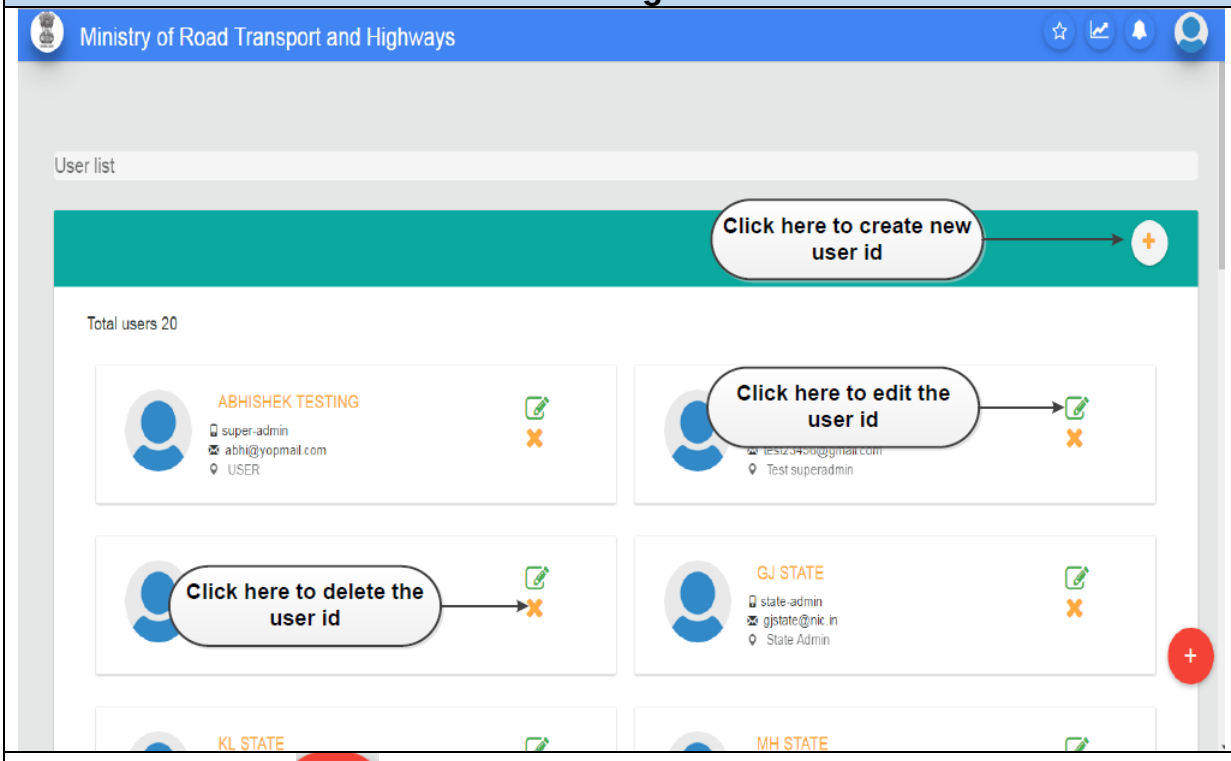
Once the user clicked on '+', a new screen appears where the admin user provide the privileges to the other user id and click on 'Submit' for submission or click on 'Cancel' to return back to the role management home page or click on 'Home' to return back to the home page.

Screen for accessing the User Management



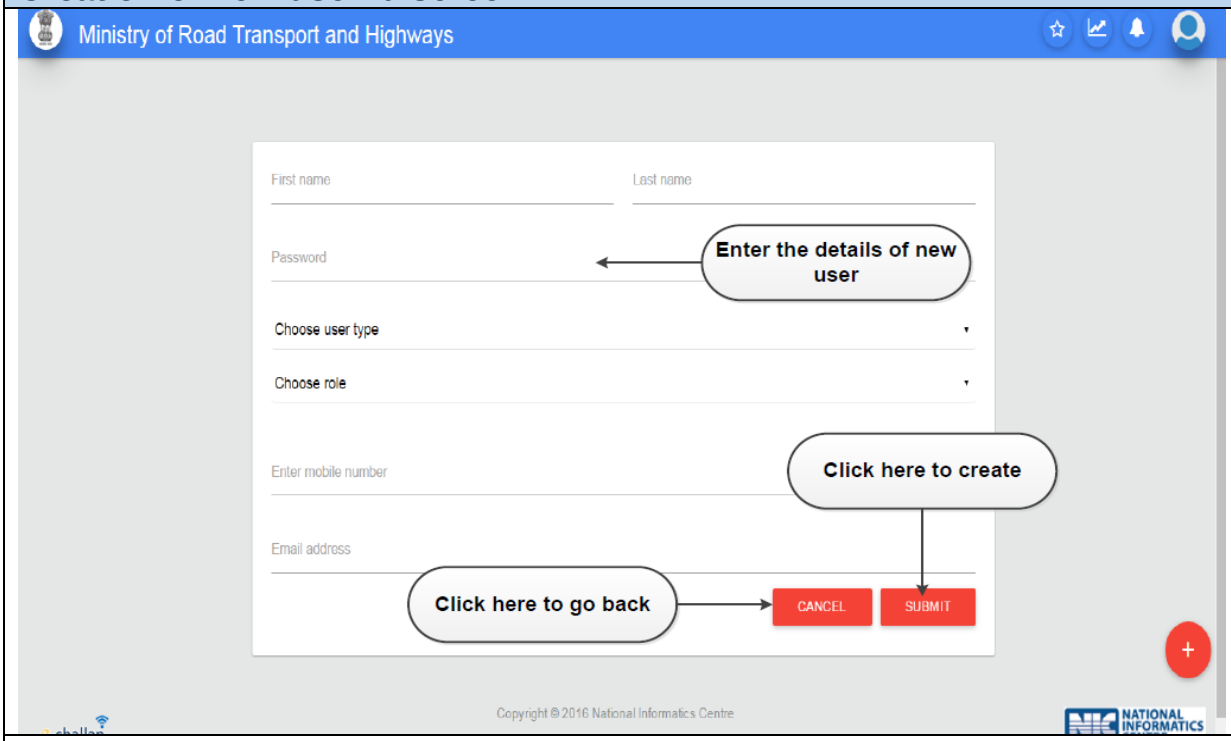
Click on '' icon to manage the user's.

User Manage home page screen where the admin user can able to create a new users or edit / delete the existing the user's.



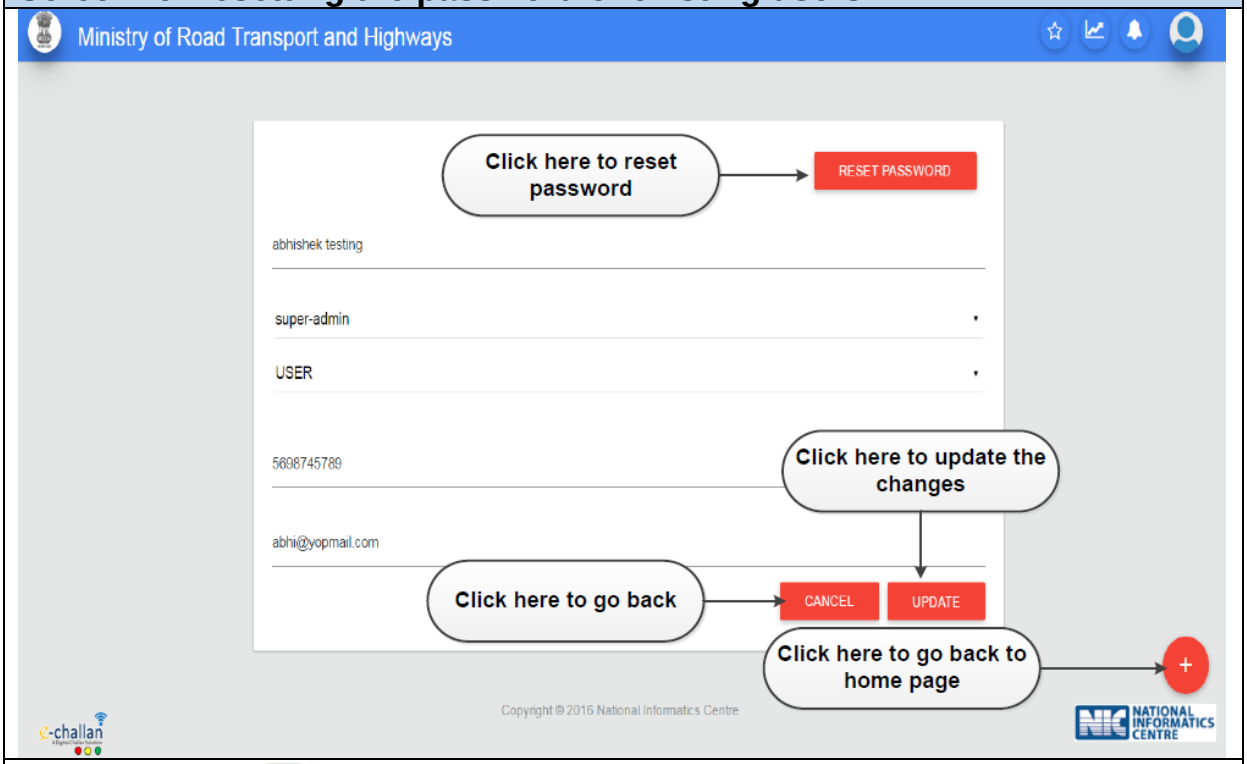
Upon the clicking on '' icon, a new screen appears where the admin user click on '+' to create a new user or click on '' icon for edit or click on '' icon for delete the user id.

Creation of new user id screen



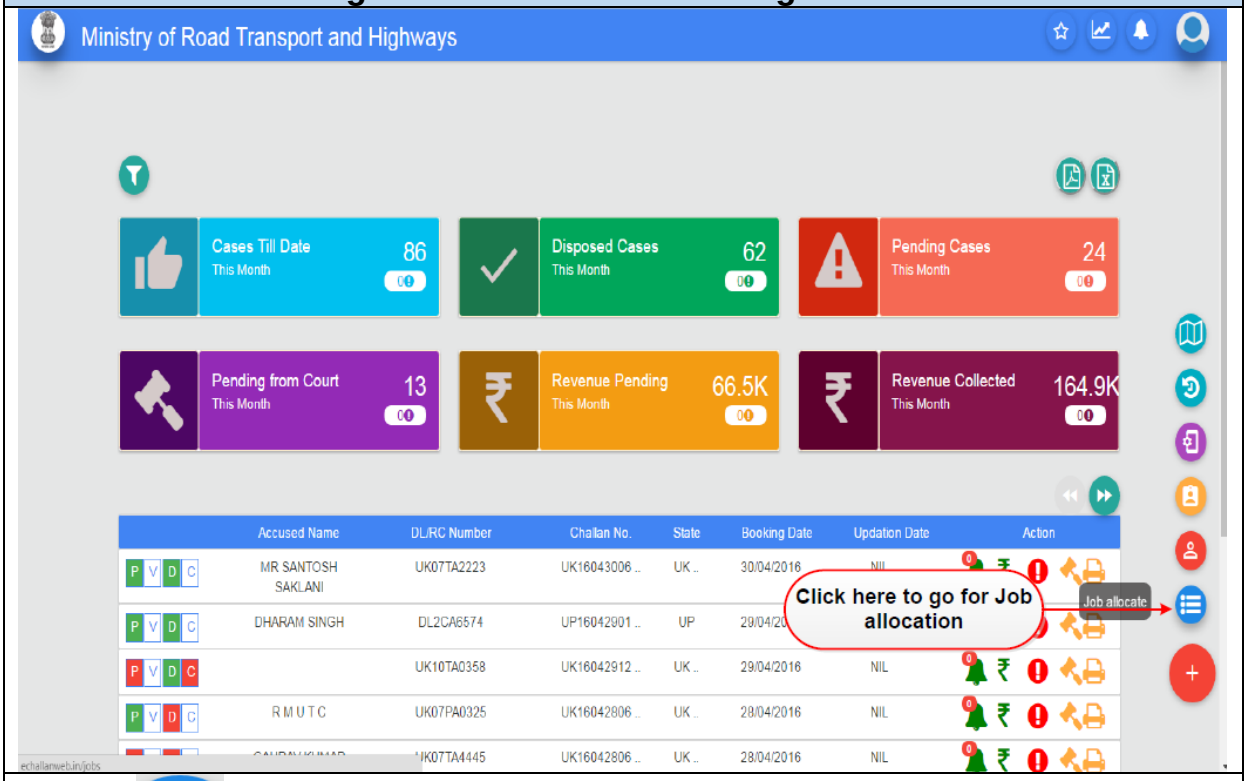
Once the user clicked on '+' icon, a new screen appears where the admin user enter the details of new user to create a new user id and click on 'Submit' to complete or click on 'Cancel' to return back to the user manager home page.

Screen for resetting the password of existing users.



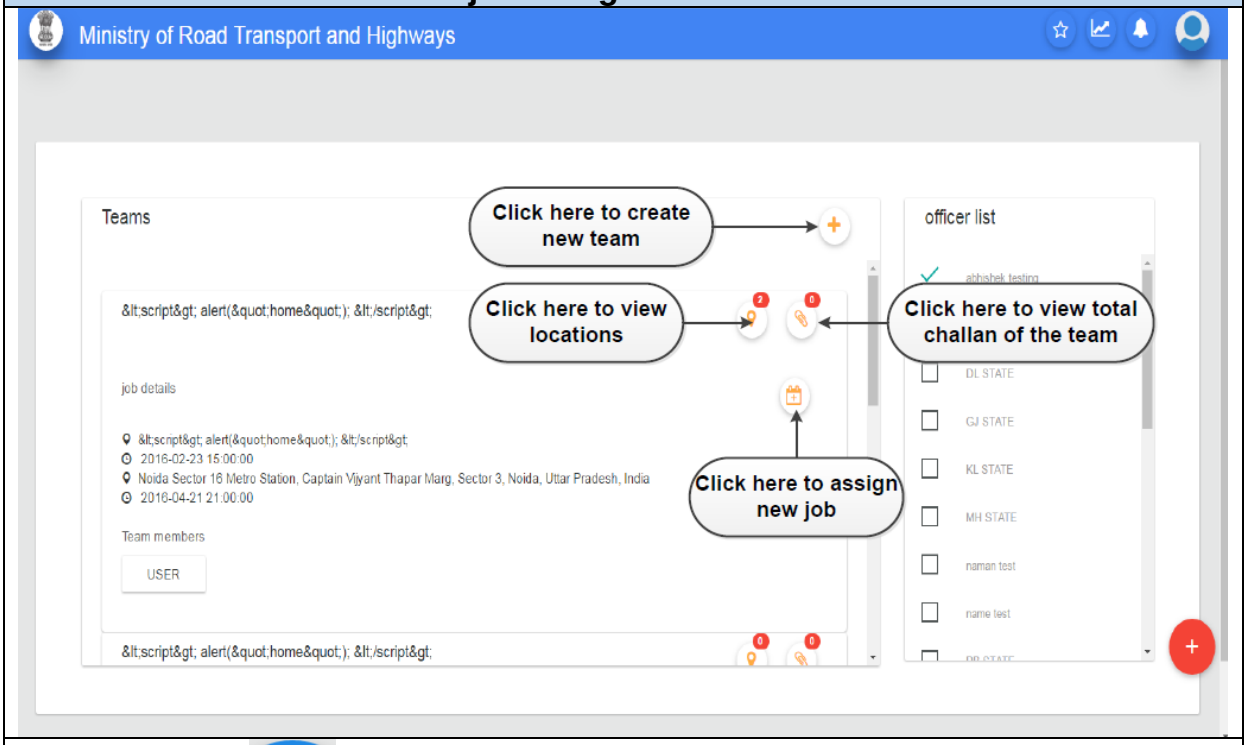
Upon clicking on ' ' icon , a new screen appears where the admin user edit the details of user and click on 'Update' for updation or click on 'Cancel' to return back or click on 'Reset Password' for reset the password of the user or click on 'home' to return back to home page

Screen for accessing the Job Allocation Management



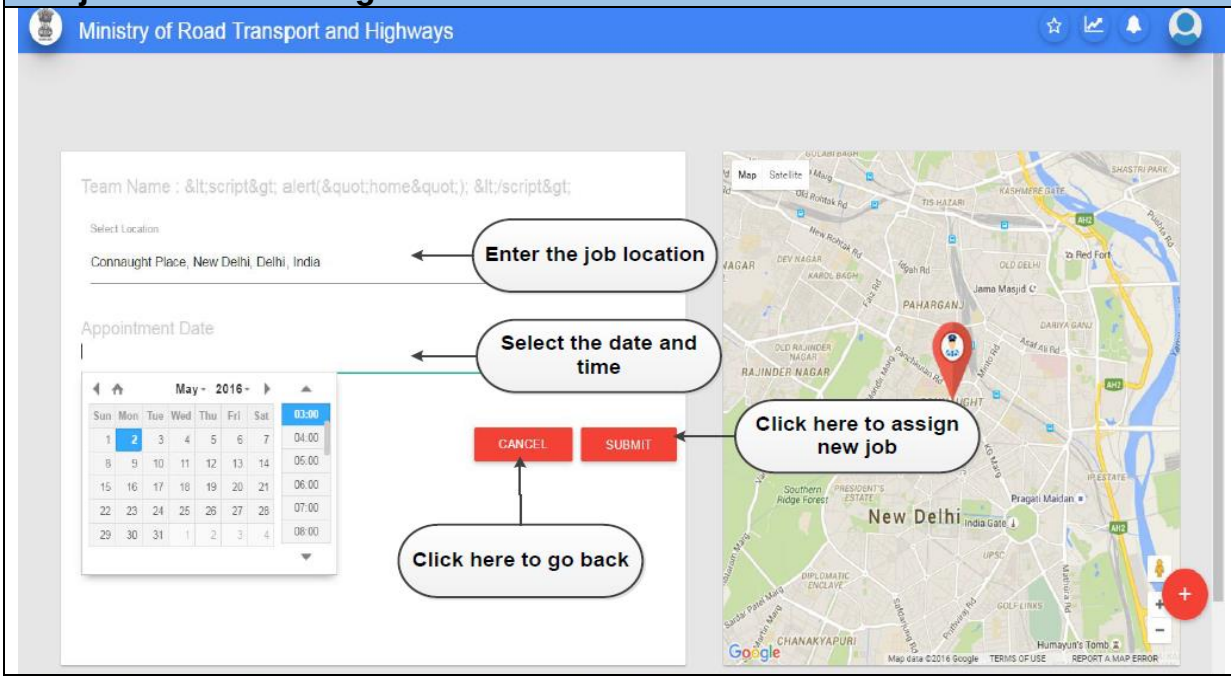
Click on ' ' icon to manage the job allocation

Job Allocate home page screen where the admin user can able to check the list of officers, total challan of existing team & their locations and create new officer team for job assignment



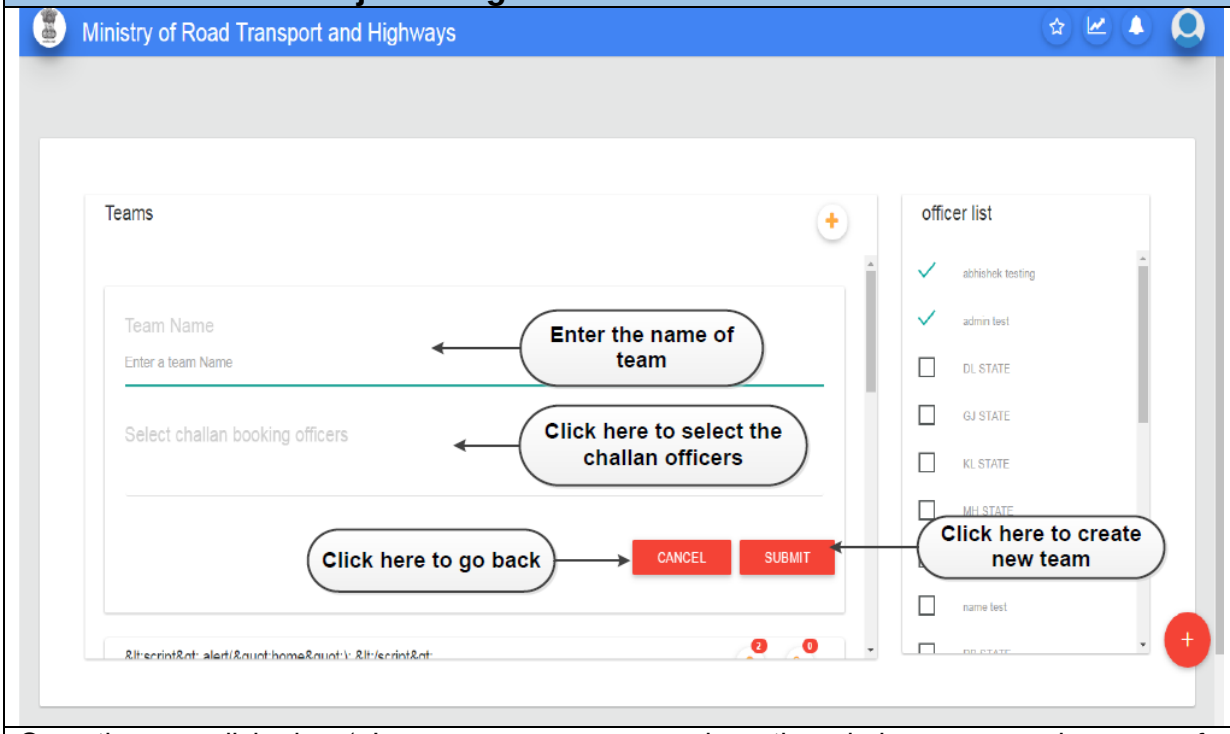
Upon clicking on ' ' icon, a new screen appears where the admin user select the team from the officer list and click on '+' to create a new team or click on ' ' to view the total jobs and location of the existing team or click on ' ' icon to view the total challah of the existing team or click on ' ' icon to assign a new job to existing team

Job Allocate home page screen where the admin user can able to assign the job to the existing team



Upon clicking on ‘ ’ icon, a new screen appears where the admin user select the location and date and click on ‘Submit’ to assign the job allocation of officers or click on ‘Cancel’ to return back to job allocate page.

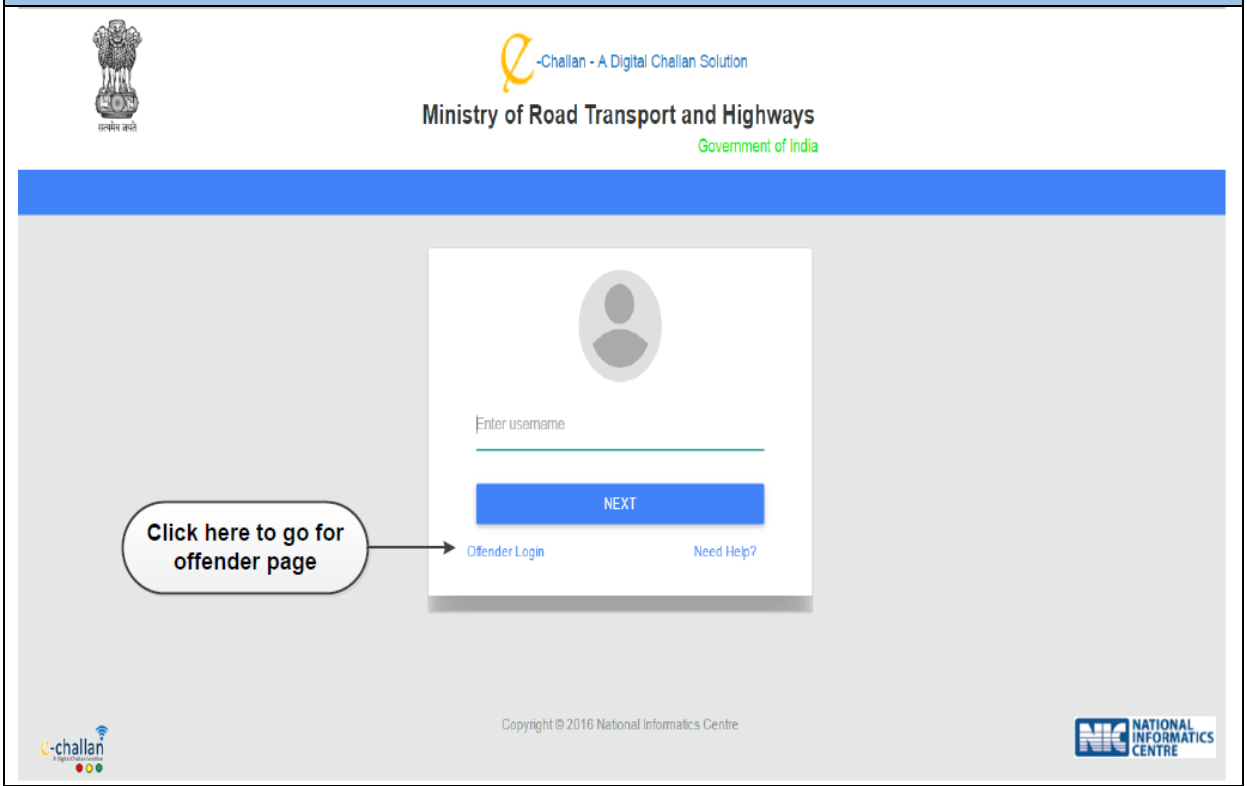
Job Allocate home page screen where the admin user can able to create new officer team for job assignment



Once the user clicked on ‘+’ a new screen appears where the admin user enter the name of team, Select the challan booking officers and click on ‘Submit’ to create a new team or click on ‘Cancel’ to return back to the job allocation page or click on ‘Home’ to return back to the home page.

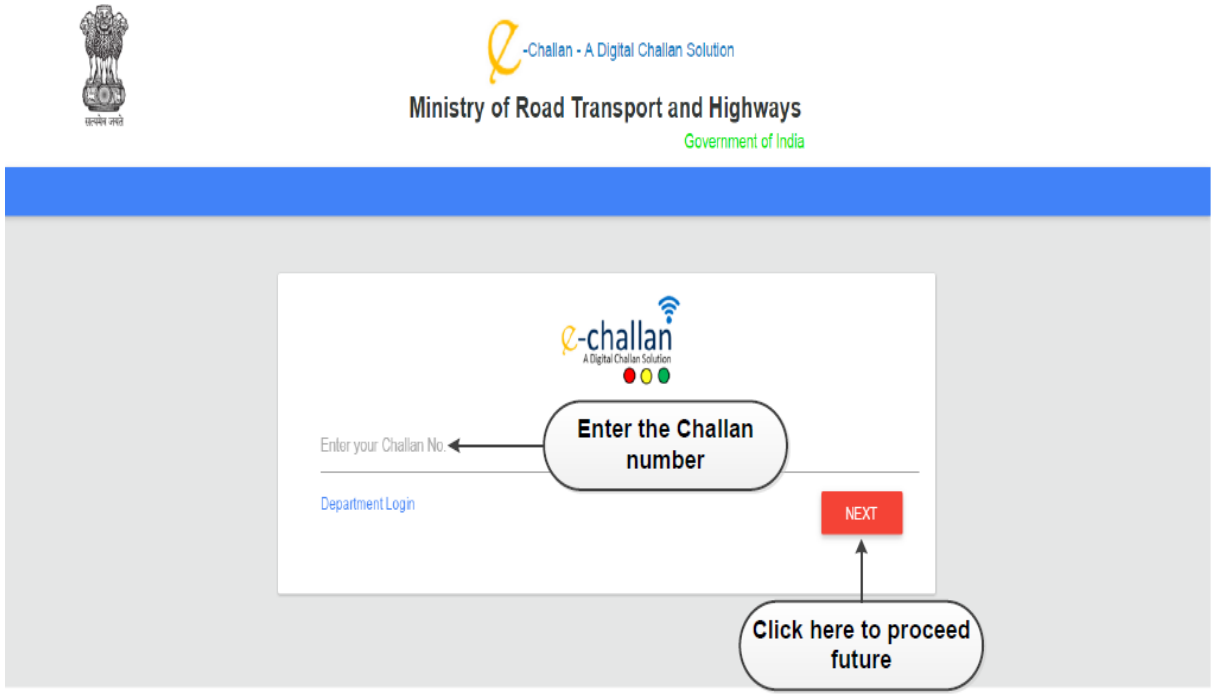
6.2 Offender Login:

Login page for offender login



Click on ‘Offender login’ to access the offender page

Offender Login Page for entering the Challan Number

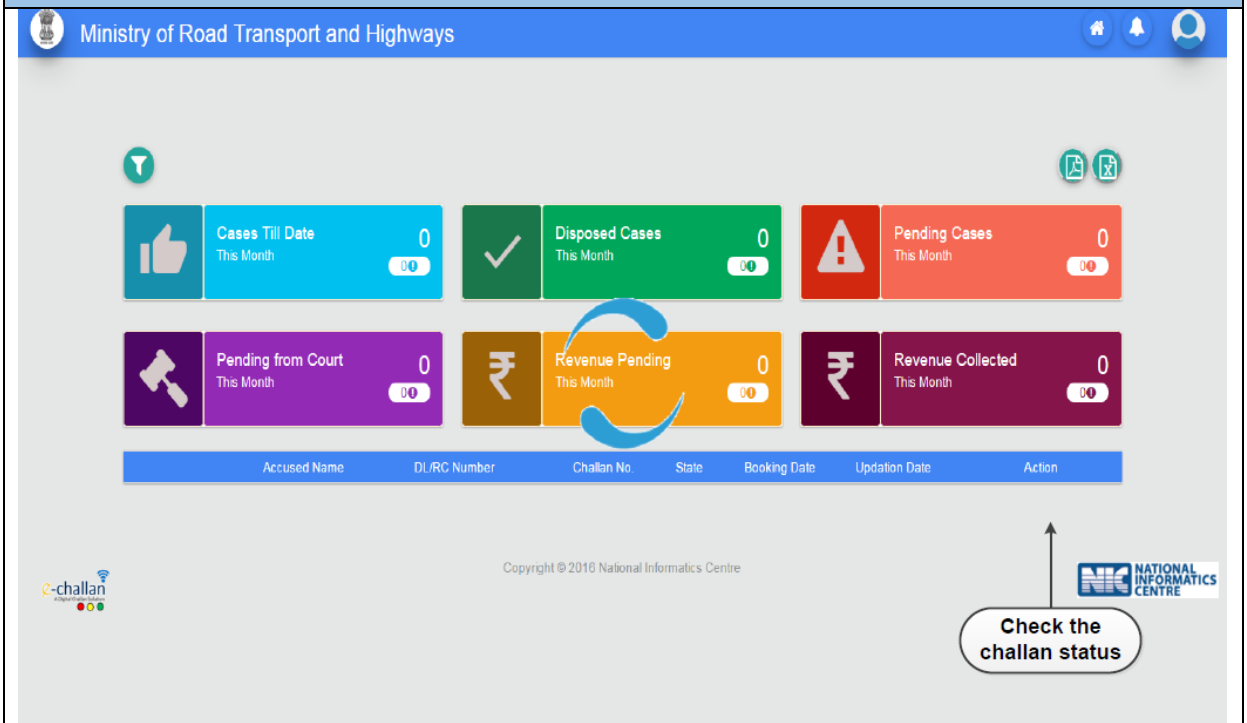


Upon clicking on ‘Offender login’, A new screen appears where the offender enter challan number and click on ‘NEXT’ to process future.

Offender Login Page for entering the RC/DL/Document number

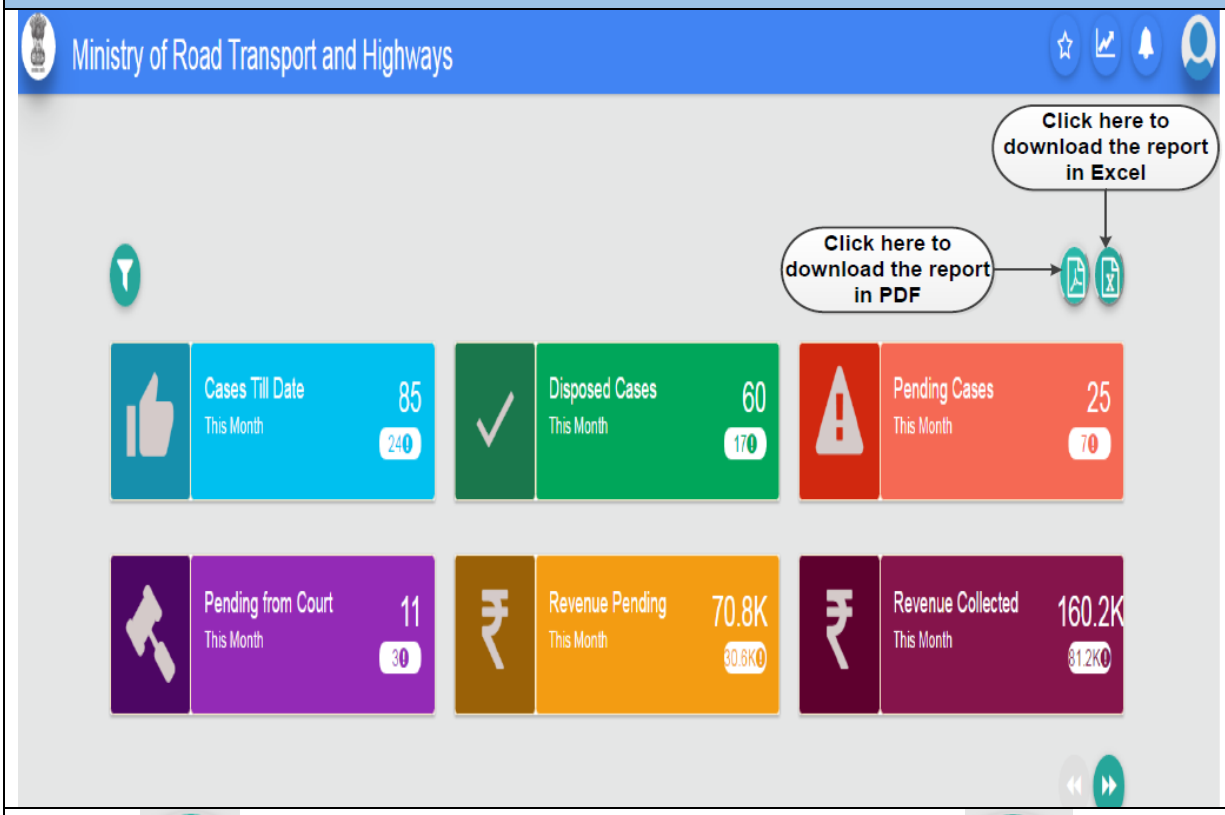
Once the offender clicked on 'NEXT', A new screen appears where the offender enter RC/DL/ Document number and click on 'Login' to login the web application or Click on 'Cancel' to return back to the previous page.

Screen for checking the status of challan



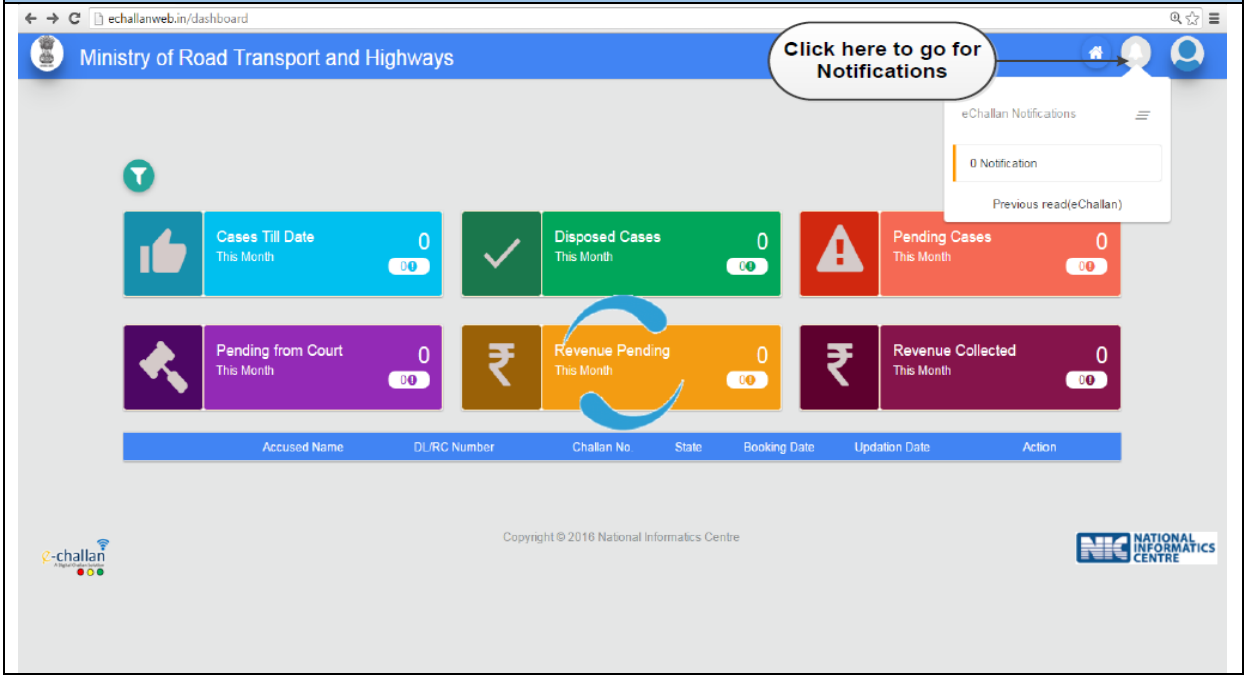
Once the user logged into the web application page, A new screen appears where the offender check the status of challan.

Screen for downloading the report in 'PDF' or 'Excel' format



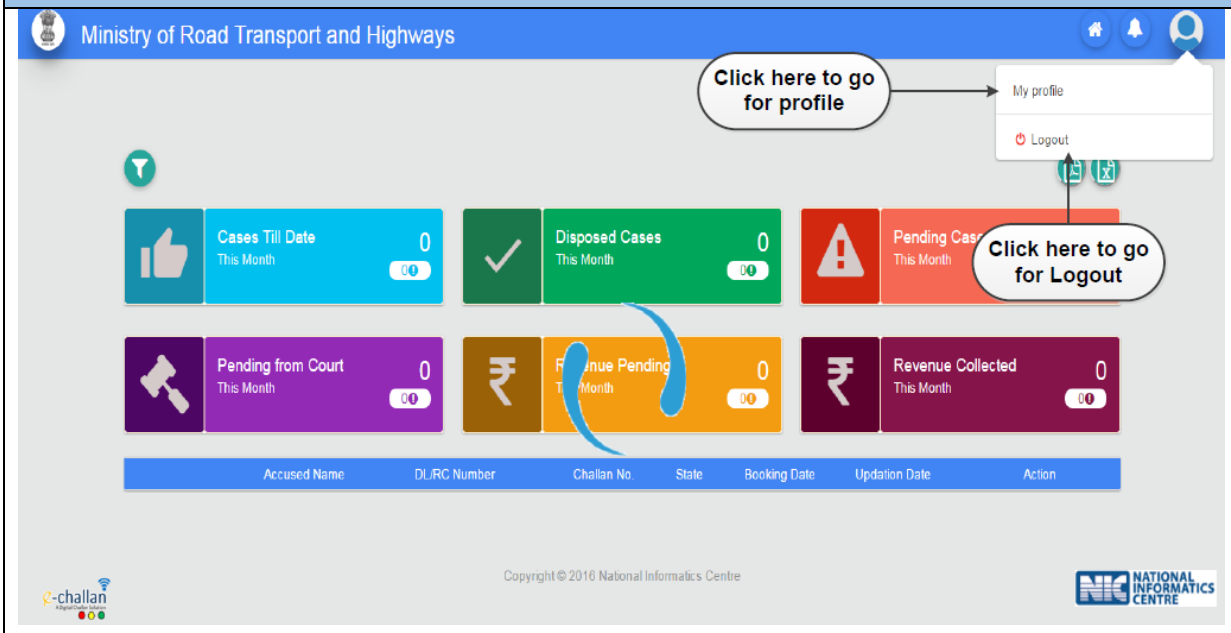
Click on " " icon to download the report in PDF format or Click on " " icon to download the report in excel format.

Screen for viewing the Notifications received from the RTO



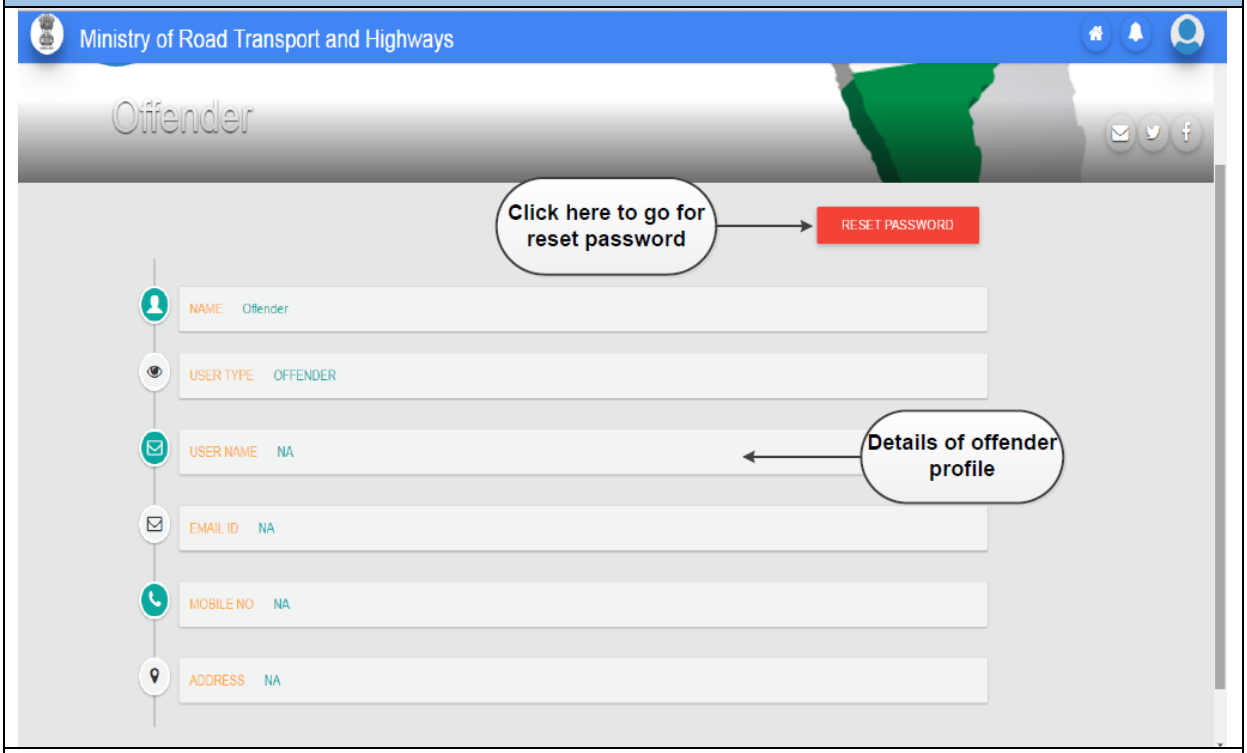
Click on ‘ ’ icon to check the notifications from RTO.

Screen for viewing the user profile or logout from the web application



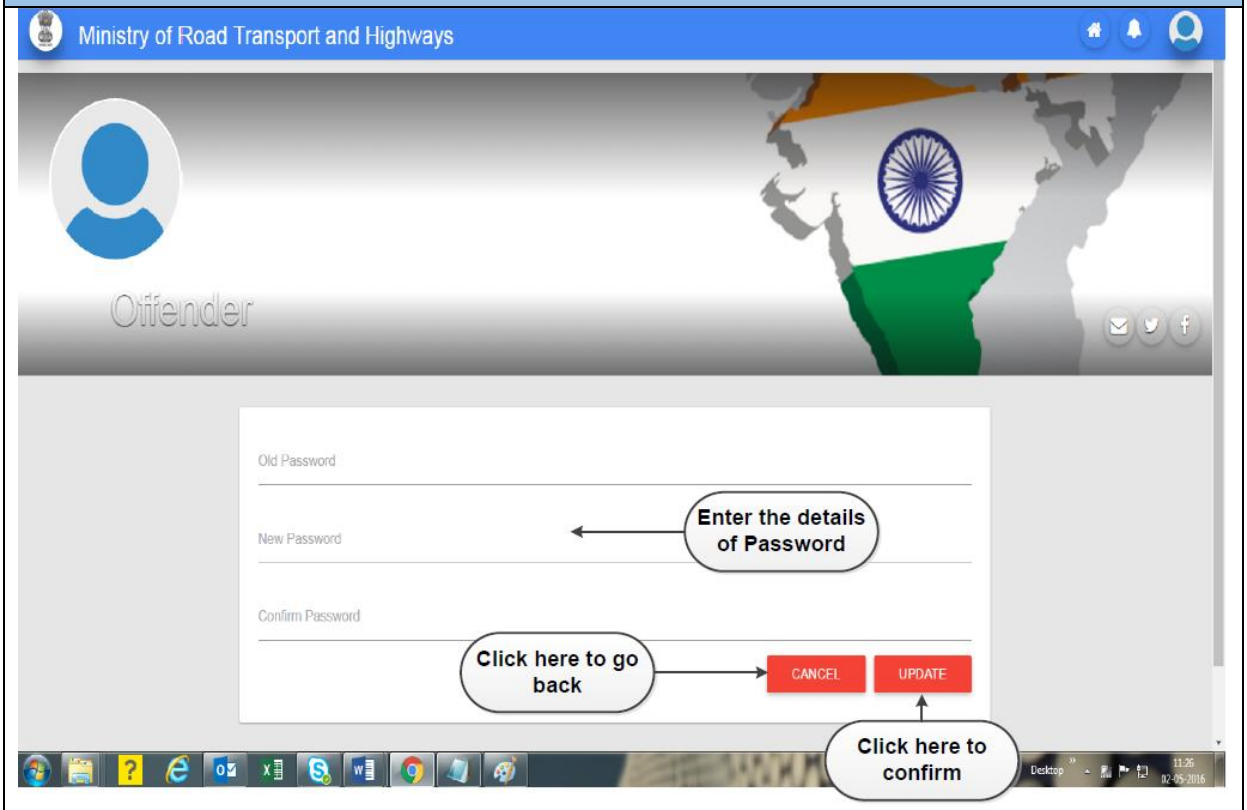
Click on “ ” icon, where the two options appears ‘My Profile’ and ‘Logout’, click on ‘My Profile’ to view the user profile or click on ‘Logout’ to switch from the application.

Screen for viewing the profile information’s



Upon clicking on ‘My Profile’, A new screen appear where the offender view his profile or click on ‘Reset Password’ to reset his password.

Screen for Password Resetting

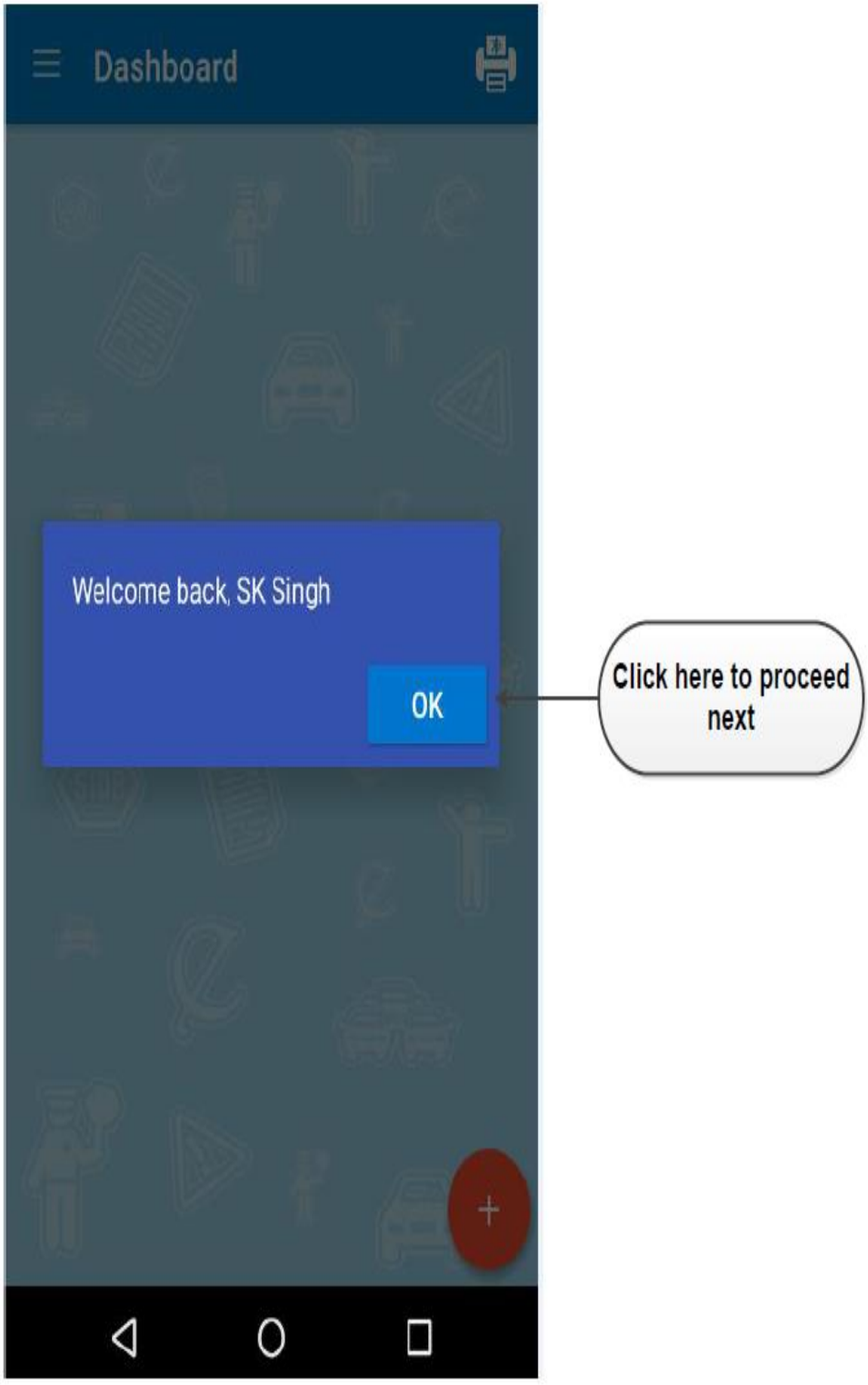


Upon clicking on 'Password Reset', A new screen appear where the offender enter his old password, new password & confirm password and click on 'update' to generate a new password or click on 'Cancel' to return

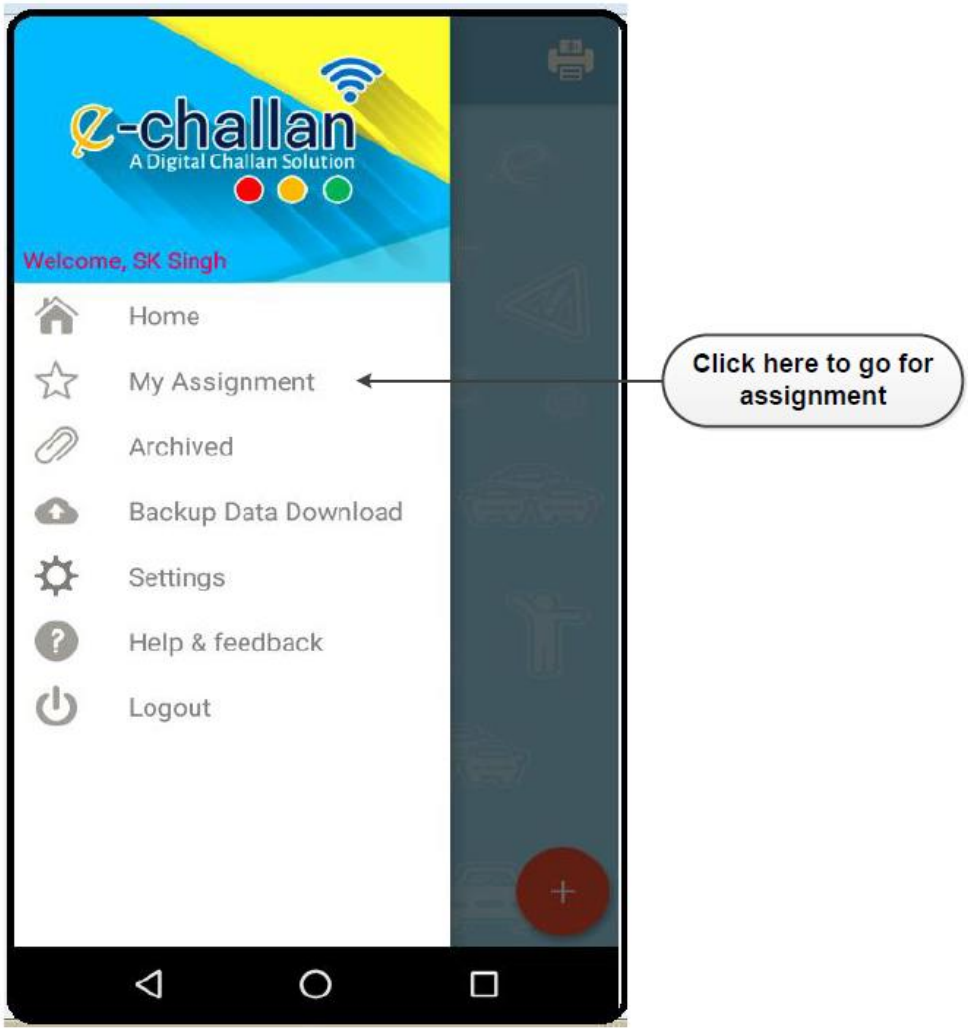
6.3 Traffic Officers Login

Login Page for entering the User name and Password
Enter ‘user name’ & ‘password’ and click on ‘Login’ to access the application

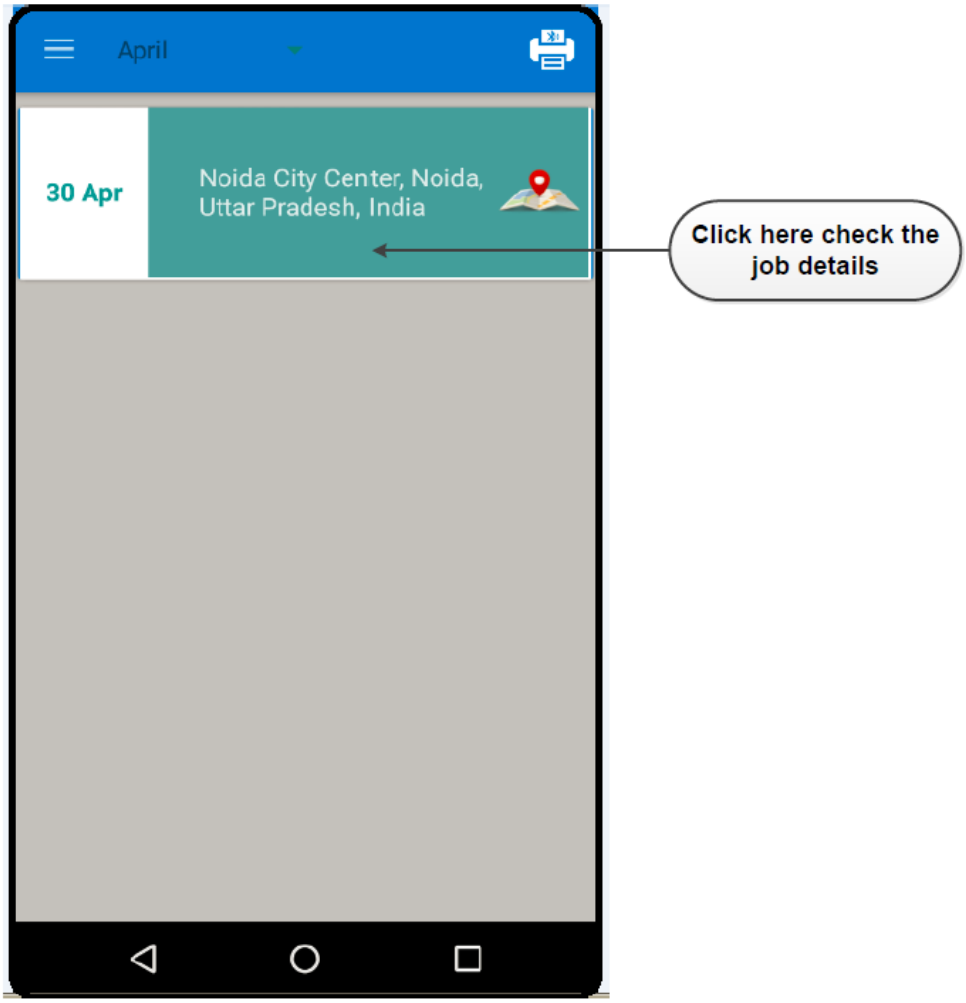
Welcome page screen of the mobile application



Click on ‘OK’ to proceed future

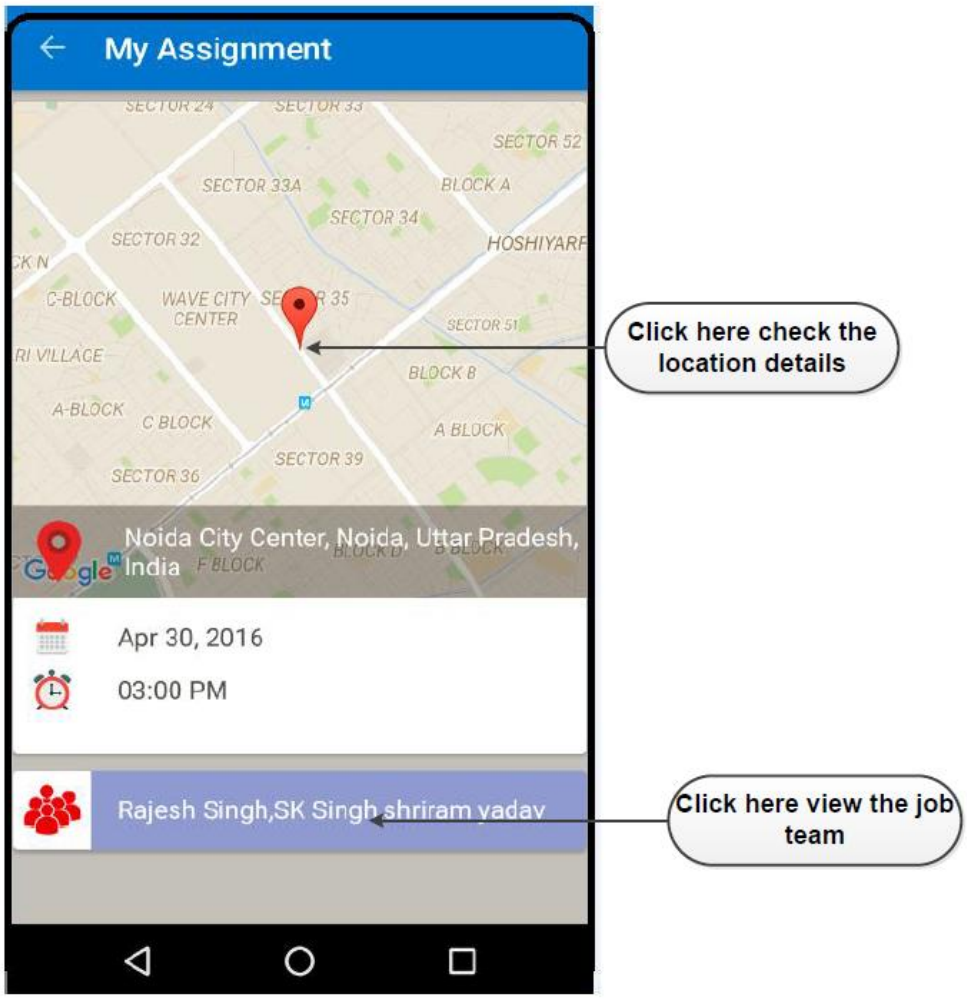
Screen for accessing the My Assignment

Click on 'My Assignment' to check the assignment

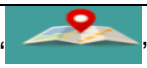
Screen for viewing the assignment



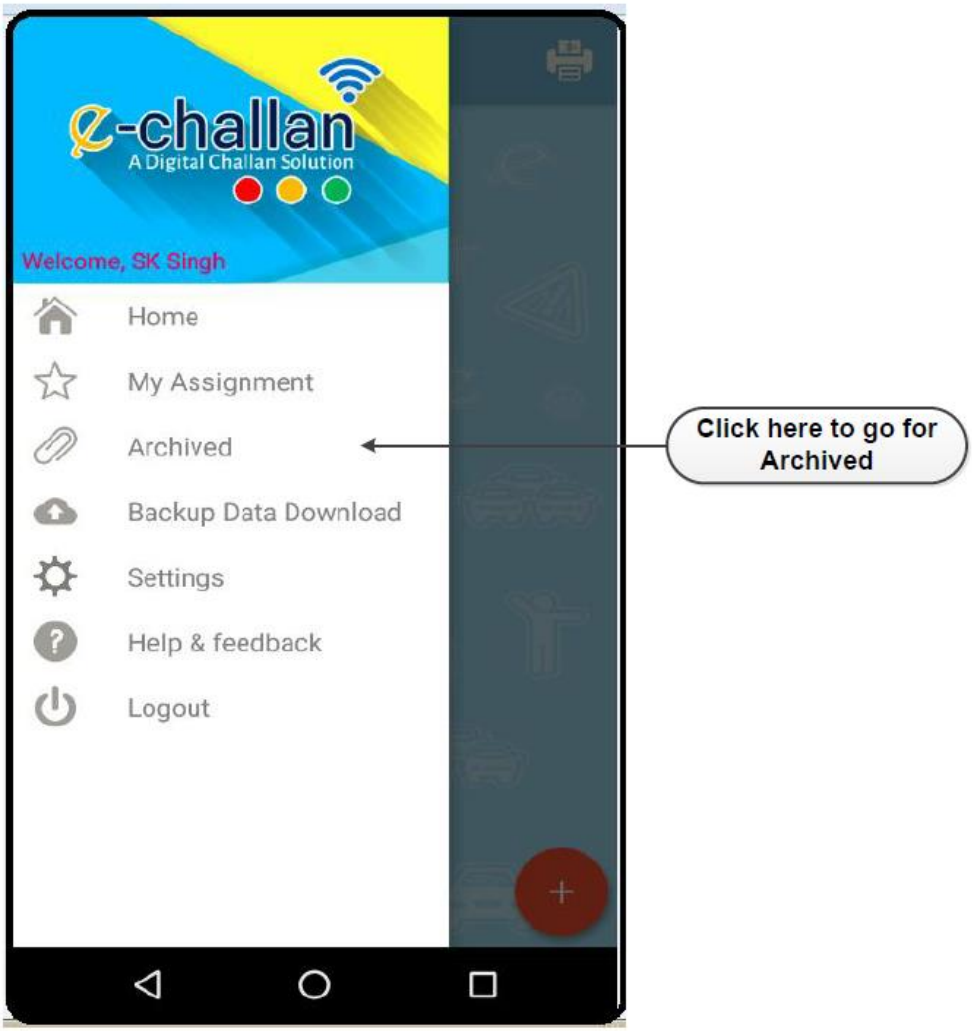
Upon clicking on ‘My Assignment’ , A screen appears where the user Click on ‘ ’ icon to check the assignment location

Screen for viewing the task location, date, time and team



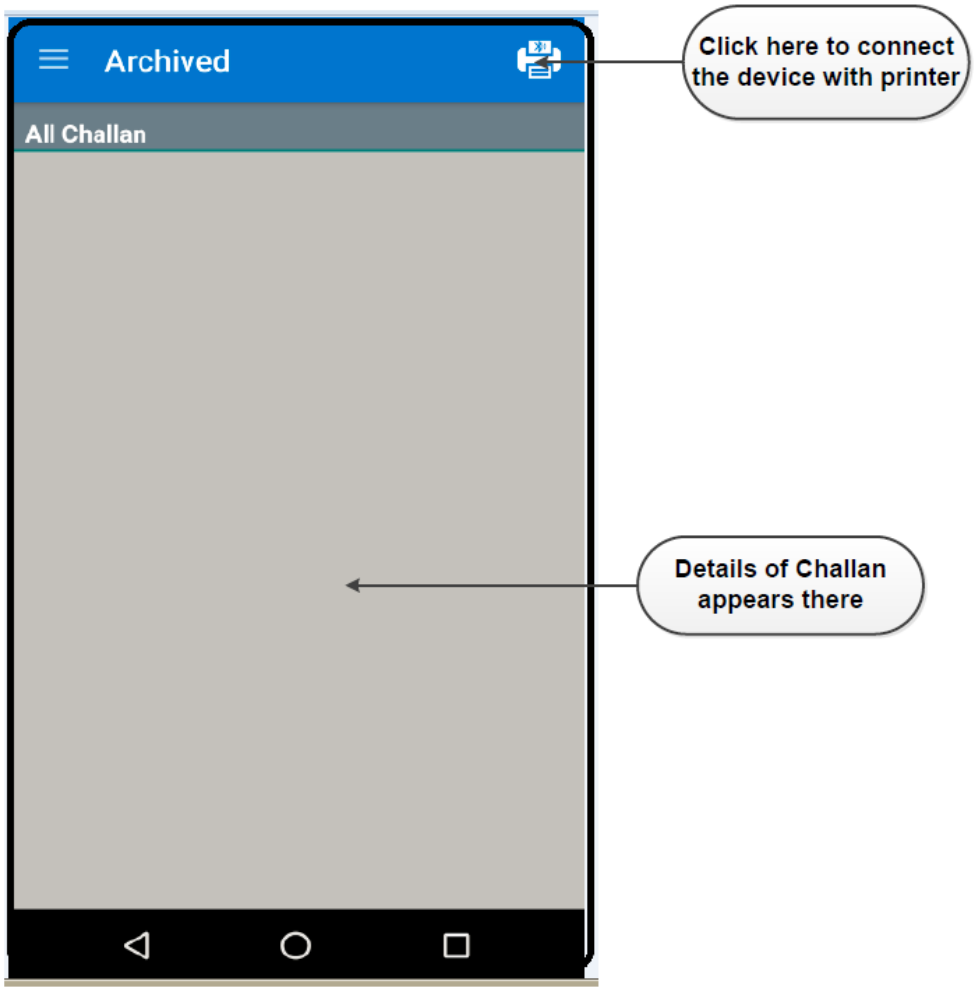
Once the user clicked on ‘  ’ icon , Again a new screen appears where the user Click on ‘ ’ icon to view the details of team on assignment location

Screen for accessing the Archived

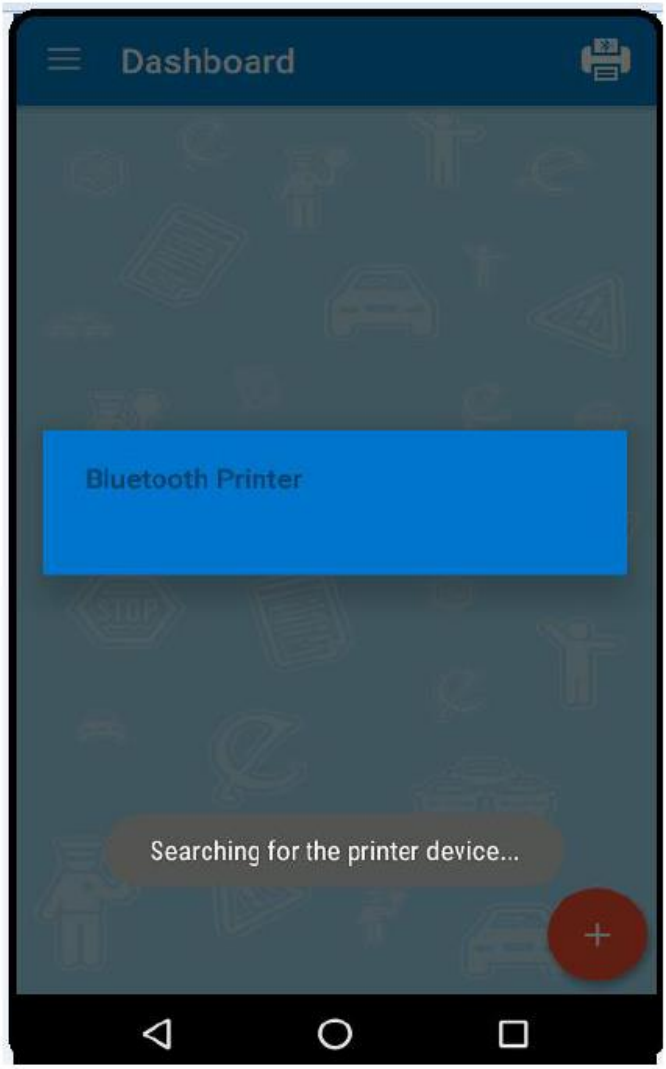


Click on ‘Archived’ to check the challan history

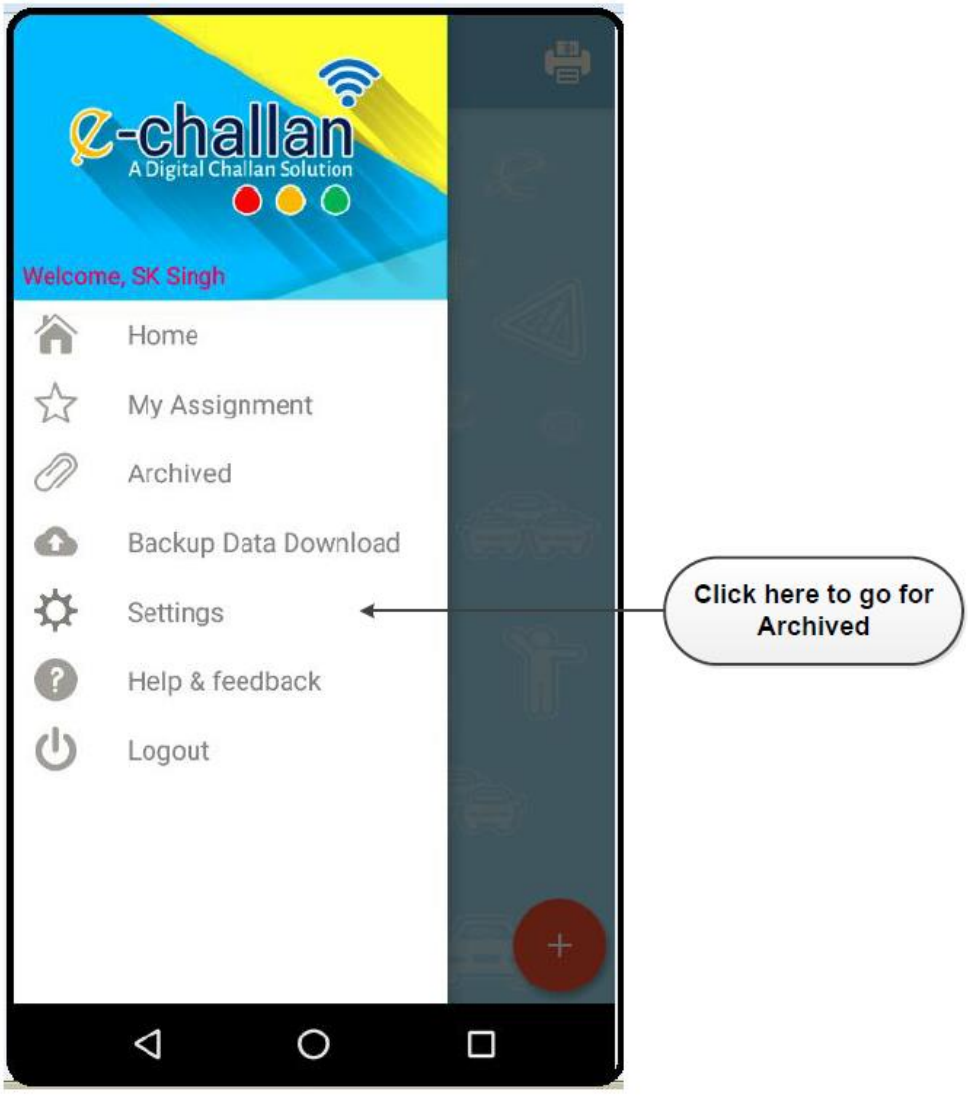
Home page screen of Archived



Upon clicking on ‘Archived’, A new screen appears where the user can able to view the challan history record or click on ‘ ‘icon to print the selected challan

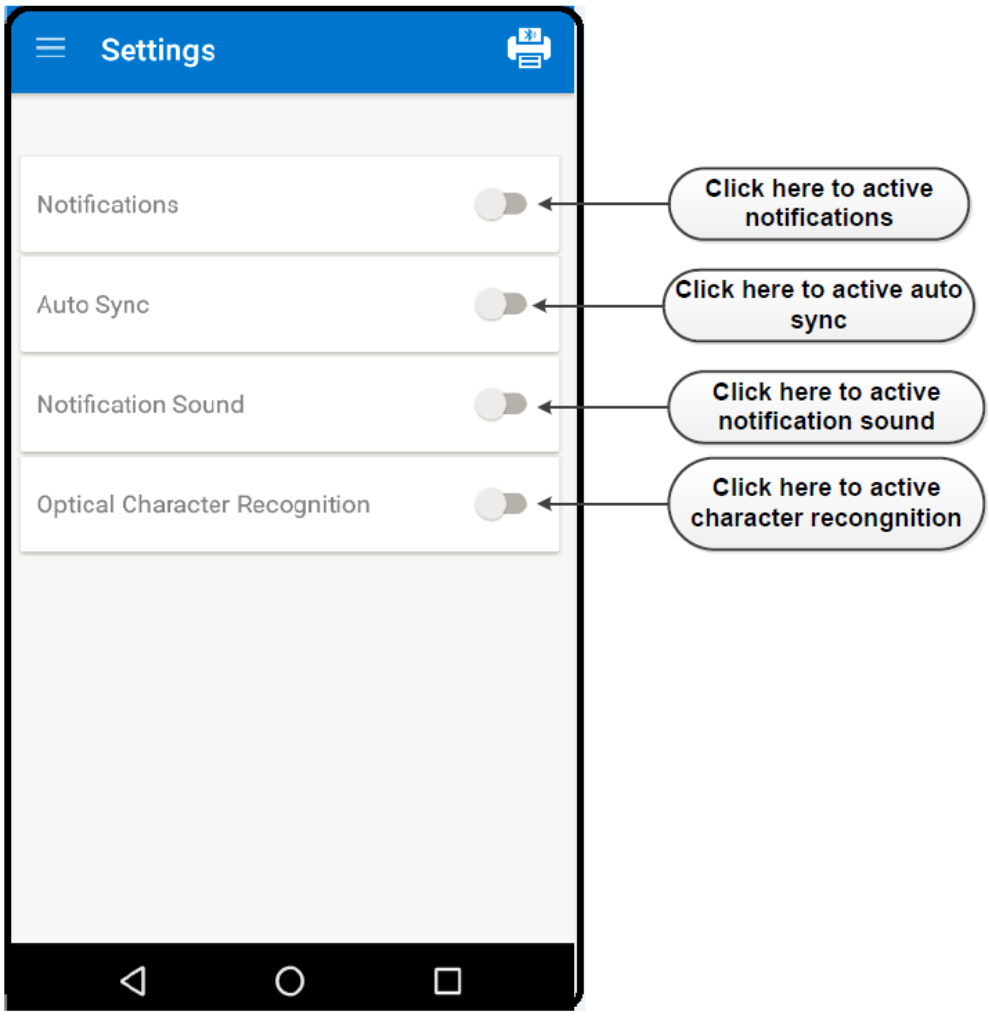
Screen for selecting the printer

Once the user clicked on ‘ ’ icon, the mobile connected with printer

Screen for accessing the Settings

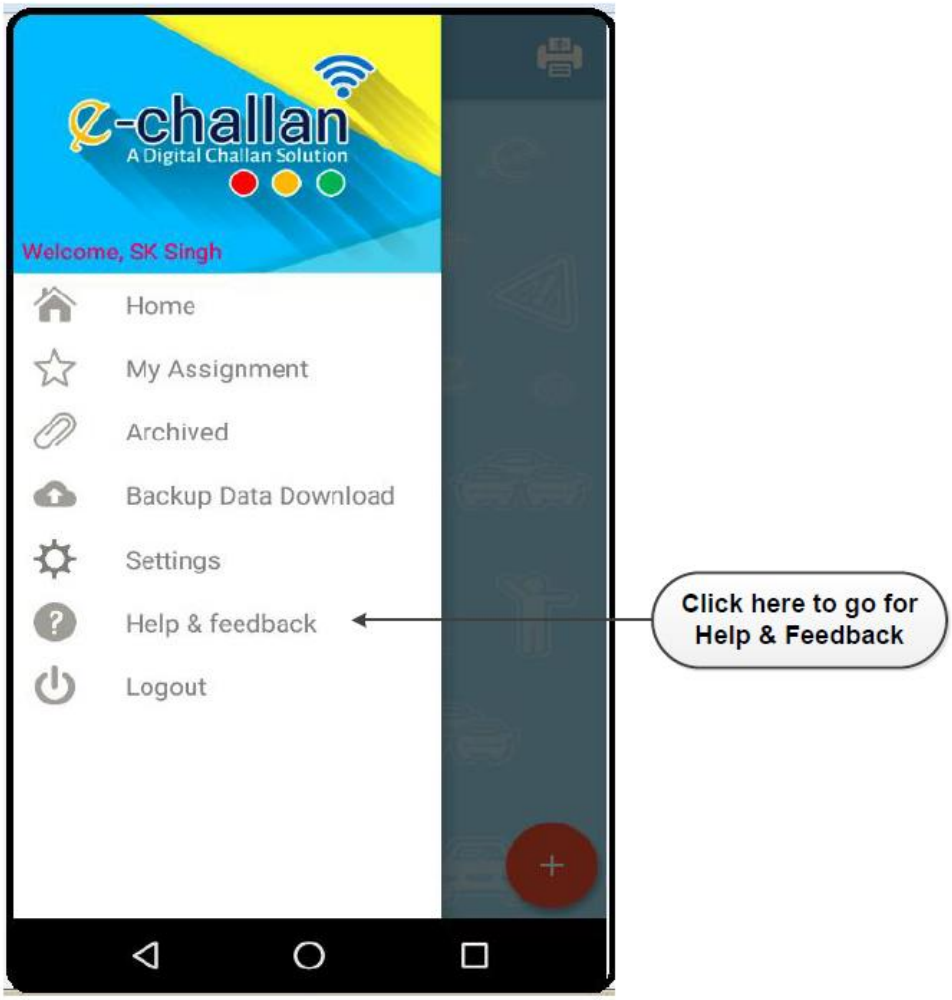


Click on 'Setting's to change application settings

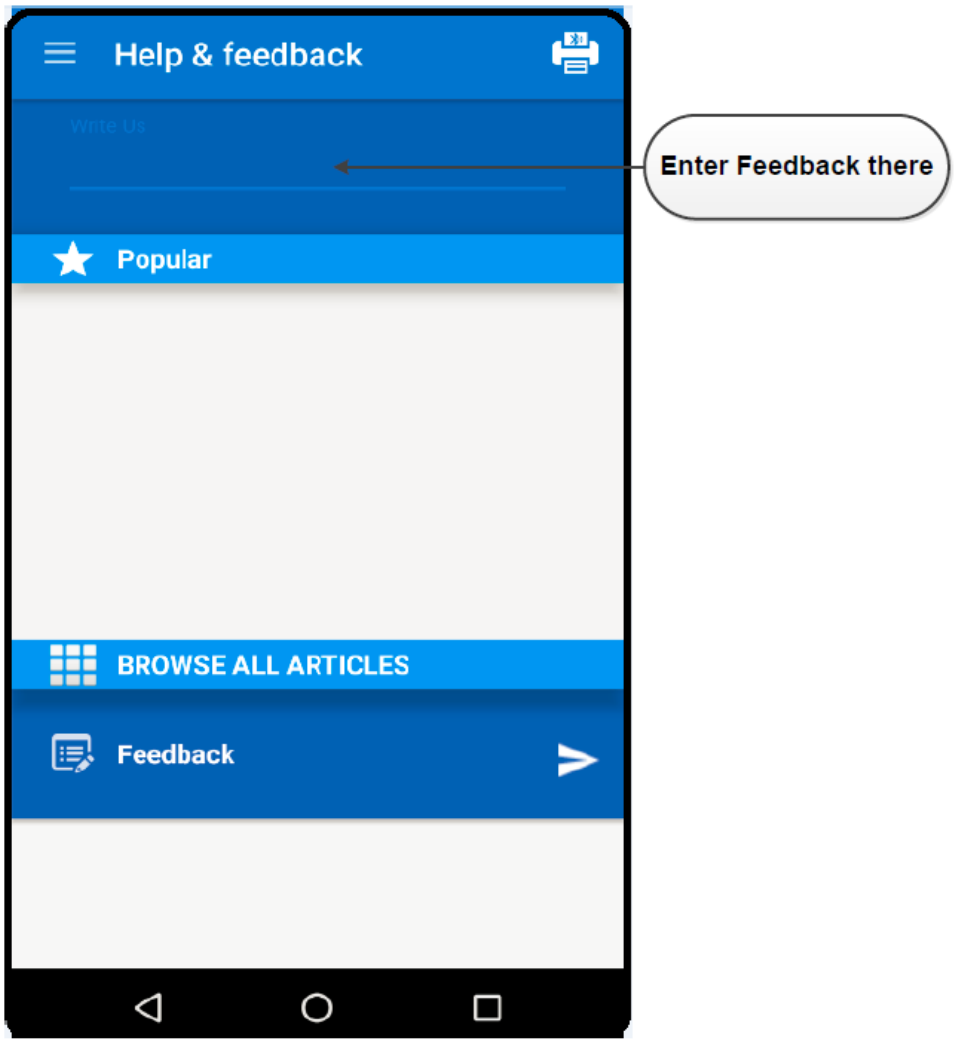
Home page of Settings screen



Upon clicking on 'Settings' A new screen appears where the user can able to change the application settings of 'Notification', 'Auto Sync', 'Notification Sound' and 'Optical Character Recognition'.

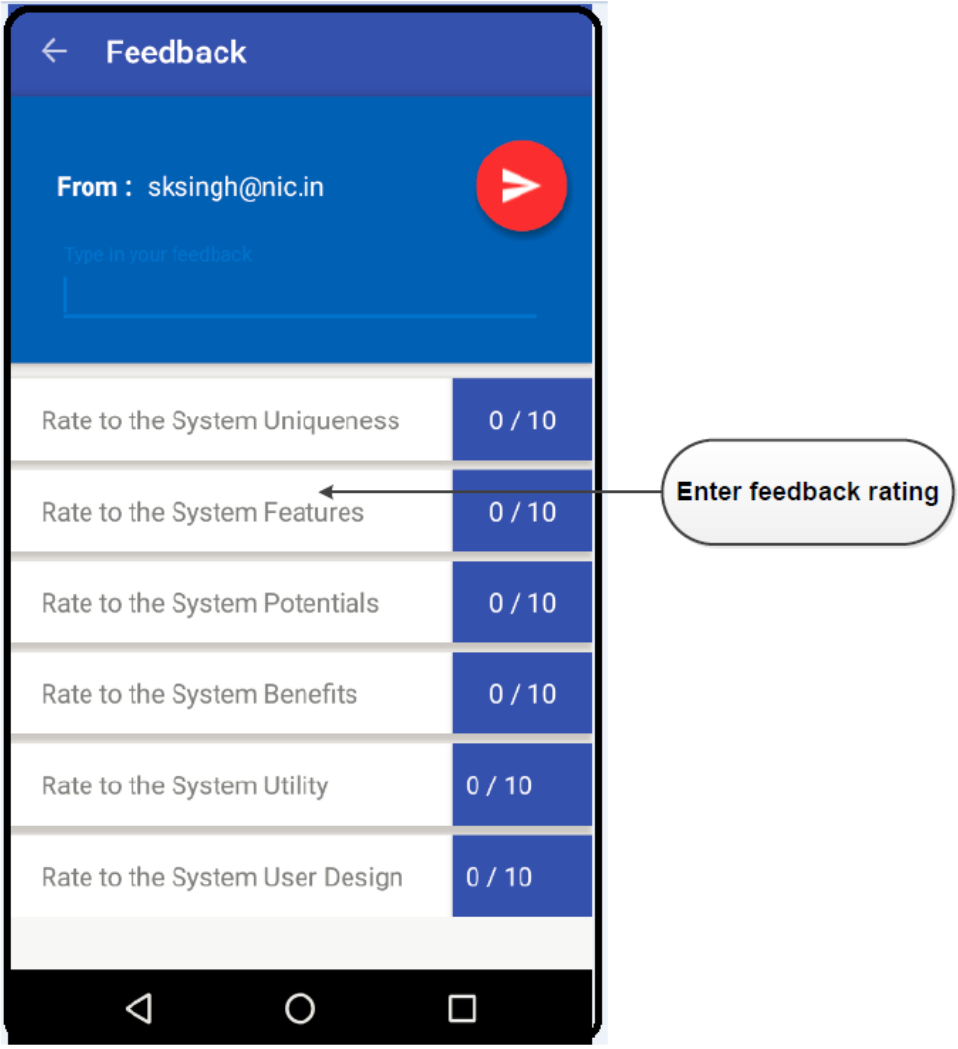
Screen for accessing the 'Help and Feedback'

Click on 'Help & Feedback' for any assistance

Home page screen for Help and Feedback

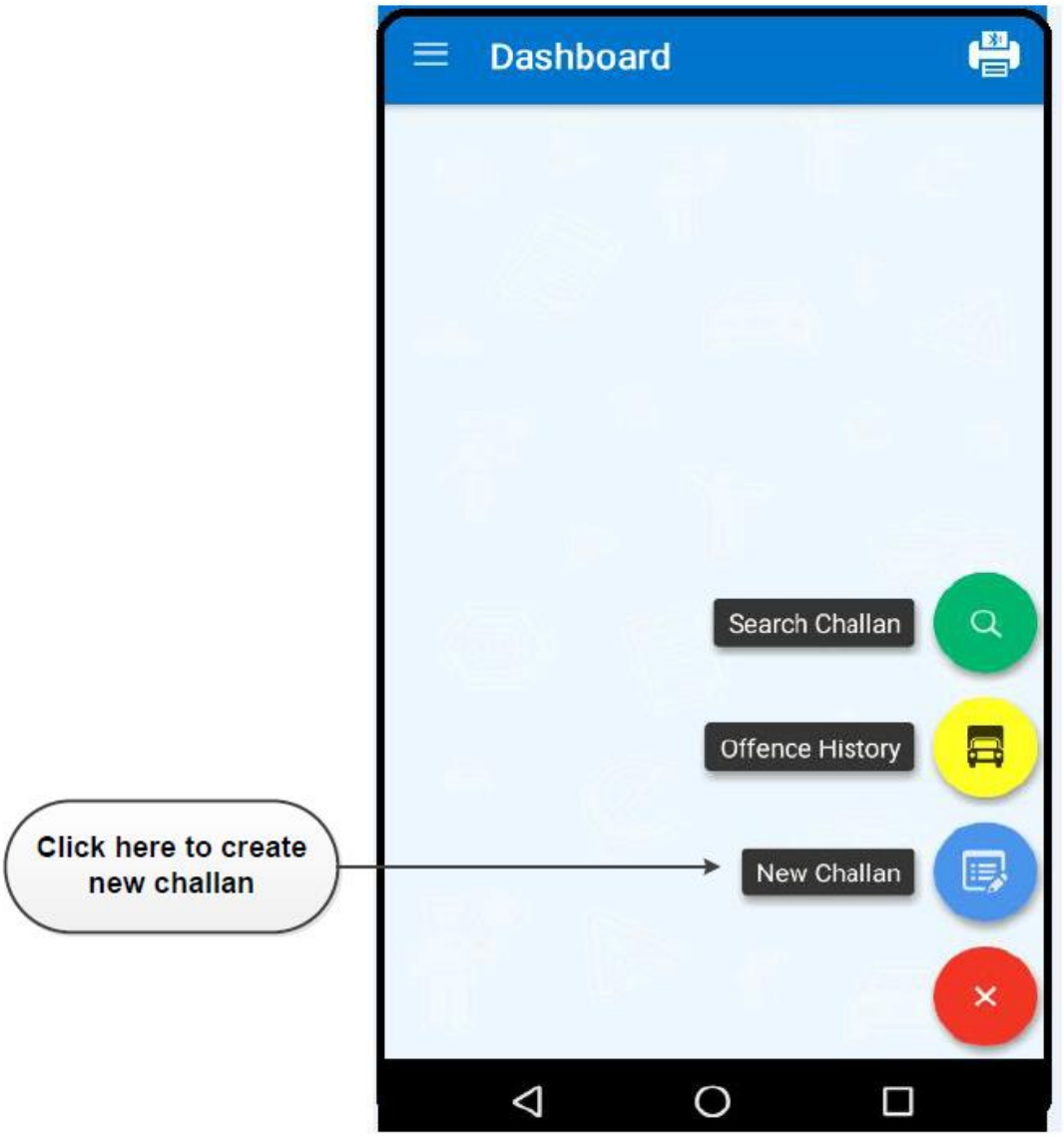


Upon clicking on 'Help & Feedback', A new screen appears where the user click on 'Feedback' to provide any feedbacks related to mobile application

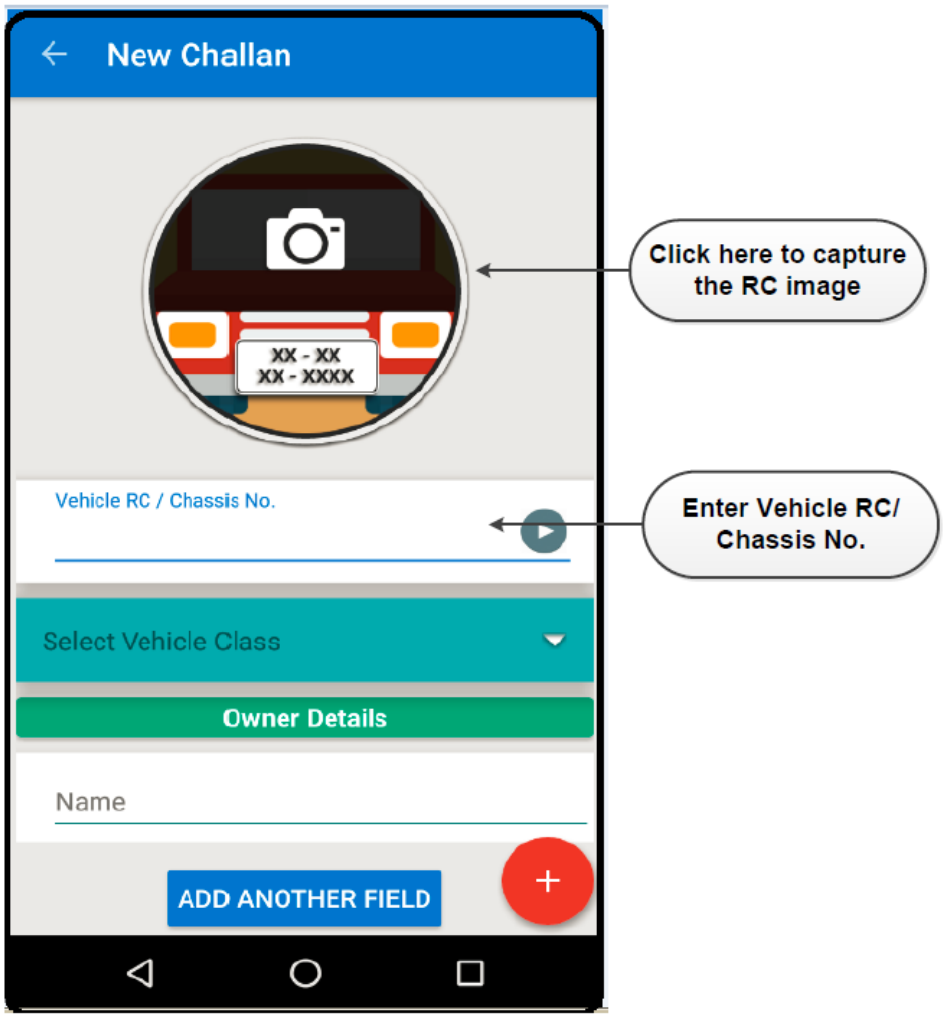
Screen for submitting the feedback



Once the user clicked on ‘Feedback’, A new screen appears where the user can provide his feedback and click on ‘Send’ to submit the feedbacks

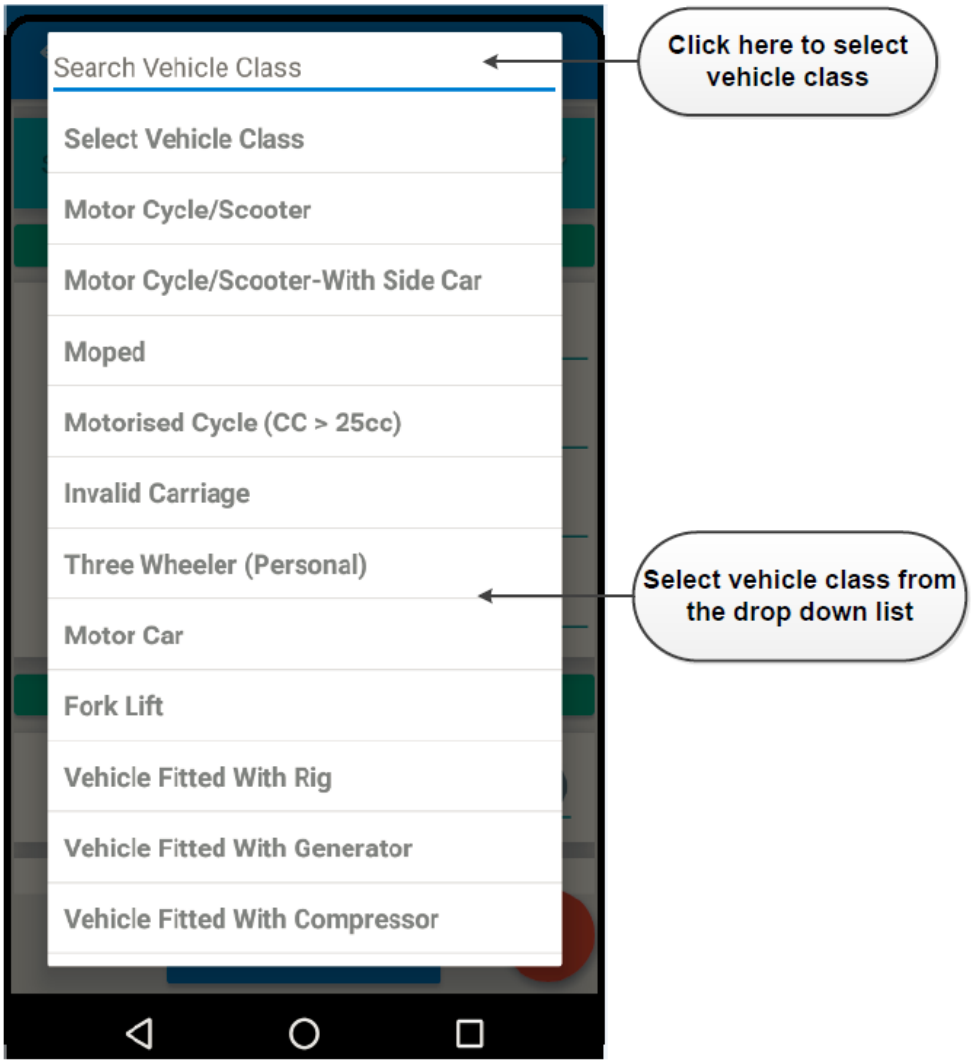
Screen for creating a New Challan

Click on ‘New Challan’ to create a new challan

Screen for capturing the RC image and update RC number



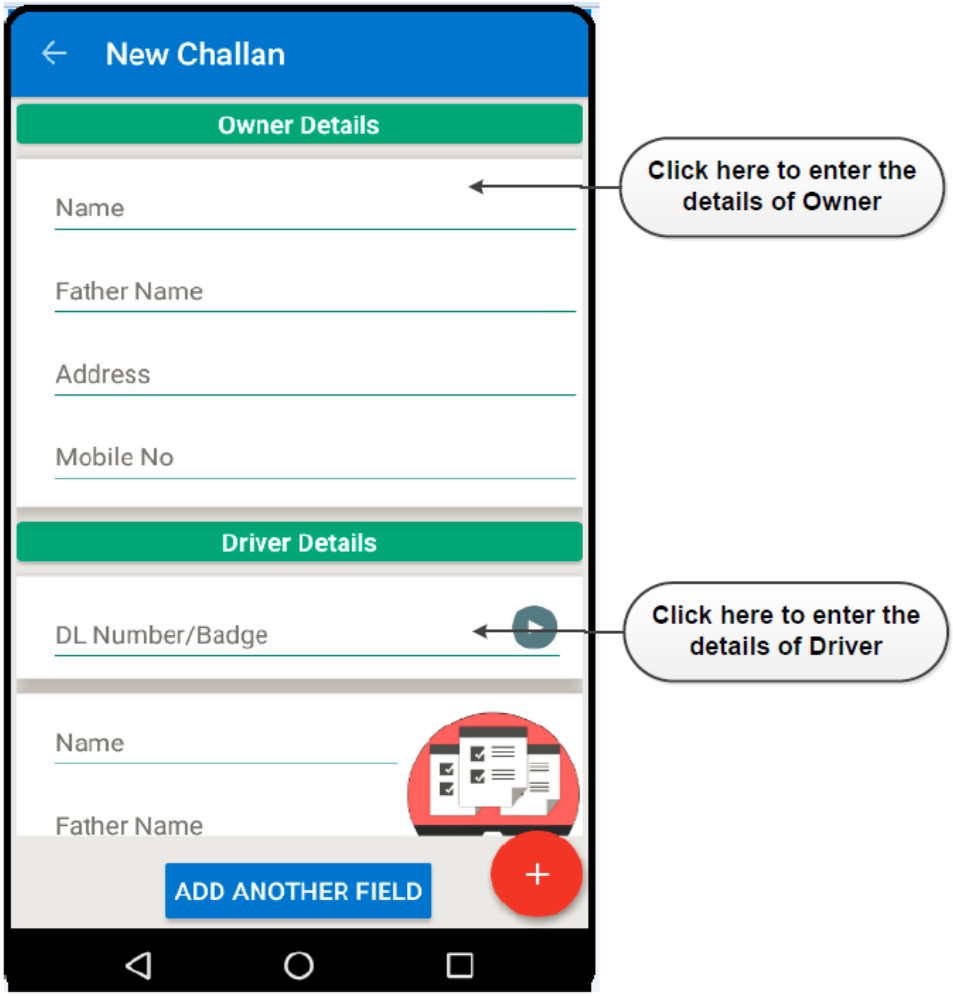
Upon clicking on 'New Challan', A new screen appears where the user click on ' ' icon to capture the picture of the vehicle registration number and enter vehicle details on 'Vehicle RC/ Chassis No'.

Screen for selecting the class of vehicle



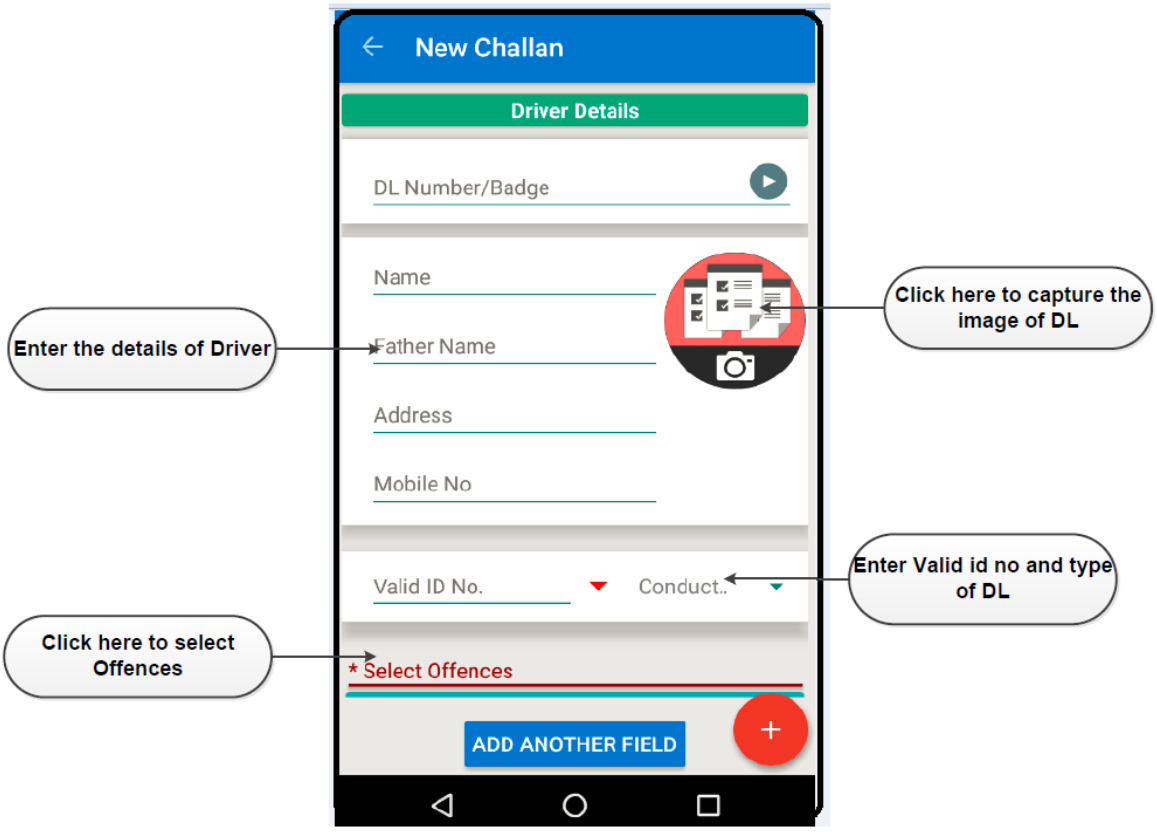
Click on ‘Vehicle Class’ and select the vehicle class from the list of drop down.

Screen for entering the details of Owner or Driver



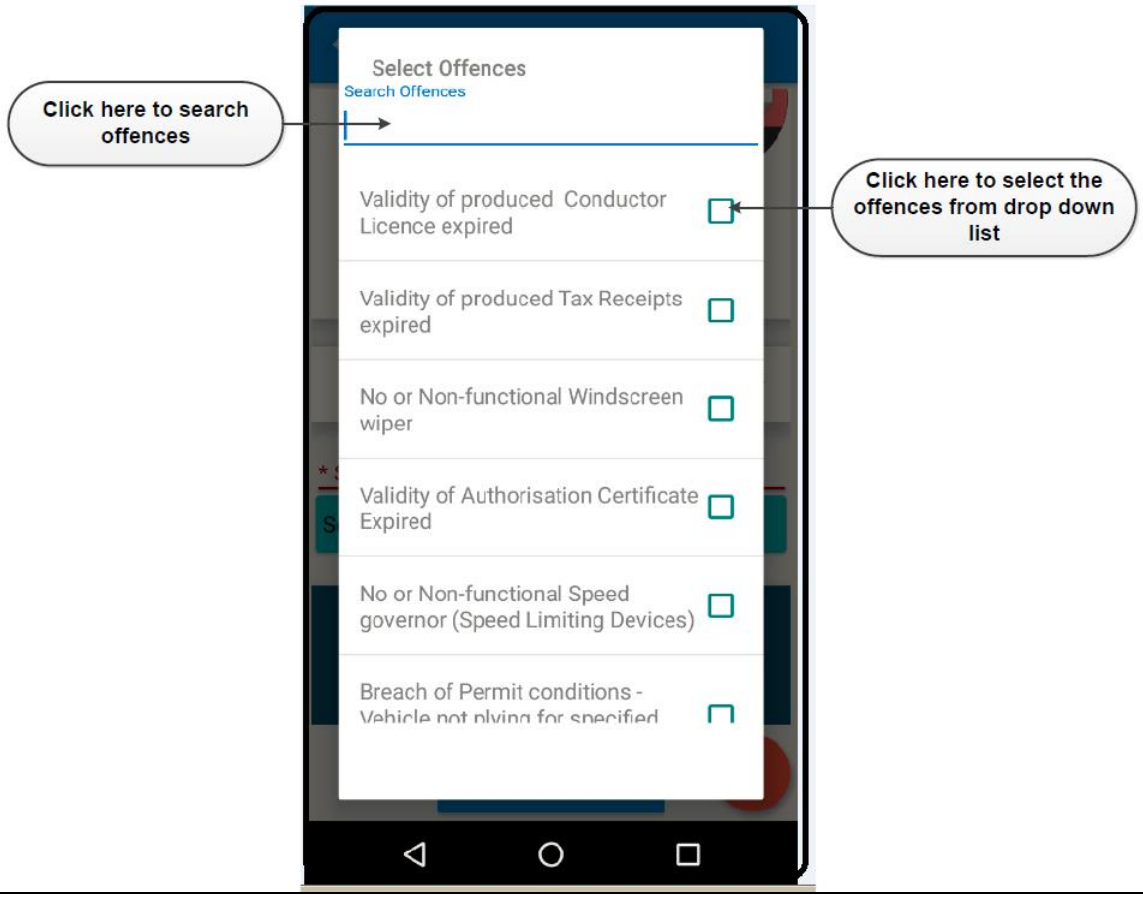
Click on 'Owner Details' and enter the details of owner or click on 'Driver Details' to enter the details of driver

Screen for entering the DL number and capturing the image of DL



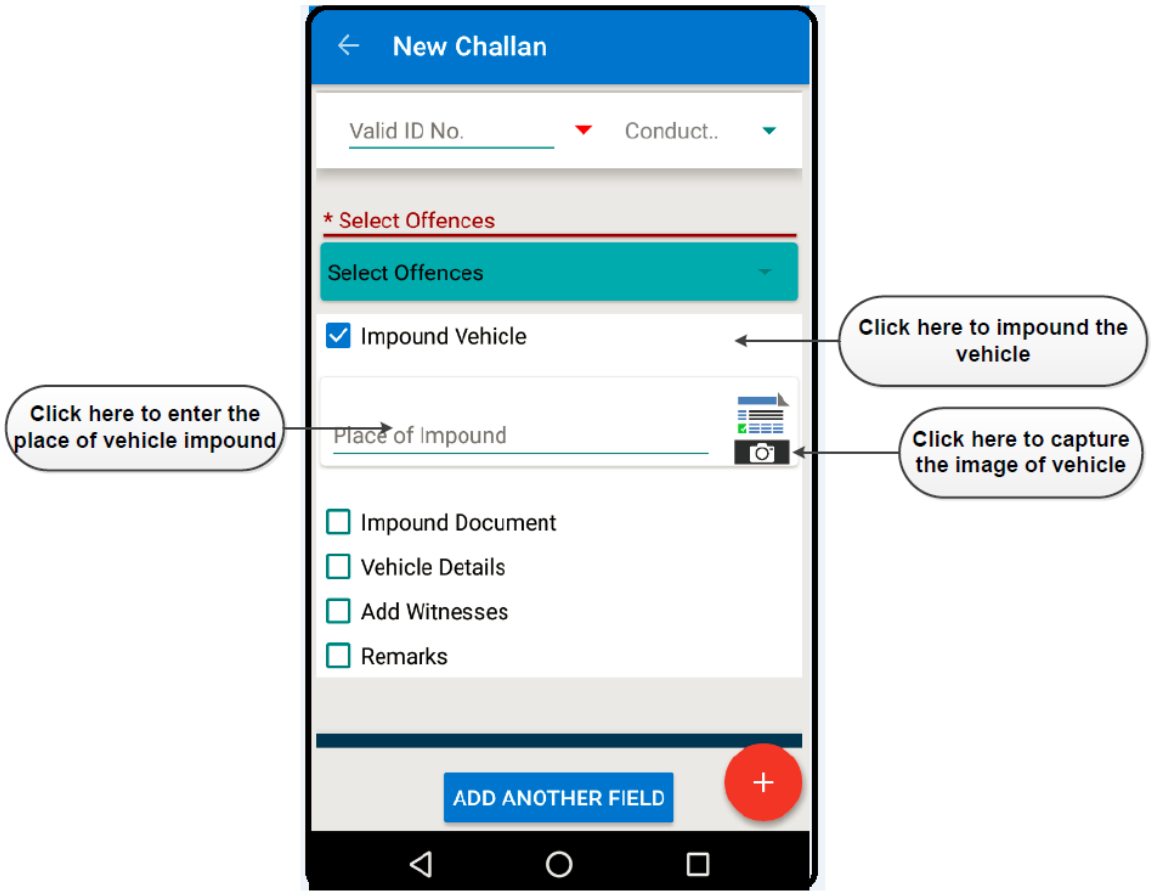
Upon clicking on 'Driver Details' A new window appears where the user enter the details of driver and click on ' ' icon to capture the image of DL then Click on 'Select Offence' to select the offence.

Screen for searching and selecting the offences



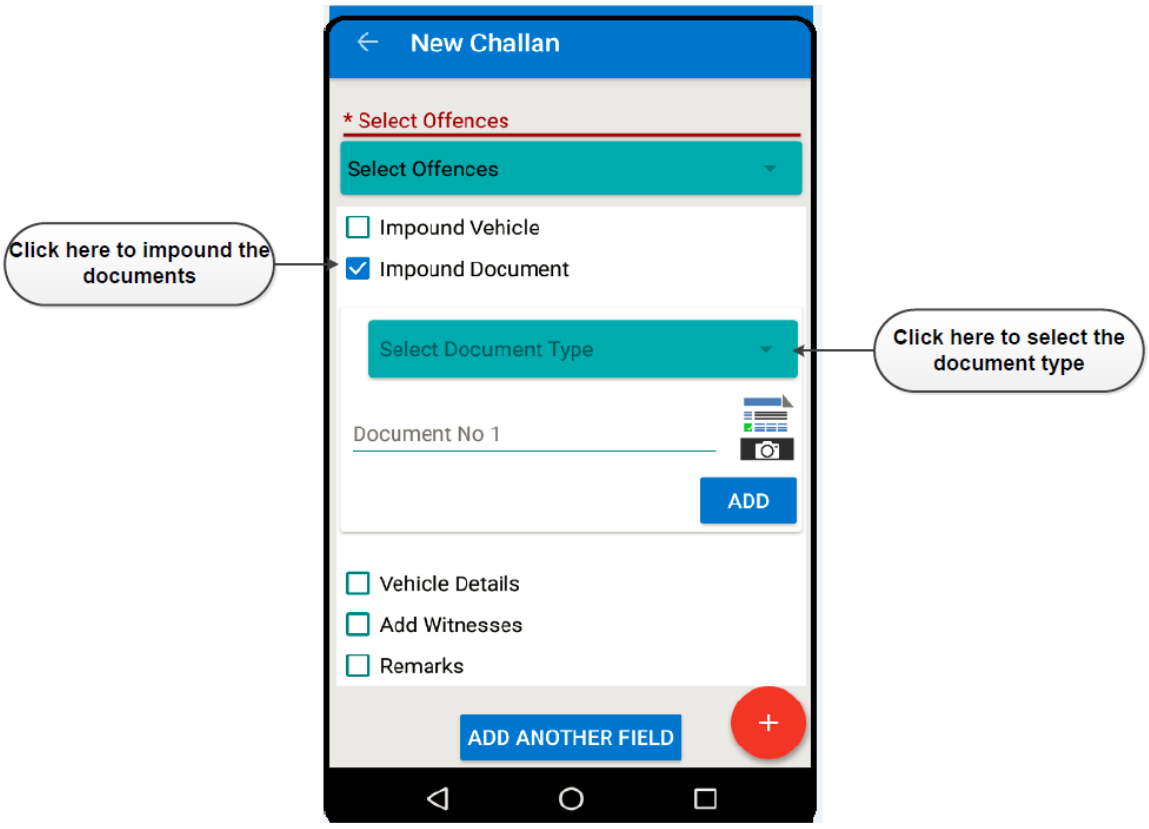
Upon clicking on 'Select Offence', A new window appears where the user search and select the offence from the list of offence.

Screen for impounding the vehicle



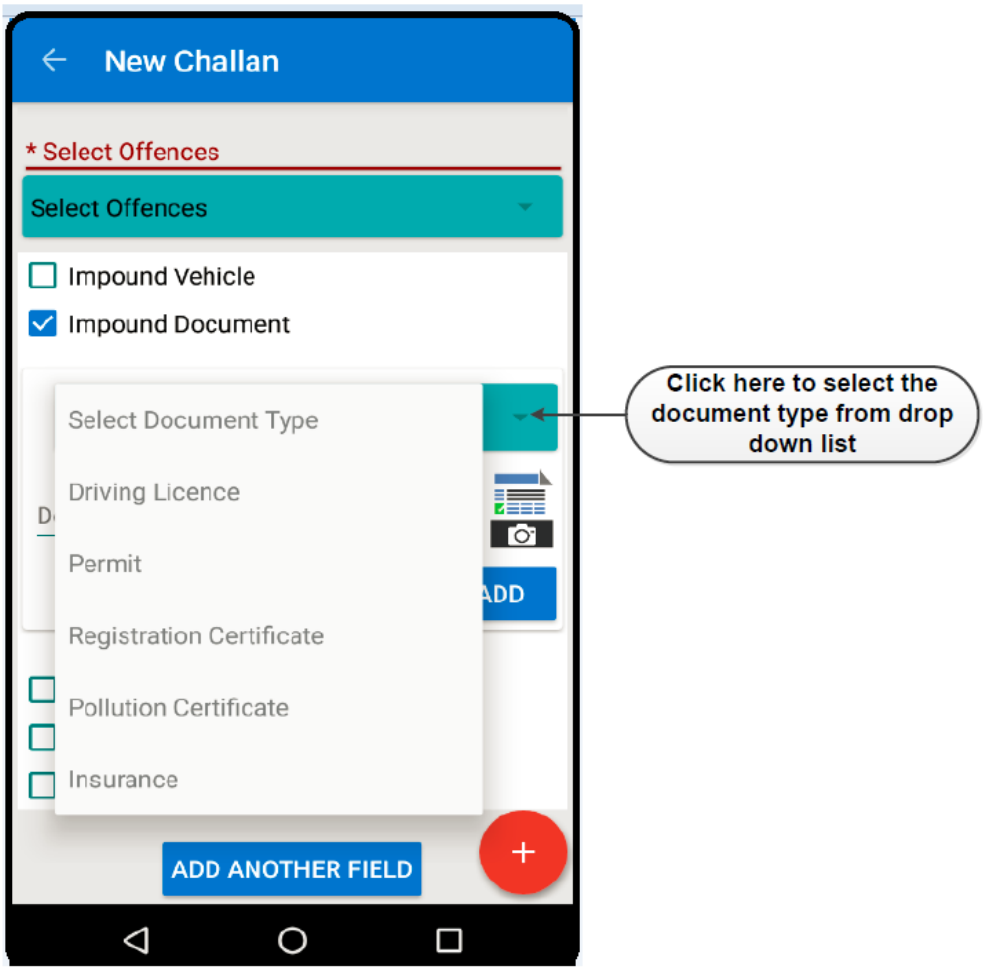
Click on 'Impound Vehicle' to impound the vehicle and enter the details of 'Place of impound' then click on ' ' image to capture impound vechile

Screen for impounding the document



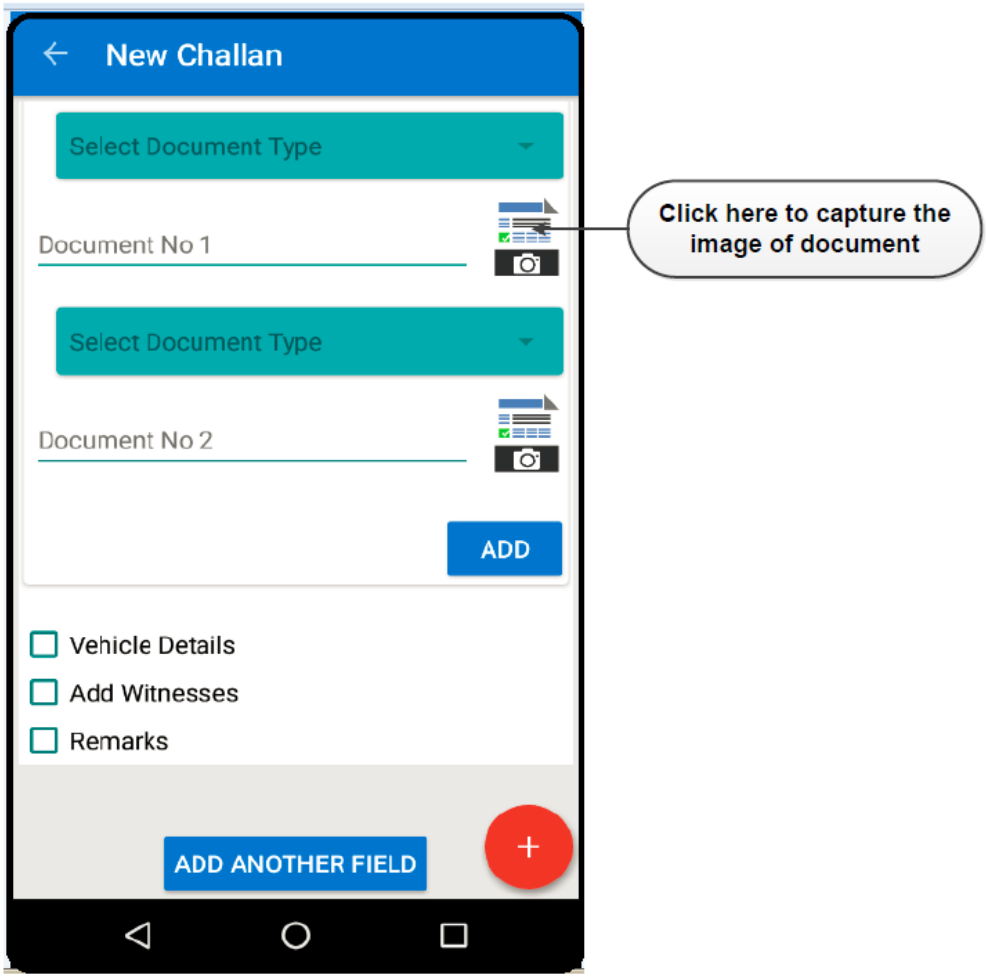
Click on 'Impound Document' to impound the documents

Screen for selecting the type of document impound



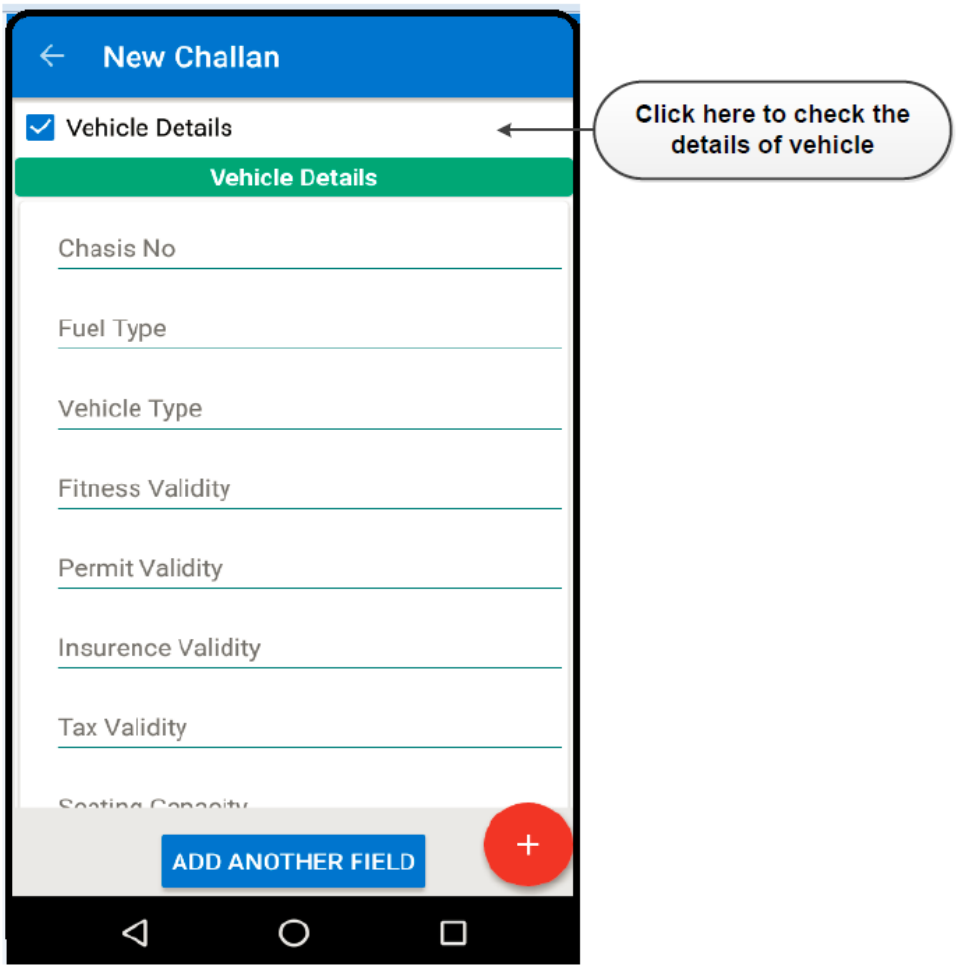
Upon clicking on 'Impound Document', A new window appears where the user select the document type from the drop down list

Screen for capturing the picture of impounded documents



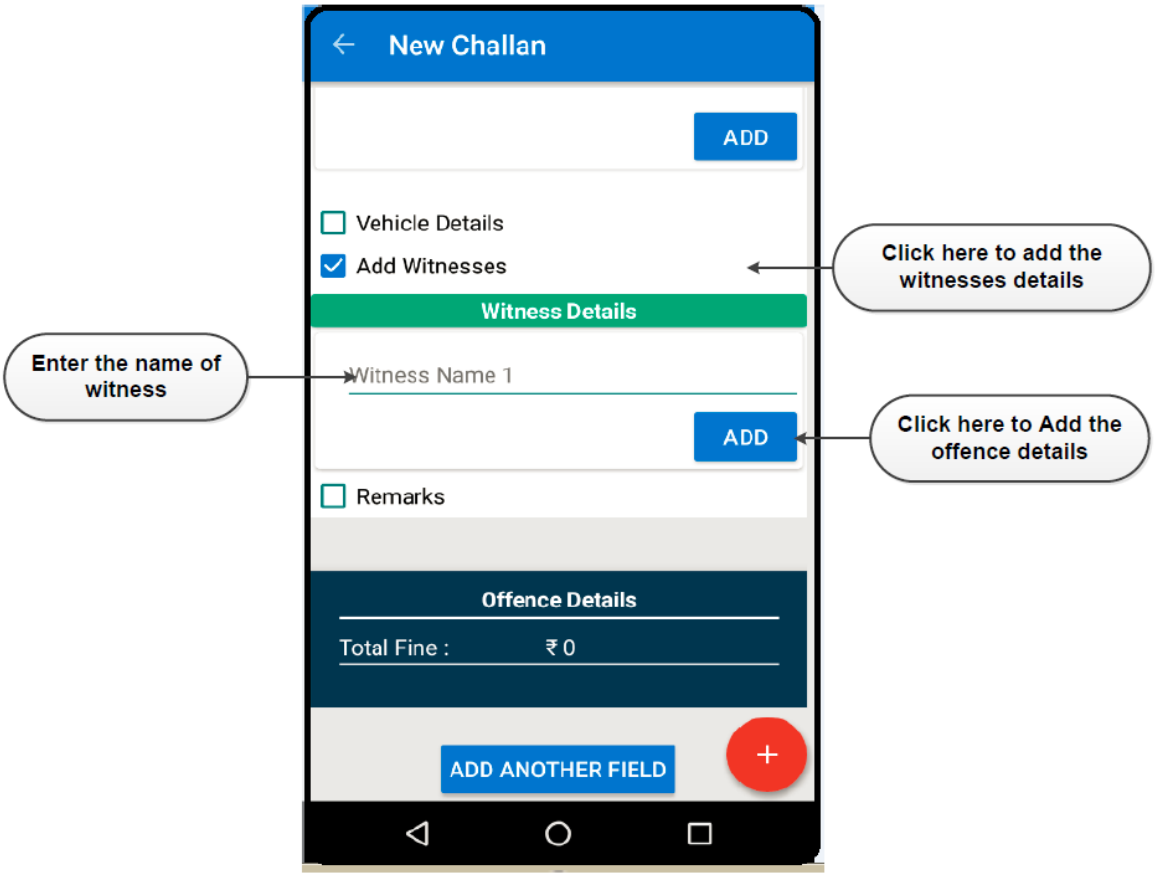
Once the user select the document type , Click on ' ' to capture the picture of the impounded documents

Screen for viewing the details of vehicle



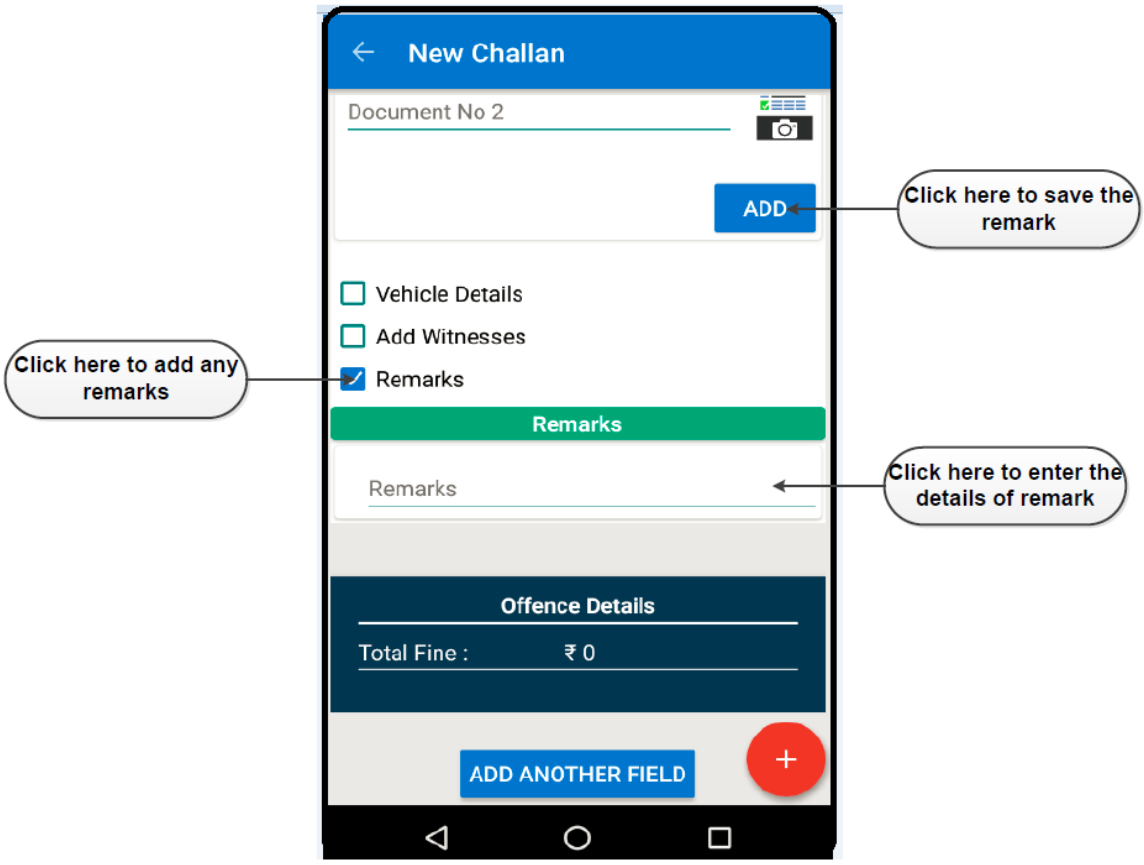
Click on 'Vehicle Details' to check the details of vehicle such as chassis no, fuel type, vehicle type, vehicle validity etc.

Screen for addition of witnesses



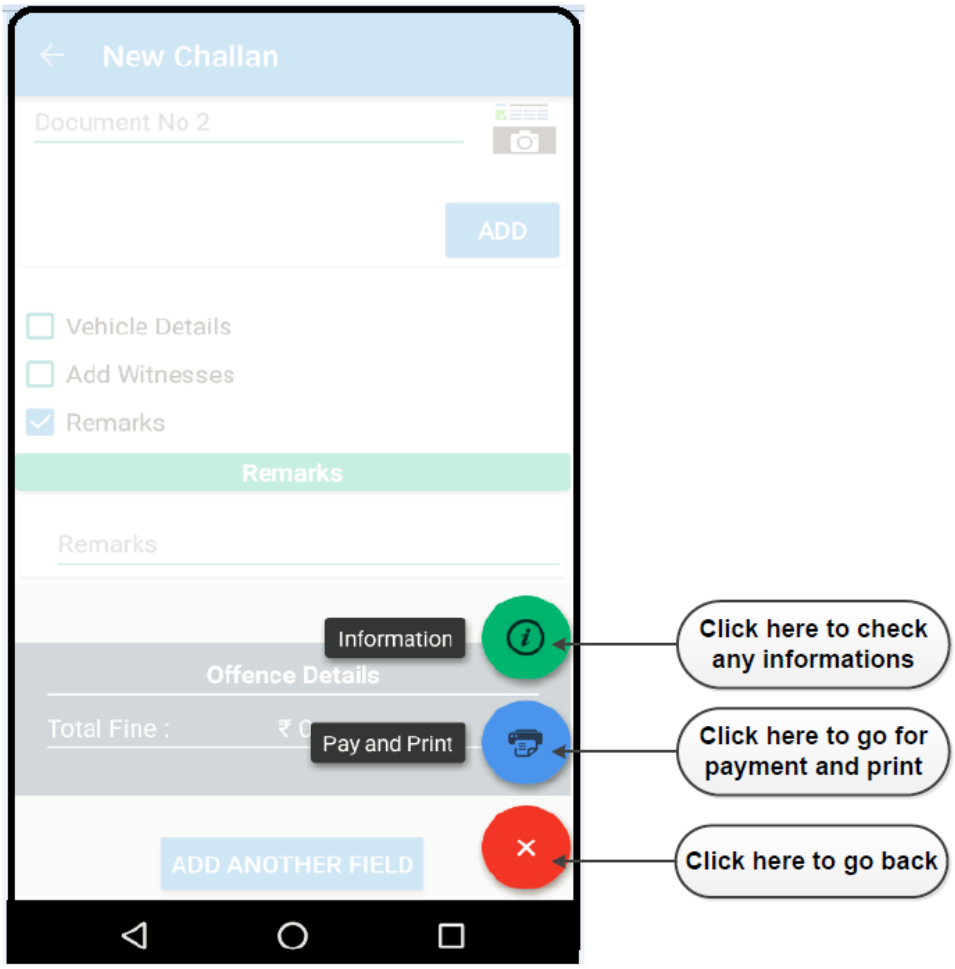
Click on ‘Add Witnesses’ to add witness details and enter the name of witness and click on ‘Add’ to add the entered witness details

Screen for addition of remarks



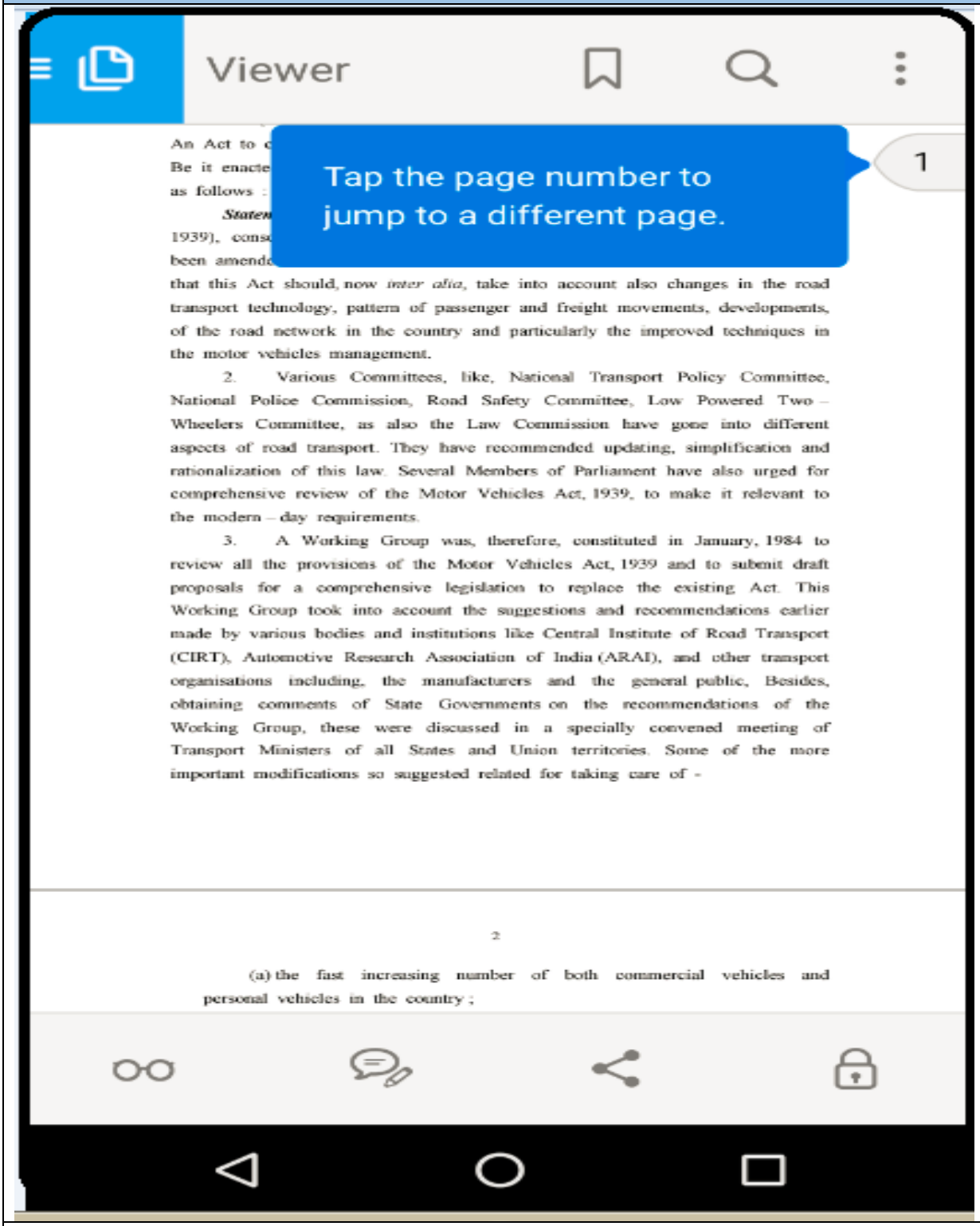
Click on ‘Remarks’ in case of any additional information required to be added on.

Screen for selection of information or Pay & Print options



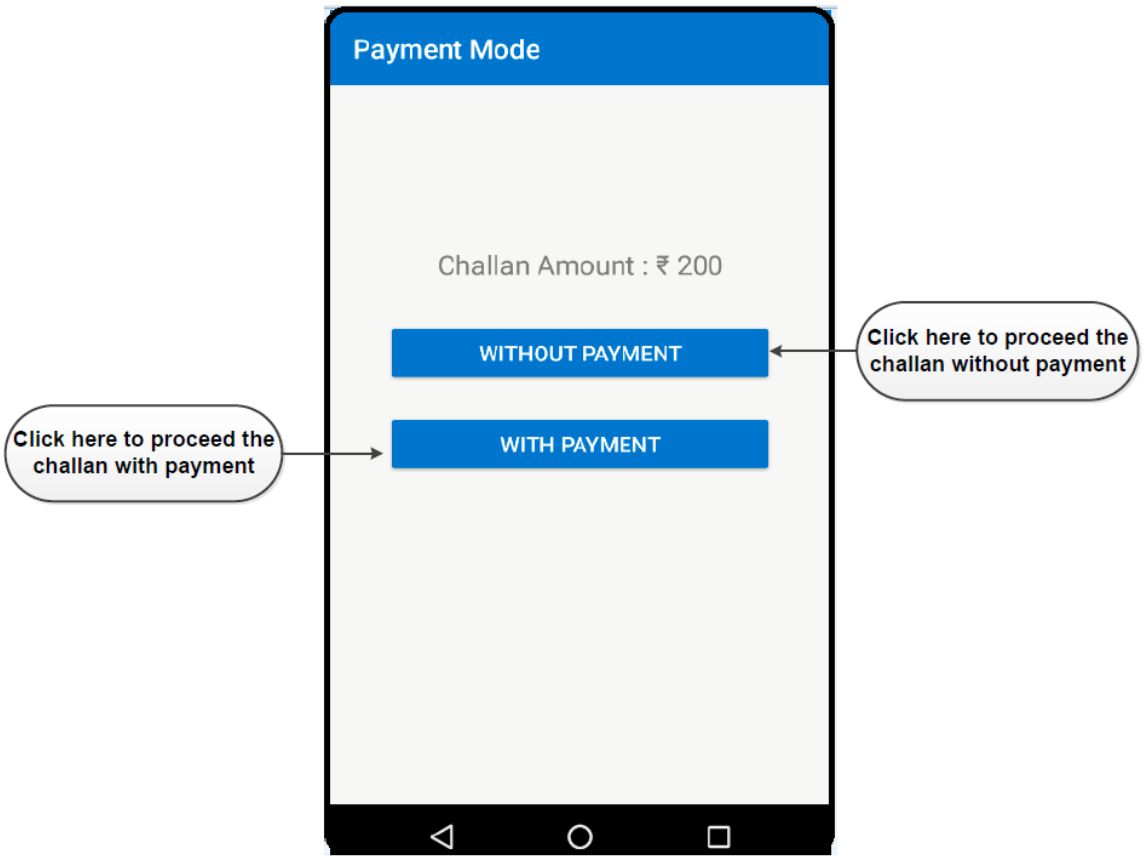
Click on ‘Information’ to check any information related to offence or click on ‘Pay and Print’ to proceed for payment of the challan.

Screen for viewing the offence details as per CMVR



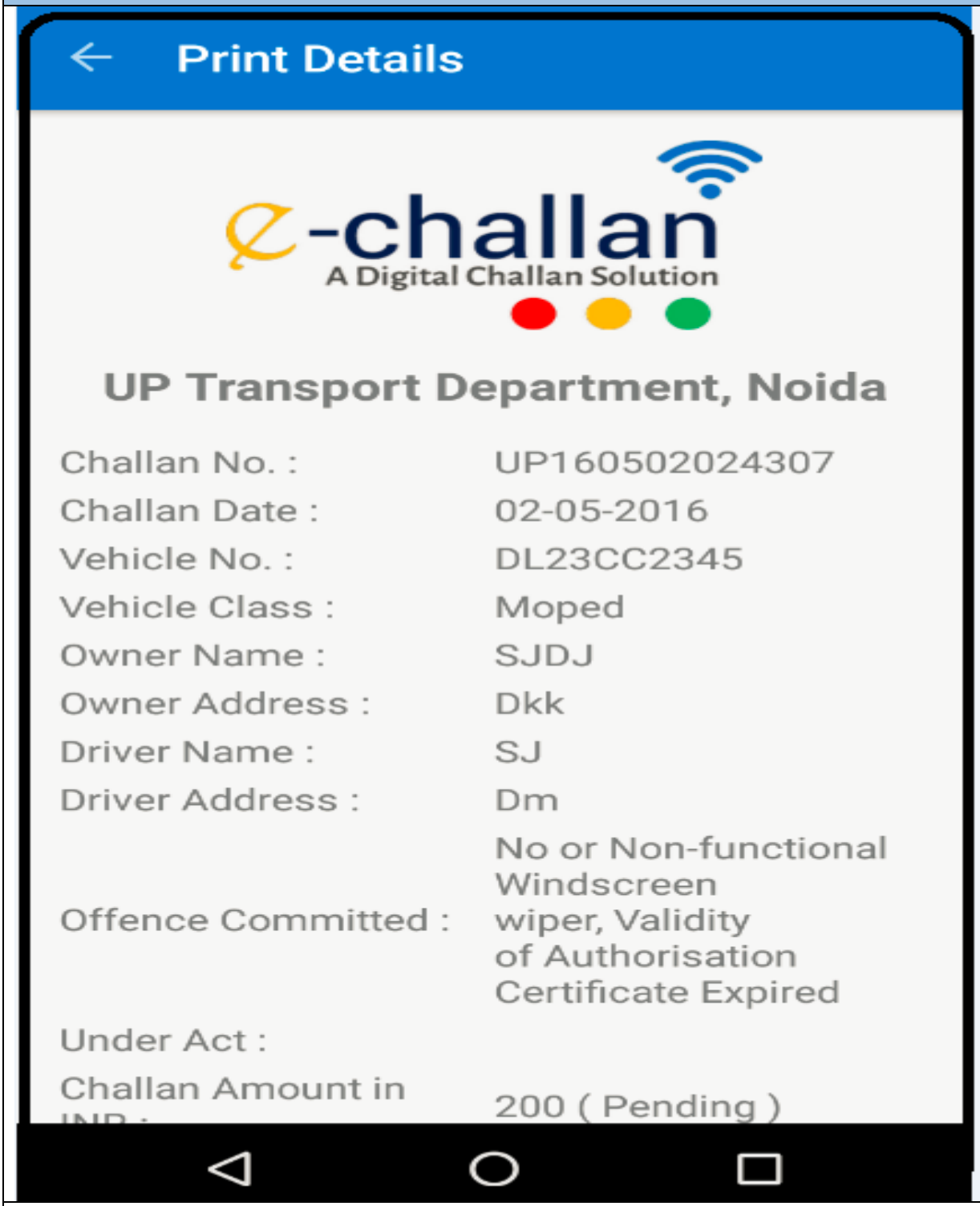
Upon clicking on ‘Information’, A new window appears where the user can able to check the information related to offence.

Screen for selection of payment mode



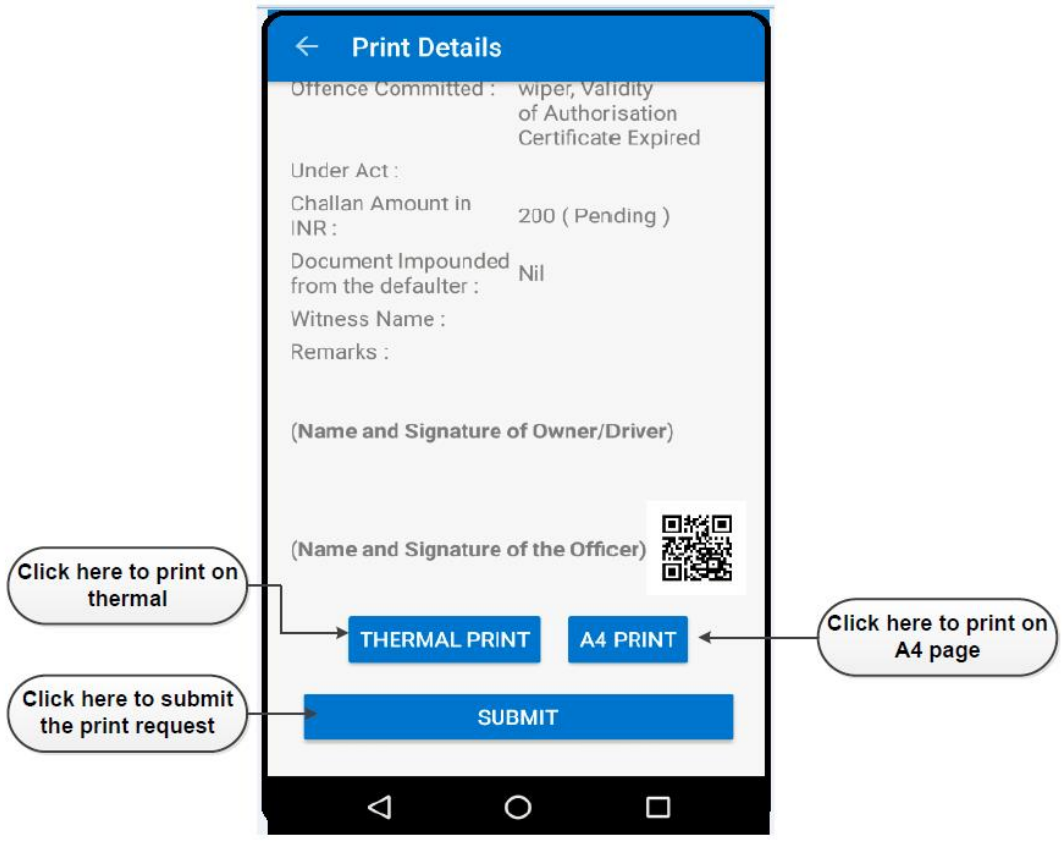
Click on 'Without Payment' to generate the challan with pending payment or click on 'With Payment' to generate the challan with payment

Screen for printing the challan



Once the user clicked to payment (without payment/ with payment), A new screen appears where the Challan generated with the payment status.

Screen for selecting the printing page

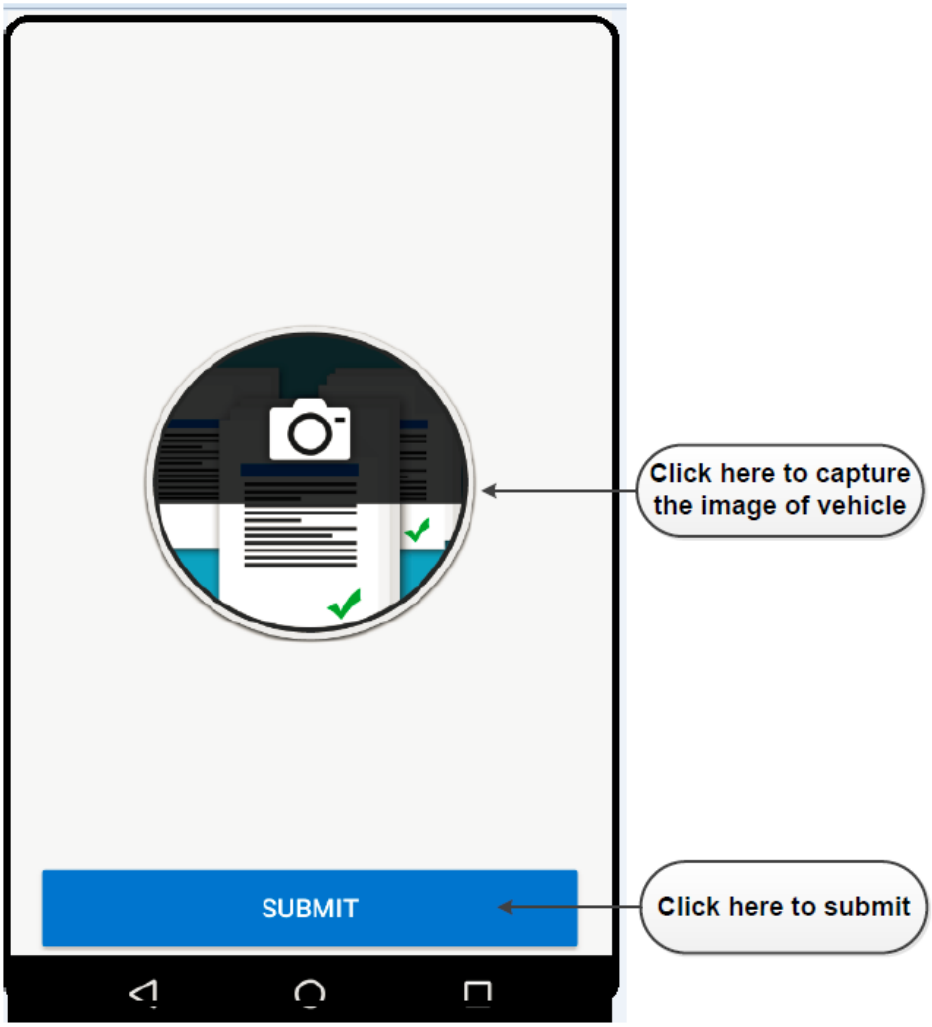


Click on ‘Thermal Print’ or ‘A4 Print’ to print the challan

Generation of challan home page screen

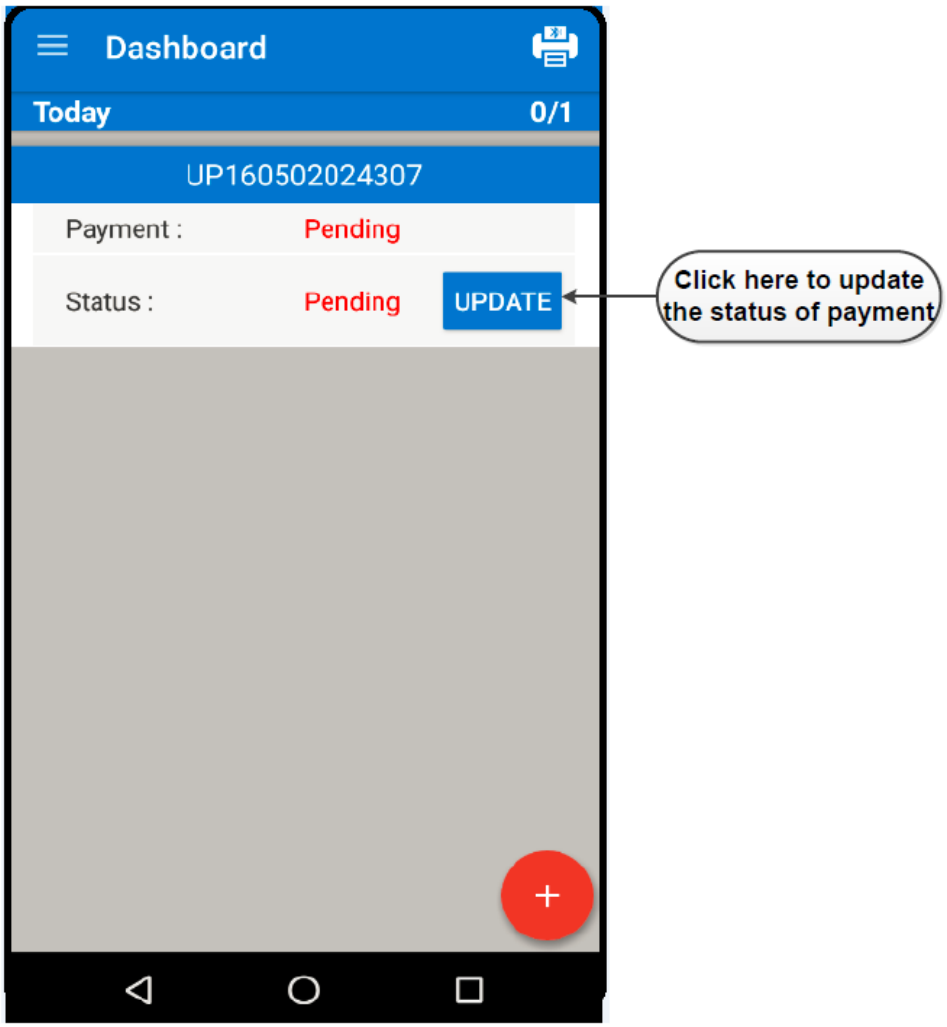
Upon clicking on ‘Print’, A new screen appears where the challan is generated.

Screen for capturing the image of vehicle and submission of challan



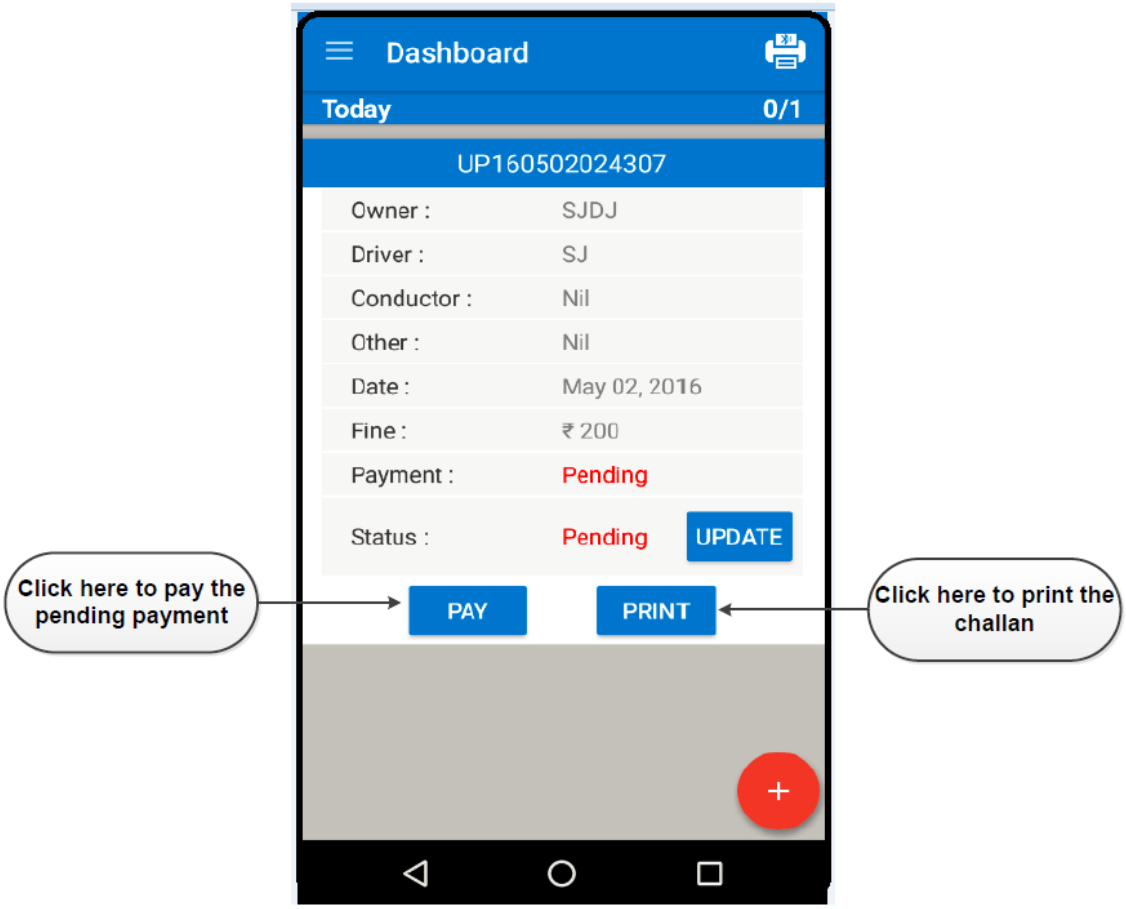
Click on ‘ ’ icon to take the picture of the vehicle and click on ‘Submit’ to submit the challan

Screen for updating the challan status



Upon clicking on ‘Submit’, A new screen appears where the user click on ‘Update’ to update the status of the challan

Screen for payment of pending challan amount



Once the user click on ‘Update’, A new screen appears where the user click on ‘Pay’ to get payment of the challan or click on ‘Print’ to get the print out of the challan