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 offline 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:

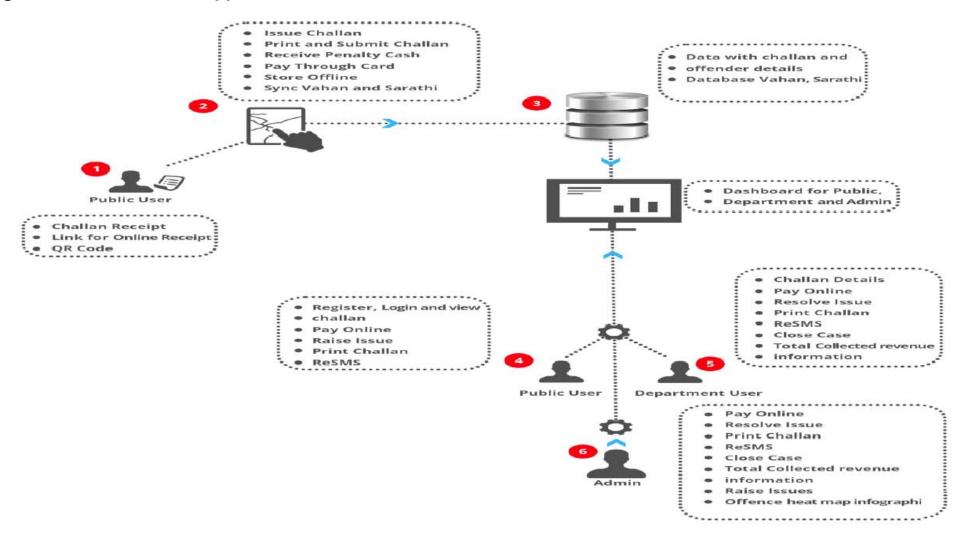
- Enforcement officers
- Citizens (private or commercial car owners/drivers)
- State transport office
- Regional transport office
- NIC admin
- Ministry of Road and Transport

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

Issue of challan

- •EO captures RC and DL of the offender in the mobile app
- Vehicle and driver/owner details are fetched in the form from Vahan-Sarathi database
- EO selects the type of offence committed
- Challan amount is autocalculated
- •EO takes the print of the chalan amount receipt describing the vehicle, driver/owner and challan amount details and hands it to the offender

Payment of challan

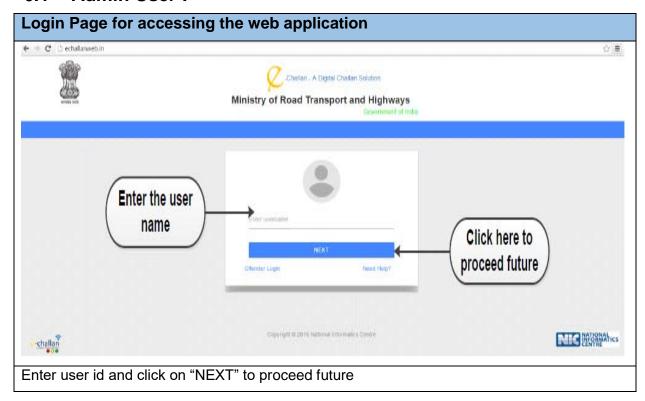
- •The offender can pay challan amount through any of the 3 options: (i) in cash at onsite (ii) online through web later (iii) in cash at RTO office
- •The offender can scan the QR code on the receipt and he is directed to the online challan payment website
- The offender can log into the website using the OTP received on his mobile number which he reigstered with EO during the issuance of challan
- Once logged in, the offender will be able to see the pending challan amount for payment against his challan number
- The offender can then make the payment through online payment gateway

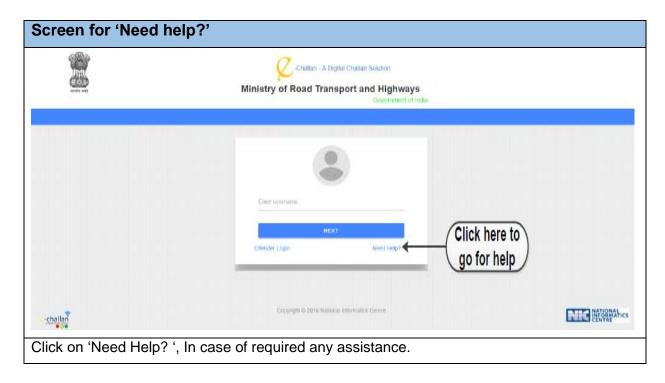
Monitoring

- •EO can login to his system to check whether the payments have been received against the challans he issued. If so, then he can close the case else he may send re-notification alerts to the offender
- •The RTO officer can log in to the system to check how many payments are pending against the challans and how much revenue has been collected
- The officer can also look at the various notification or issue alerts raised from various users
- The officers and Ministry will have access to dashboards showing the heatmap of the challan issuance happening across a defined geography

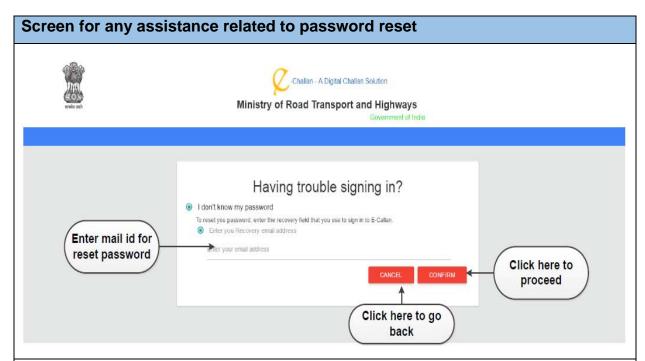
6 Tooltips of e-challan web application

6.1 Admin User:



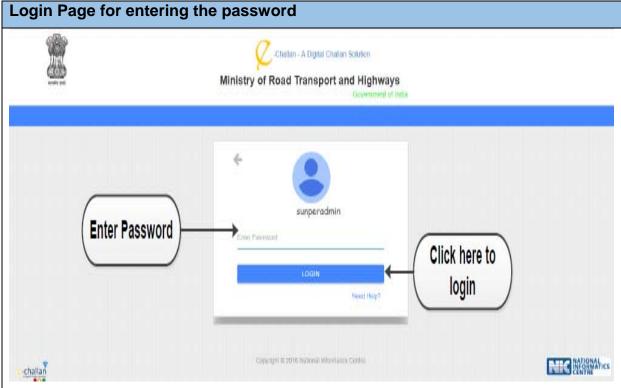






Upon clinking on "Need Help?" a new screen appear where the system from the user "Having trouble signing in ?"

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.



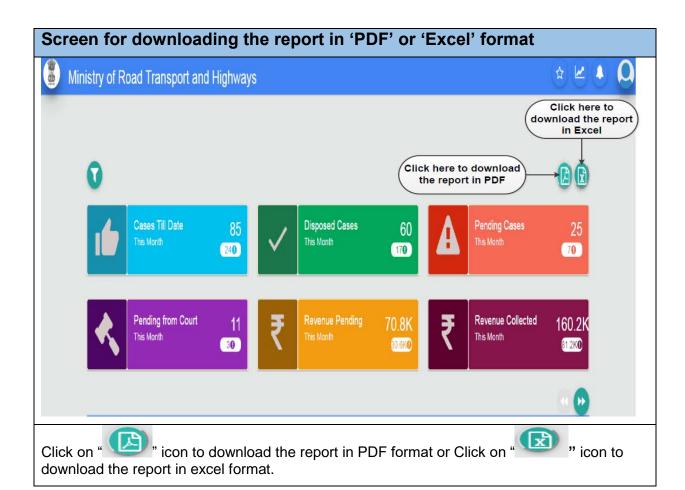
Upon clicking on "Next" the system ask from user to enter the password and click on 'Login' to access the system.



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.

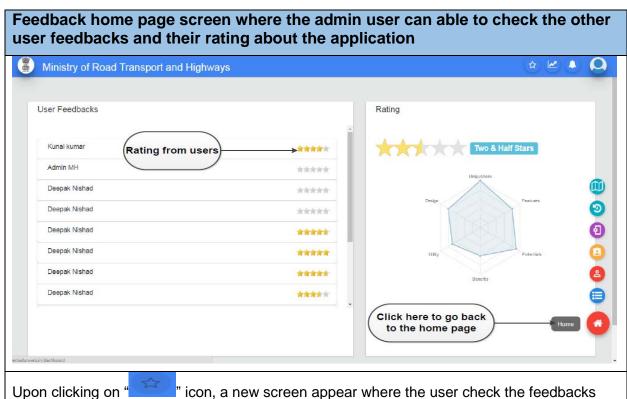


Once the user logged into his page, a new screen appear where the user manage his Cases (Pending/Completed) ,check revenue status, manage offence, manage history, manage device, manage roles, manage users and job allocate.



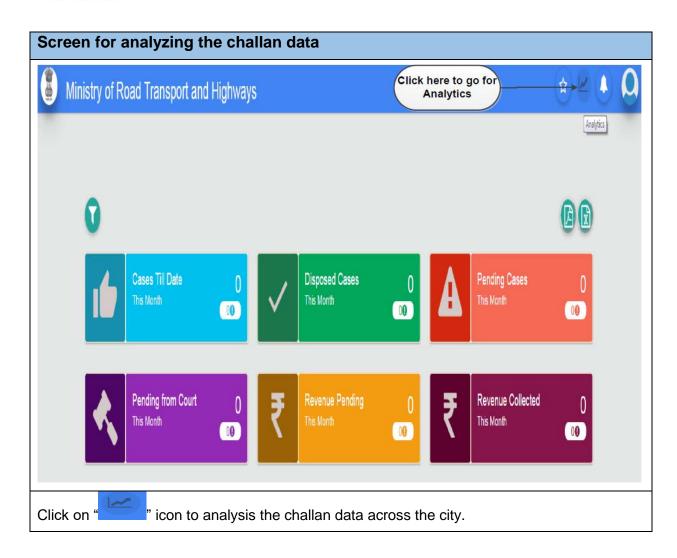


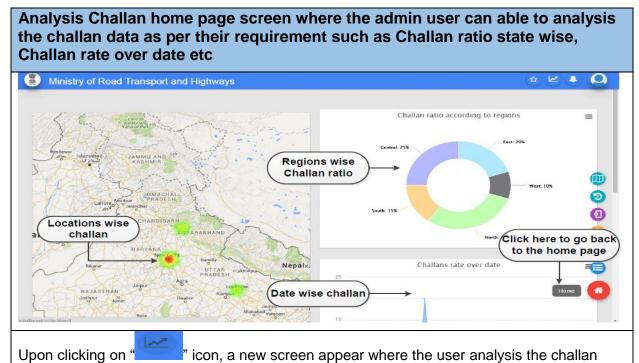




from other user and check their rating else click on 'Home' to return back to the home page.



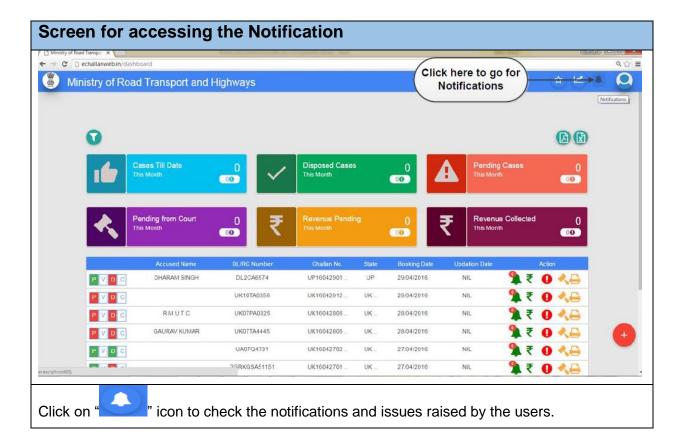


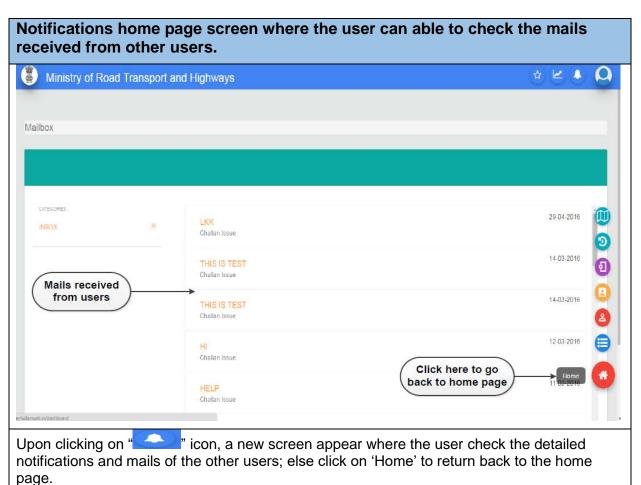


ratio according to regions, challan rate over date and challan by officer; else click on 'Home'

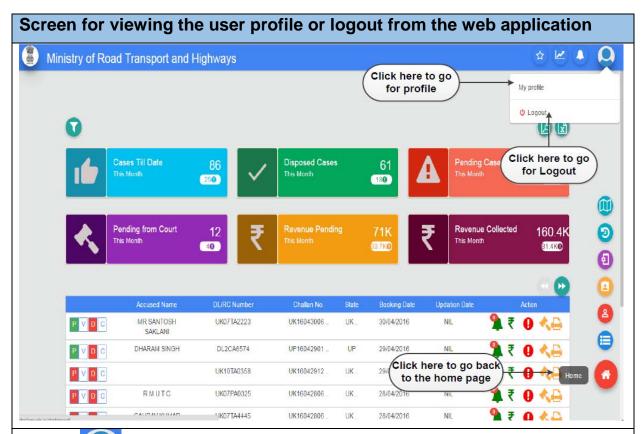
to return back to the home page.



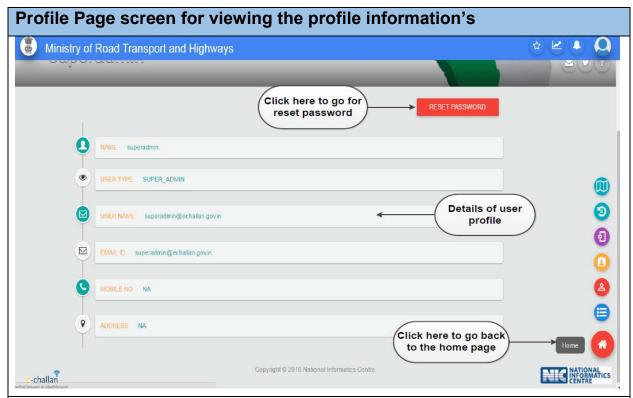








Click on "icon to view the user profile on clicking on 'My Profile' or click on 'Logout' to switch from the application or click on 'Home' to return back to the home page.



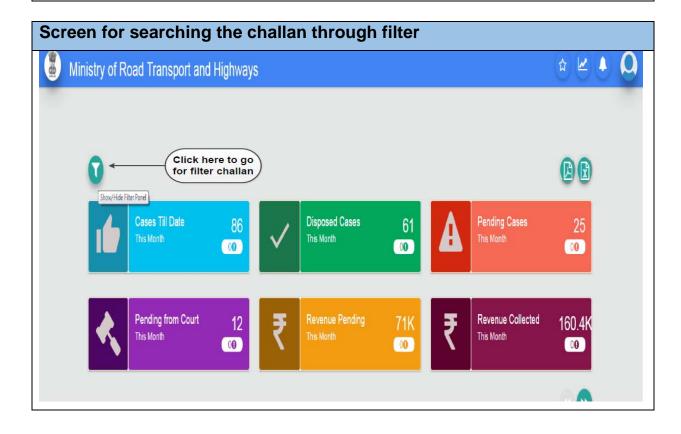
Upon clicking on 'My Profile', A new screen appear where the user view the profile of his own or click on 'Reset Password' to rest his user id password; else click on 'Home' to return back



to the home page.



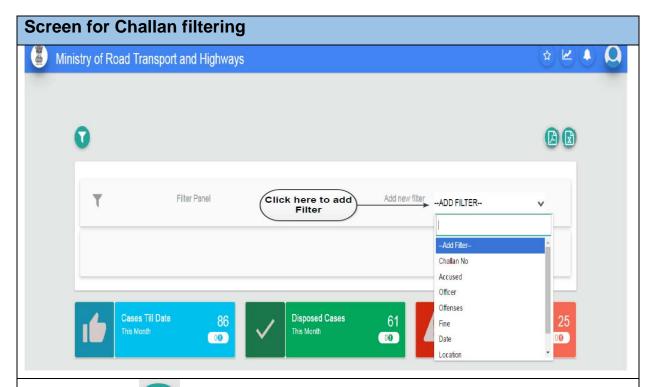
Upon clicking on 'Password Reset', A new screen appear where the user enter his old password, new password & confirm password and click on 'update' to generate a new password or click on 'Cancel' to return or click on 'Home' to return back to the home page.



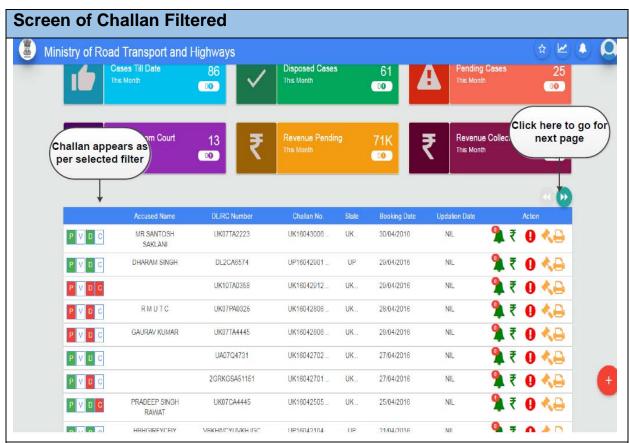


Click on ' icon to show or hide the filter panel.





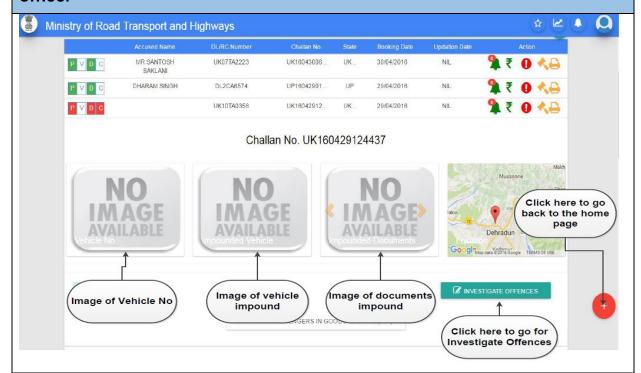
Upon clicking on ' icon, a new window appears where the user can search the challan from the drop down options such as challan number, accused, officer, offenses, fee, date, location and location.



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

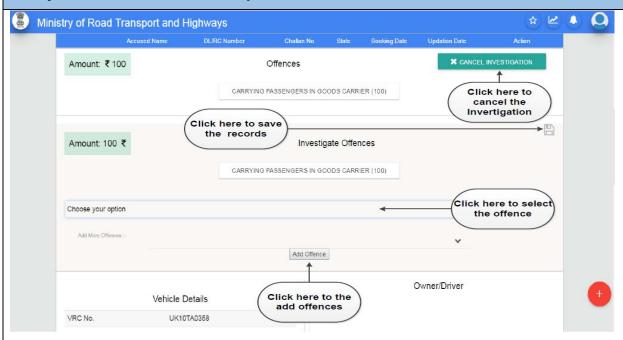


Challan Details screen where the admin user can able to view the image of RC, Impounded vehicle, Impounded documents uploaded by the officer



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

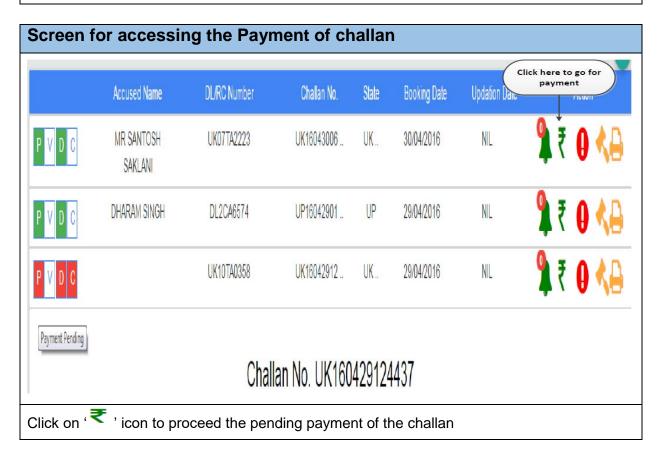


Once the user clicked on 'Investigate Offences', A new window appears where the user click on 'Add offence' form the list of offences for addition of any other offences and click on

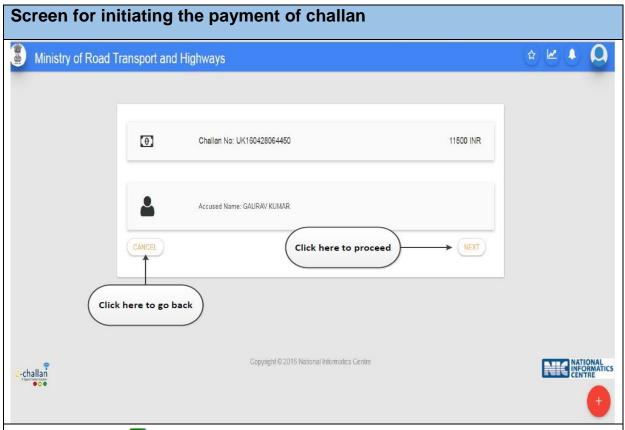


'icon to save the offence details or click on 'Cancel Investigation' to get return back to the page without the additions

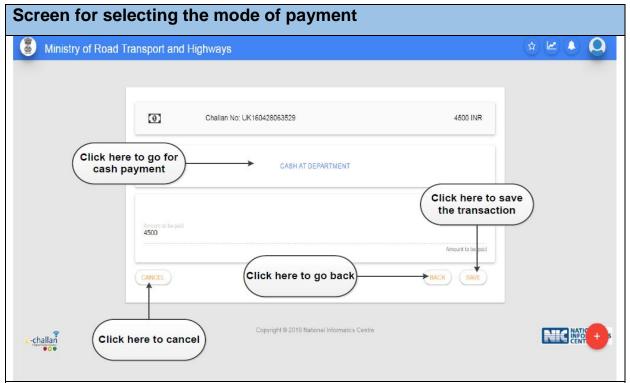
	Accused Name	DL/RC Number	Challan No.	State	Booking Date	Updation Date		Action	
P V D C	MR SANTOSH SAKLANI	UK07TA2223	UK16043006		lick here to cl the Notificatio		7	0 🕴	
P V D C	DHARAM S <mark>I</mark> NGH	DL2CA6574	UP16042901	UP	29/04/2016	NIL	1 ₹	0 4	
PVDC		UK10TA0358	UK16042912	UK	29/04/2016	NL	1 ₹	0 4	
Payment Pending		Chall	an No. UK160	429124	1437				





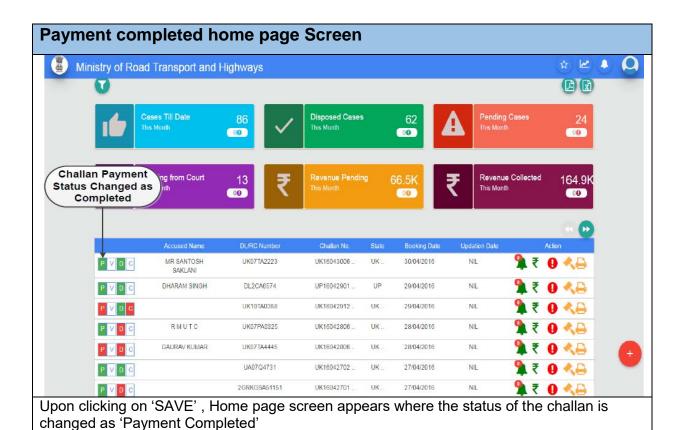


Upon clicking on ' icon , A new screen appears where the user click on 'NEXT' to proceed future or Click on 'Cancel' to return back to the page



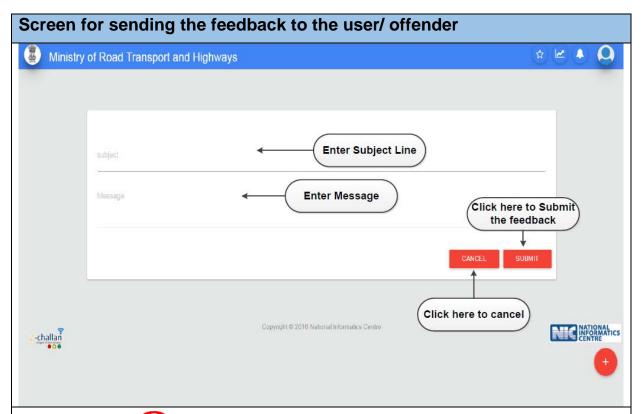
Once the user clicked on 'NEXT', Again a new screen appears where the user click on 'Cash at Department' then click on 'Save' to proceed the payment or click on 'BACK' to return back or click on 'CANCEL' to cancel the transaction





Screen for accessing the feedback Ministry of Road Transport and Highways Cases Till Date **Disposed Cases** Pending Cases This Month 00 00 Pending from Court Revenue Pending Revenue Collected 13 66.5K 164.9K This Month This Month 00 00 00 Click here to go for Feedbacks Accused Name Challan No. **Booking Date** MR SANTOSH UK07TA2223 UK16043006 UK .. 30/04/2016 NIL SAKLANI DHARAM SINGH DL2CA6574 UP16042901 UP 29/04/2016 UK10TA0358 UK16042912 UK .. 29/04/2016 NIL icon to give any feedback to the user/ offender

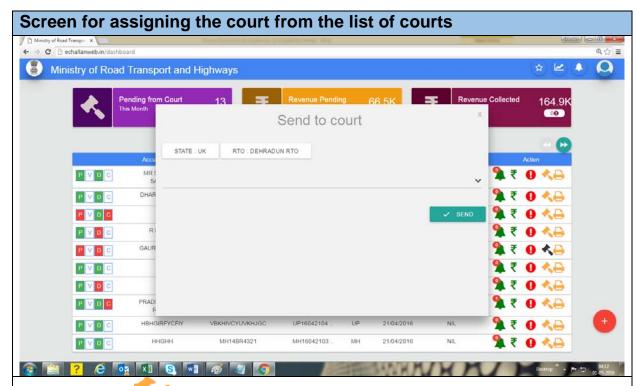




Upon clicking on ' icon , a new screen appears where the user write his feedback and click on 'SUBMIT' for submission or click on 'CANCEL' for return back or click on 'home' to go back to the home page.

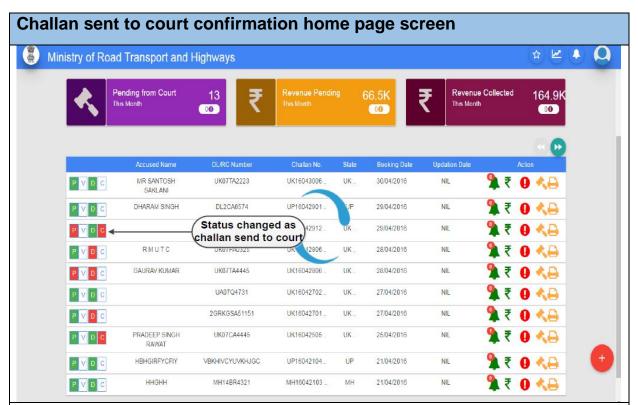




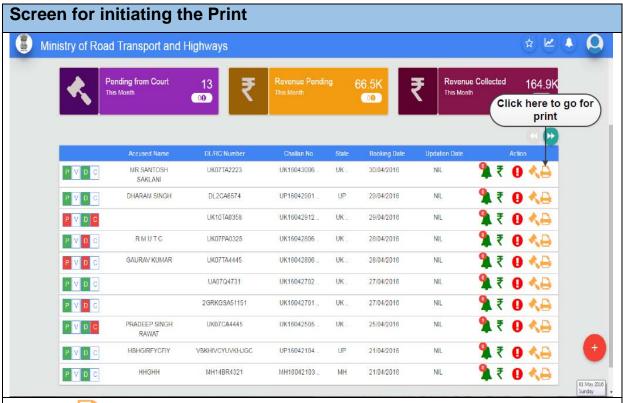


Upon clicking on ' ' icon, a new window appears where the user select the court from the list of court and click on 'SEND' for submission



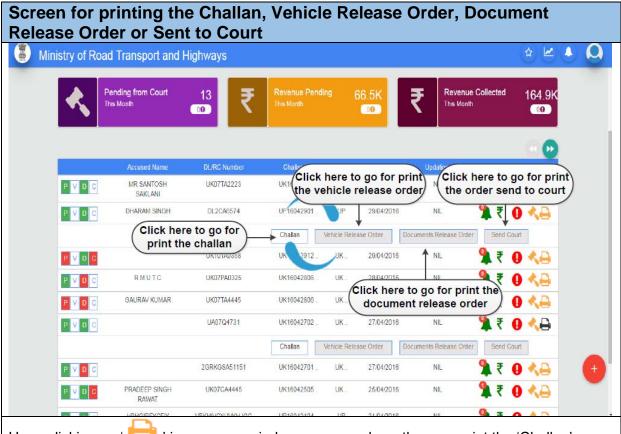


Once the user clicked on 'SEND', Home page screen appears where the status of the challan is changed as 'SENT TO COURT'.



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



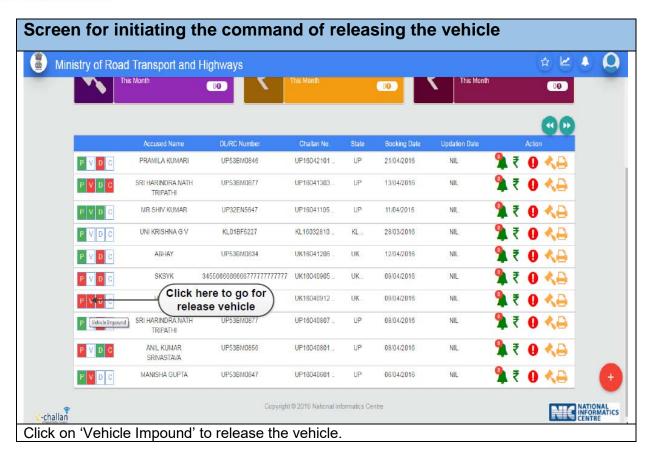


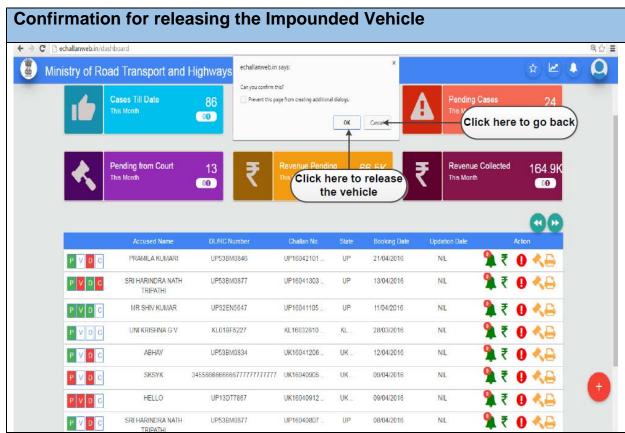
Upon clicking on ' icon, a new window appears where the user print the 'Challan', 'Vehicle Release Order', 'Document Release Order' or 'Sent to Court'



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.

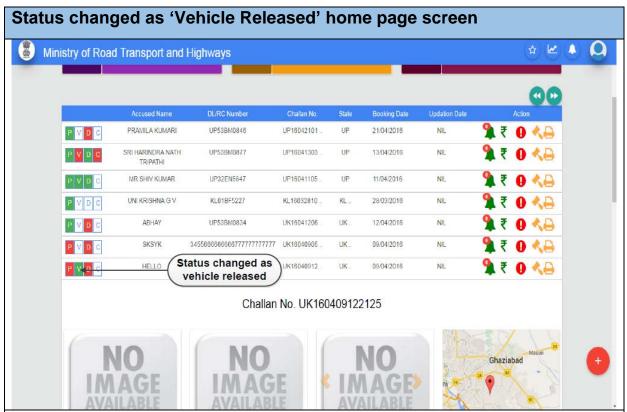




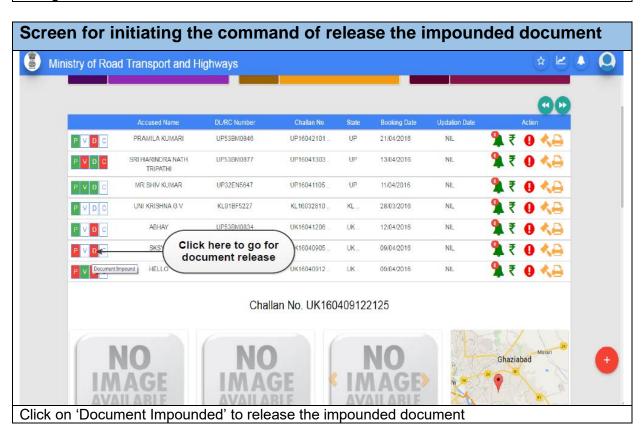


Upon clicking on 'Vehicle Impound', A new window appears where the system ask from user to 'Confirm' to release, Click 'Ok' to proceed or click on 'Cancel' to return back.

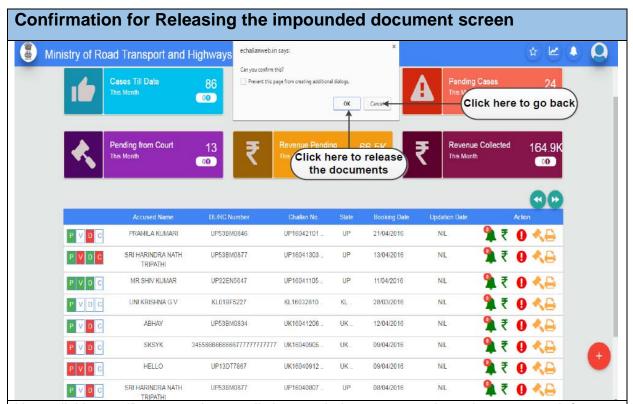




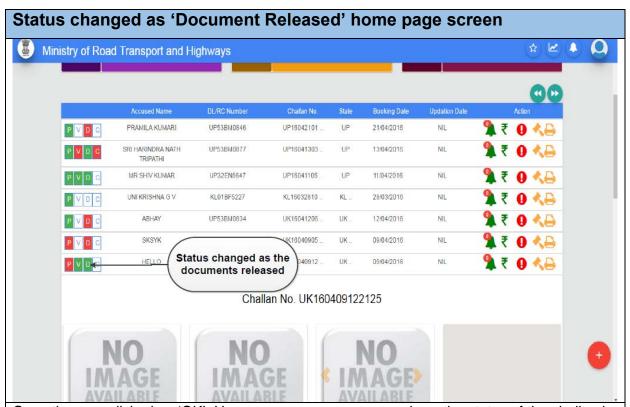
Once the user clicked on 'OK', Home page screen appears where the status of the challan is changed as 'Vehicle Released'





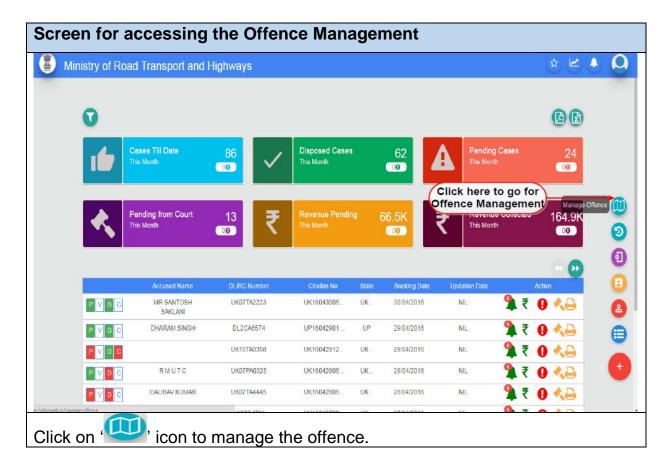


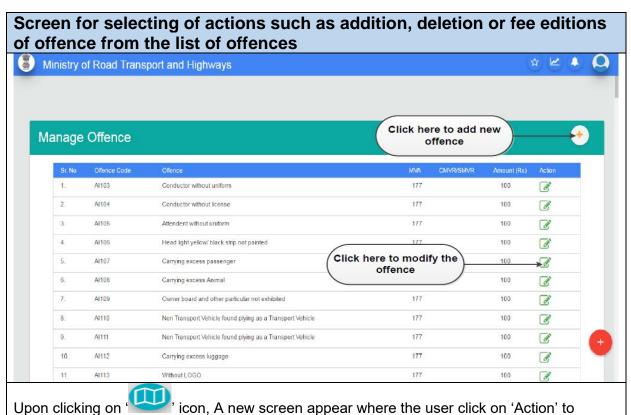
Upon clicking on 'Document Impound', A new window appears where the system ask from user to 'Confirm' to release, Click 'Ok' to proceed or click on 'Cancel' to return back.



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

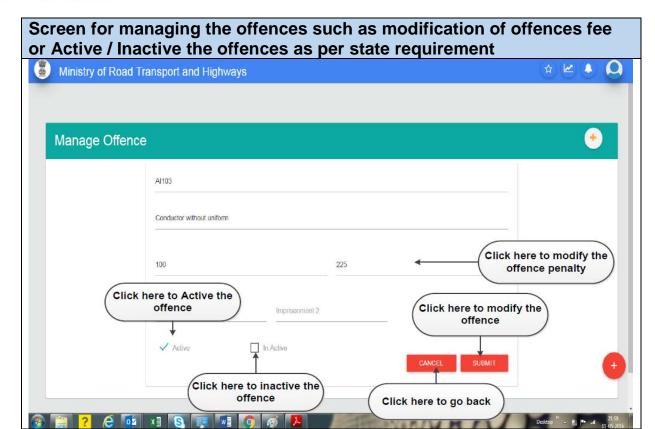




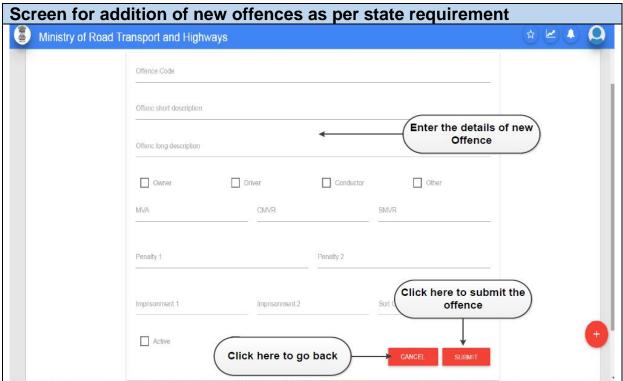


modify the offence penalty or click on (+) icon for addition of new offence.



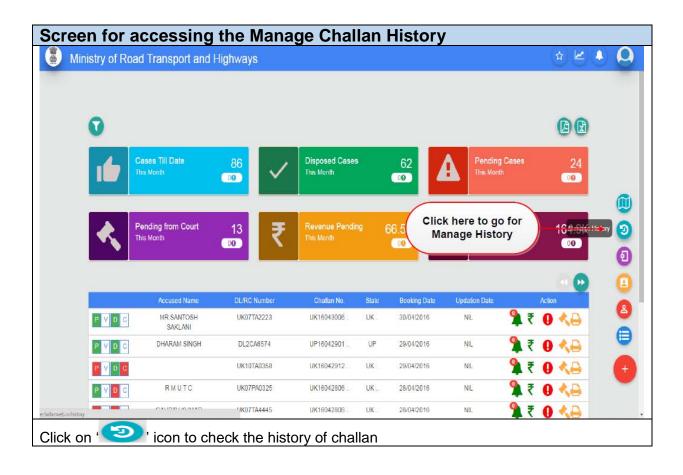


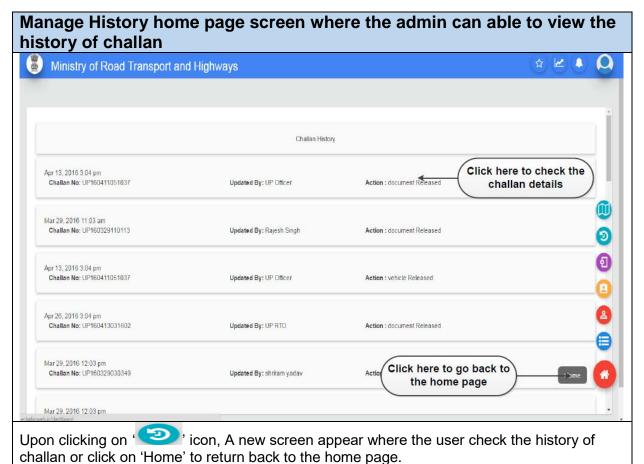
Once the user clicked on 'Action', A new screen appears where the user modify the offence penalty range and click on 'Active' to implement the selected offence for a particular state or Click on 'Inactive' to inactive the selected offence for a particular state or click on 'Submit' to submit the modified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



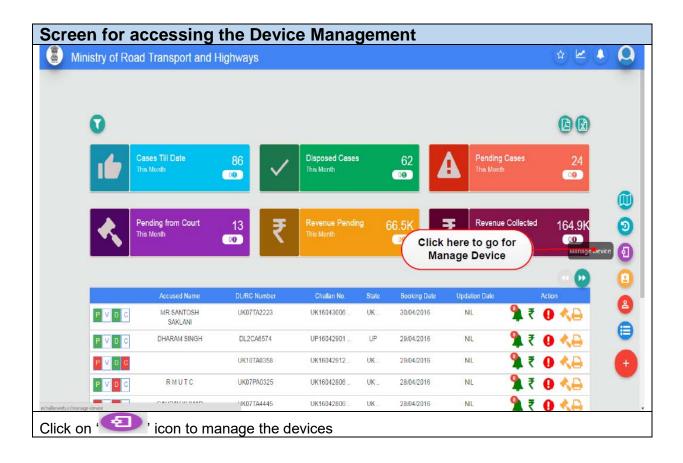
Upon clicking on (+), A new screen appears where the user update the new offences and click on 'Active' to implement the new offence for a particular state or Click on 'Inactive' to inactive the new offence for a particular state or click on 'Submit' to submit the new offence or click on 'Cancel' to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

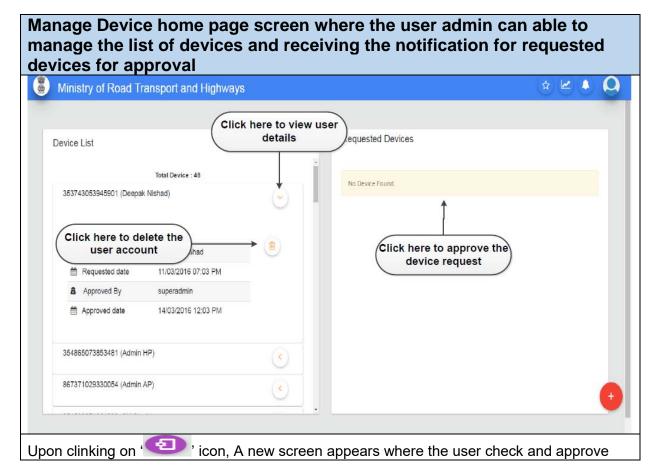






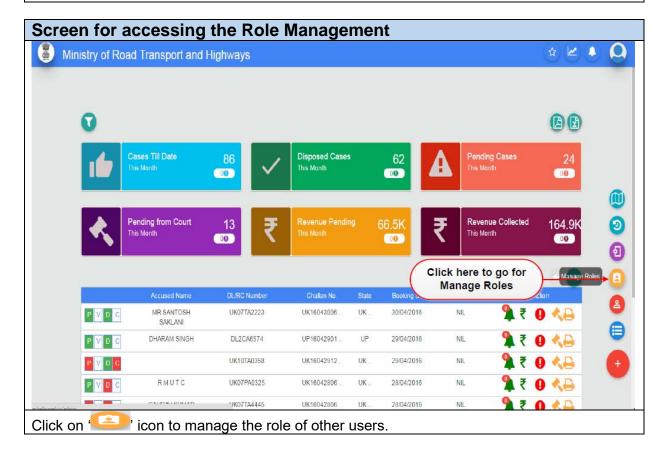






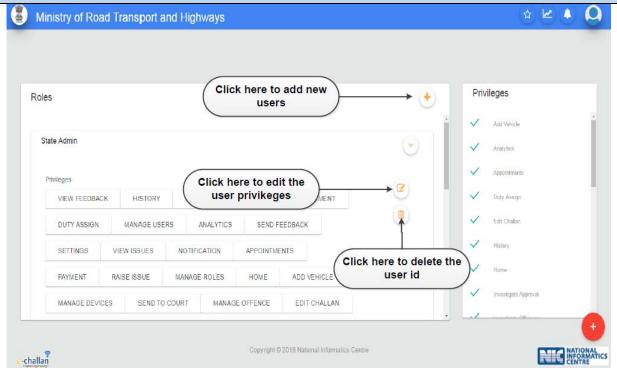


the requested devices from other users or click on 'icon to view the details of the user and click on 'icon to delete the user id or click on 'Home' to return back to the home back.





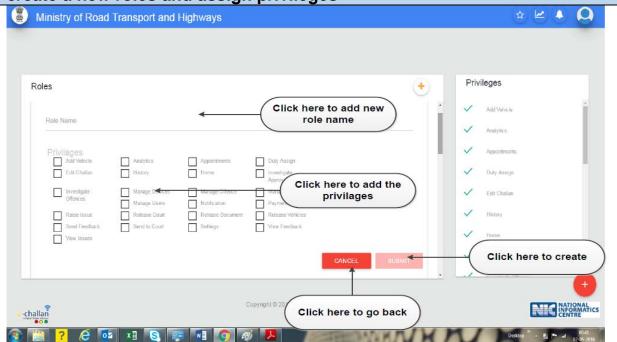
Role Management home page screen where the user admin can able to manage the privileges/roles of other user's such as view feedback, history, release vehicles, release documents, manage users, analytics etc



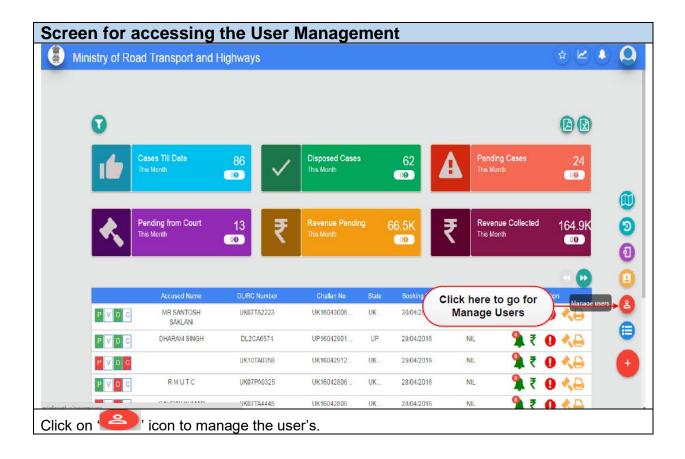
Upon clicking on '——' icon, A new screen appears where the admin user click on '——' icon to check the details of privileges of the other user id's or click on 'Edit' for any editions or click on 'Delete' for deletion of user id or click on '+' for add privileges to the new user id



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

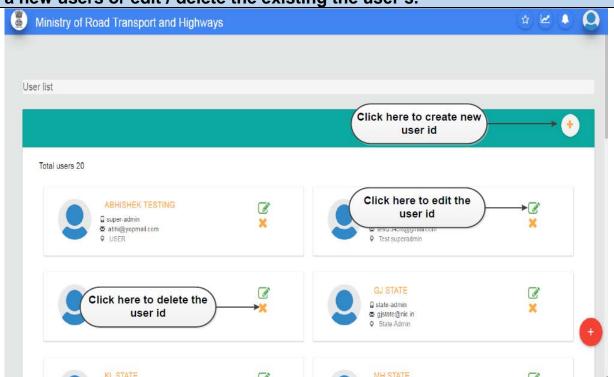


Once the user clicked on '+', a new screen appears where the admin user provide the privileges to the other user id and click on 'Submit' for submission or click on 'Cancel' to return back to the role management home page or click on 'Home' to return back to the home page.





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

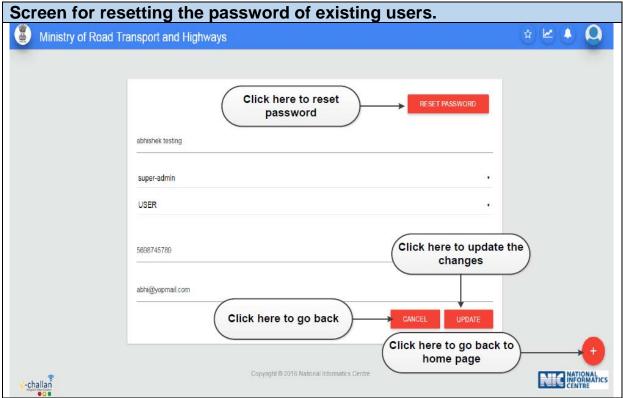


Upon the clicking on 'E' icon, a new screen appears where the admin user click on '+' to create a new user or click on 'E' icon for edit or click on 'E' icon for delete the user id.

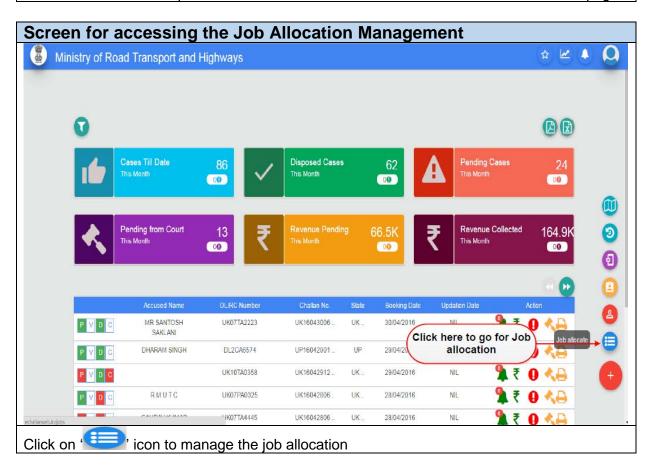


Once the user clicked on '+' icon, a new screen appears where the admin user enter the details of new user to create a new user id and click on 'Submit' to complete or click on 'Cancel' to return back to the user manager home page.



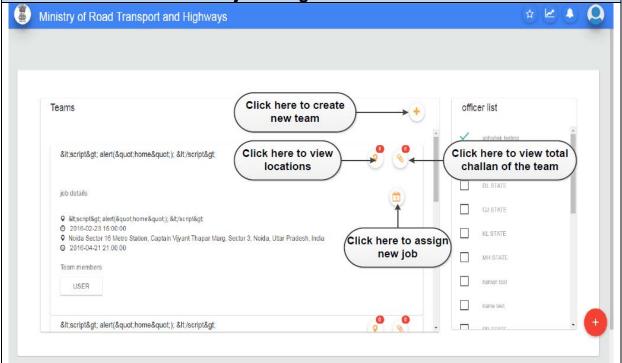


Upon clicking on ' 'con, a new screen appears where the admin user edit the details of user and click on 'Update' for updation or click on 'Cancel' to return back or click on 'Reset Password' for reset the password of the user or click on 'home' to return back to home page

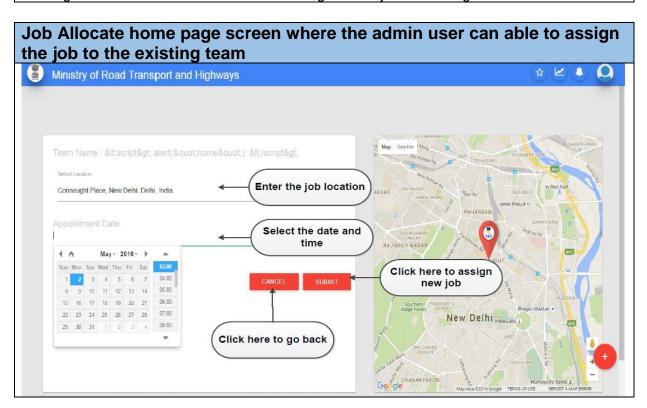




Job Allocate home page screen where the admin user can able to check the list of officers, total challan of existing team & their locations and create new officer team for job assignment

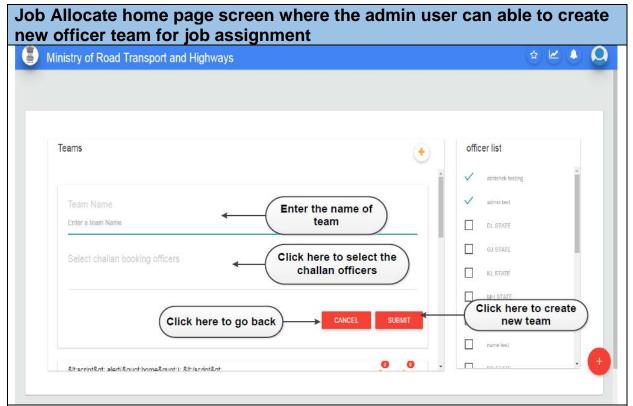


Upon clicking on 'icon, a new screen appears where the admin user select the team from the officer list and click on '+' to create a new team or click on 'icon to view the total jobs and location of the existing team or click on 'icon to view the total challah of the existing team or click on 'icon to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



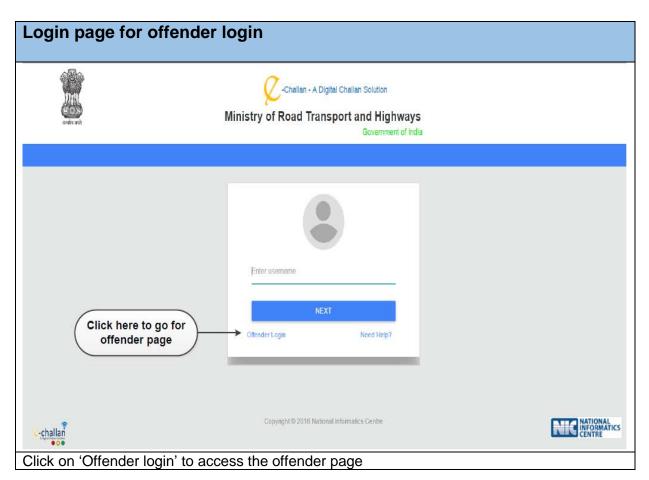


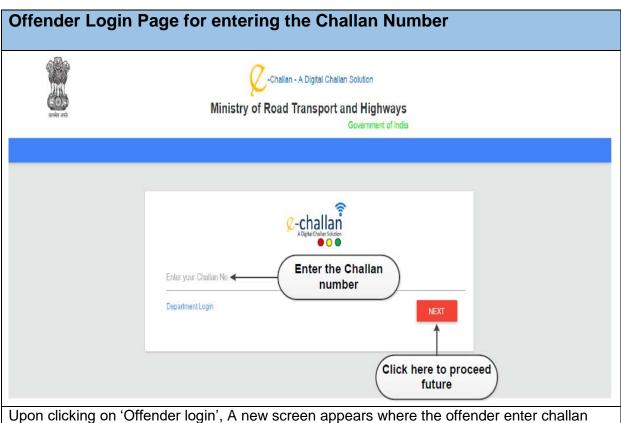
Upon clicking on ' 'icon, a new screen appears where the admin user select the location and date and click on 'Submit' to assign the job allocation of officers or click on 'Cancel' to return back to job allocate page.



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.

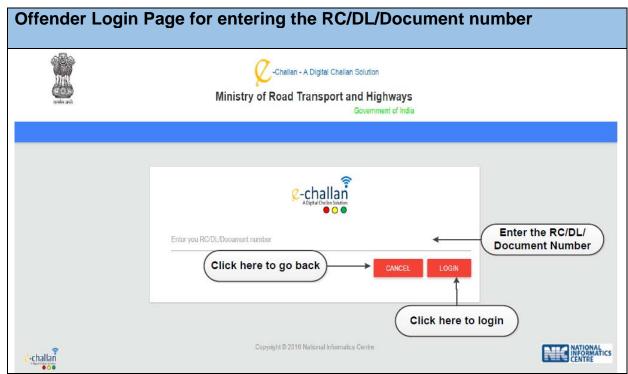
6.2 Offender Login:



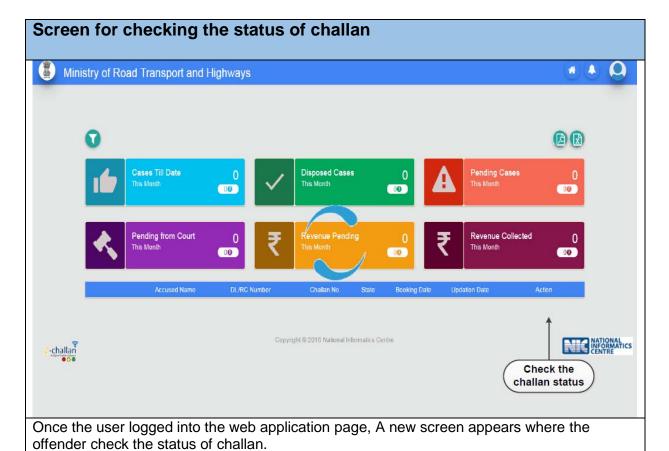


number and click on 'NEXT' to process future.

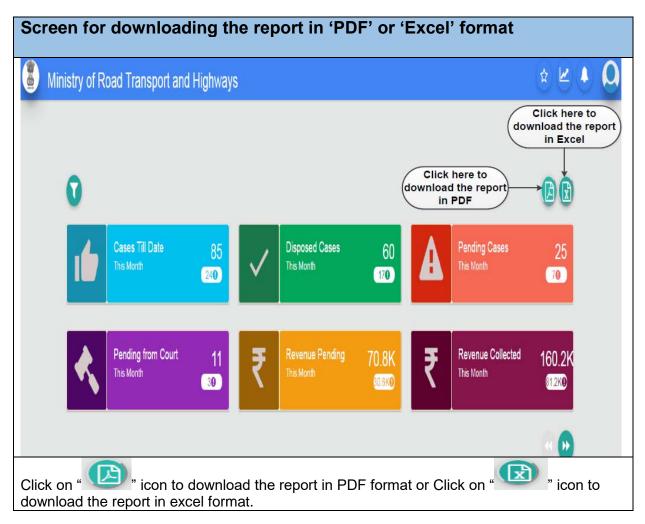


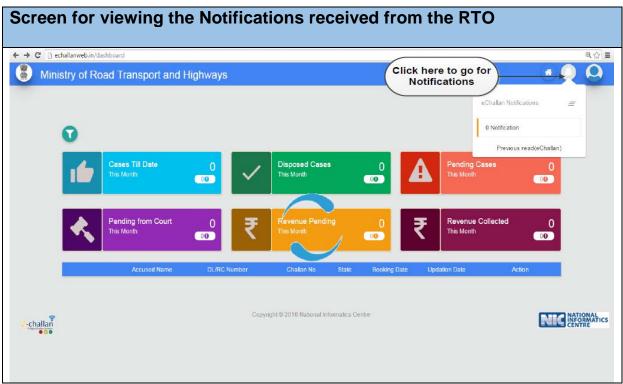


Once the offender clicked on 'NEXT', A new screen appears where the offender enter RC/DL/ Document number and click on 'Login' to login the web application or Click on 'Cancel' to return back to the previous page.



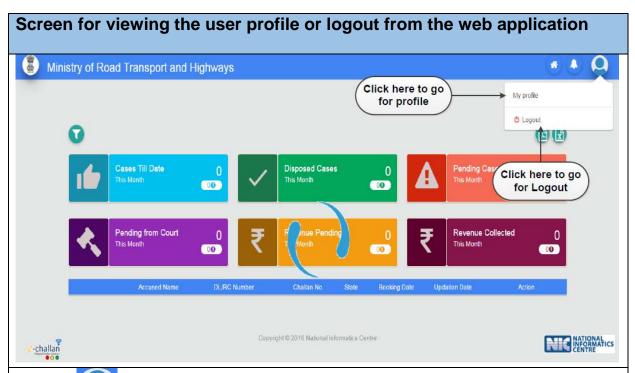




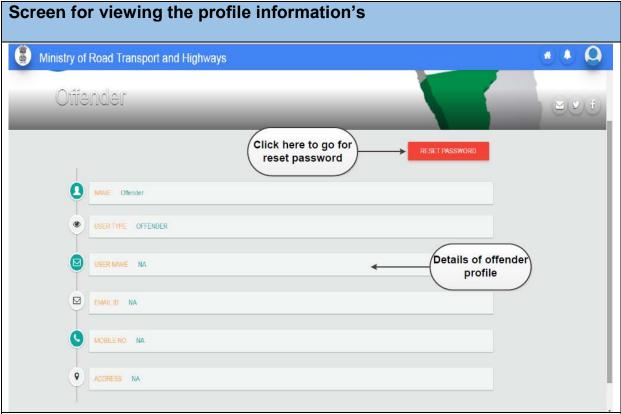




Click on 'Con to check the notifications from RTO.



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.



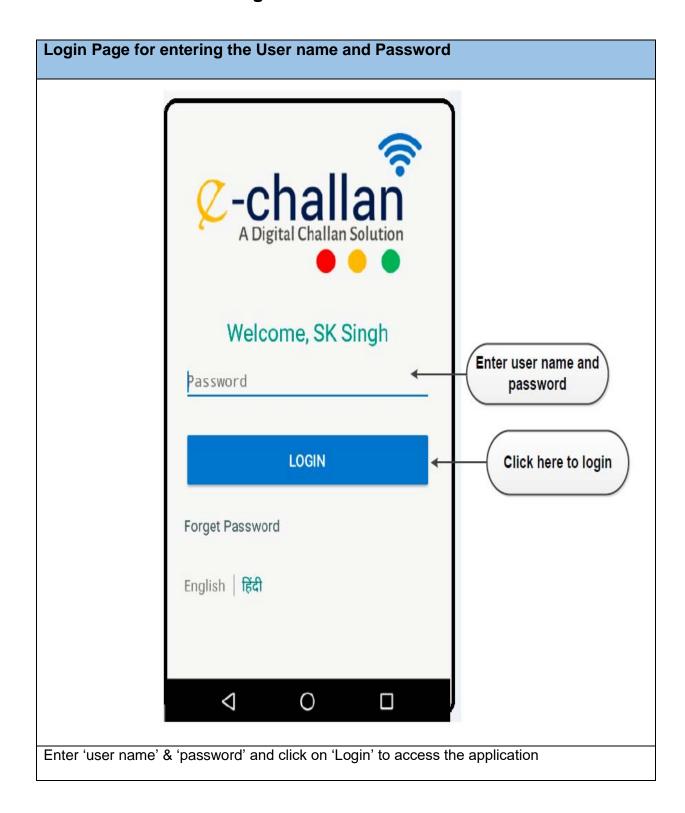
Upon clicking on 'My Profile', A new screen appear where the offender view his profile or click on 'Reset Password' to reset his password.



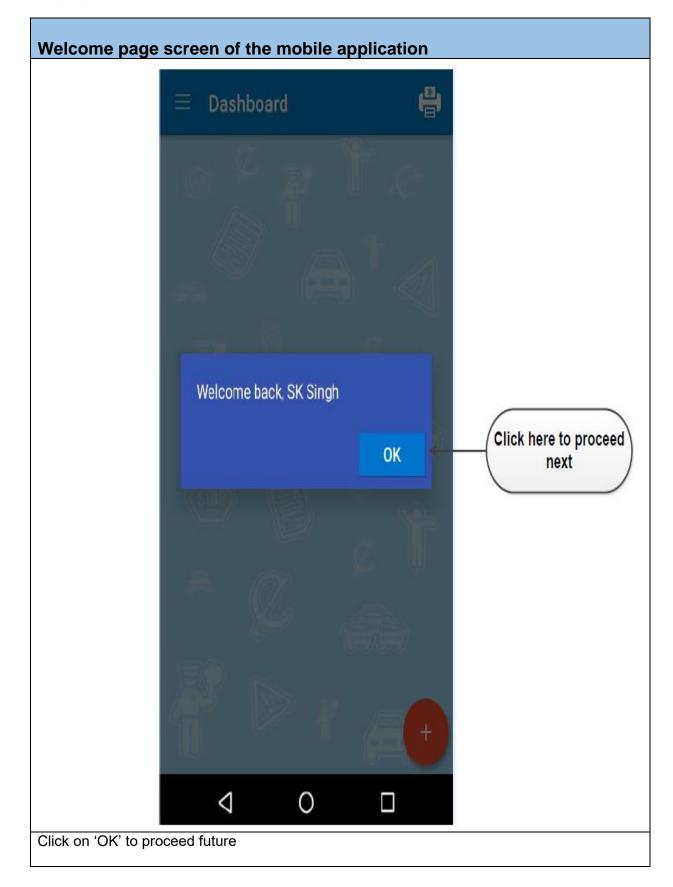


Upon clicking on 'Password Reset', A new screen appear where the offender enter his old password, new password & confirm password and click on 'update' to generate a new password or click on 'Cancel' to return

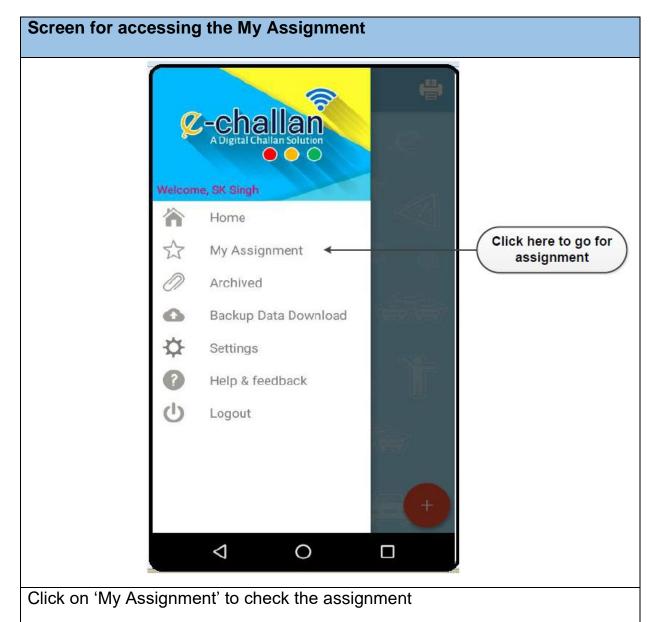
6.3 Traffic Officers Login



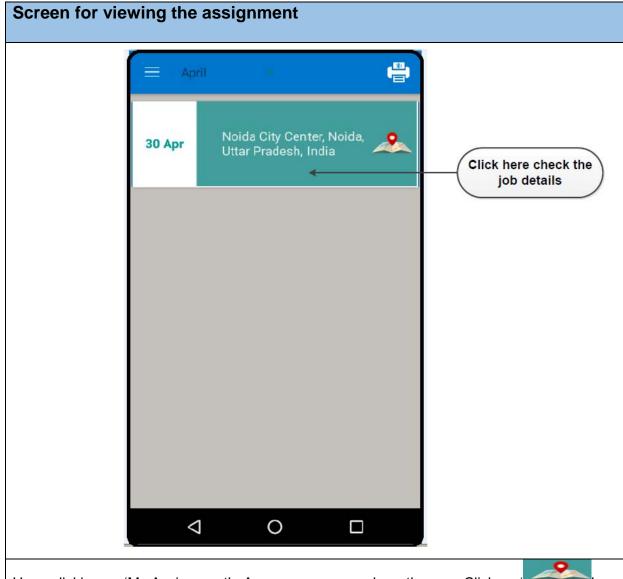




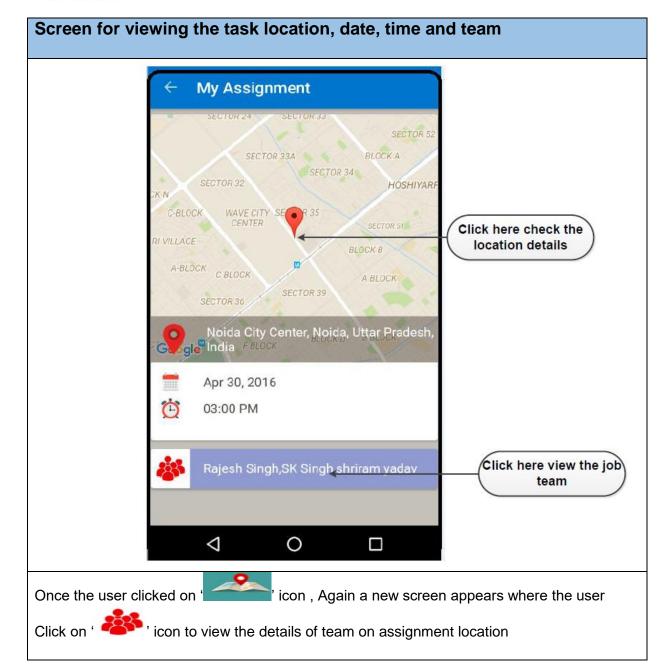




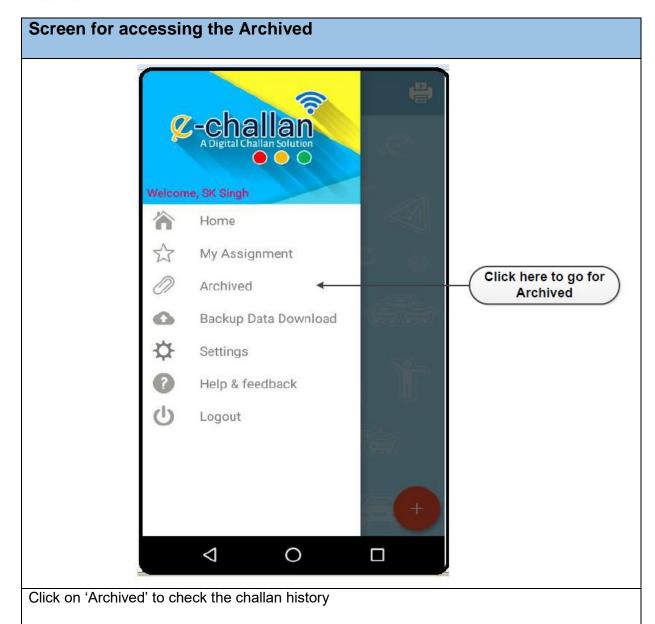












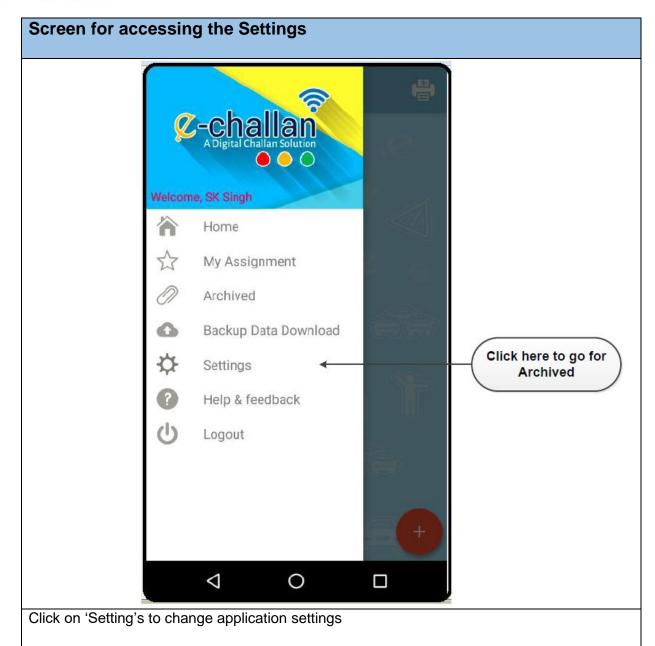




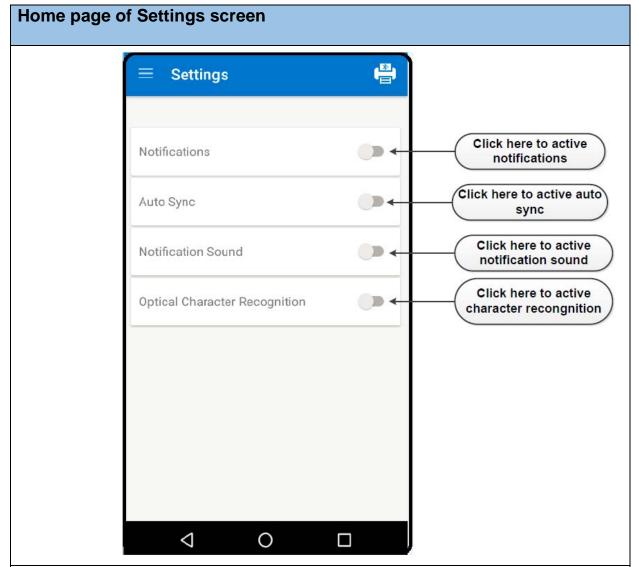


Screen for selecting the printer Searching for the printer device... 0 Once the user clicked on 'con, the mobile connected with printer



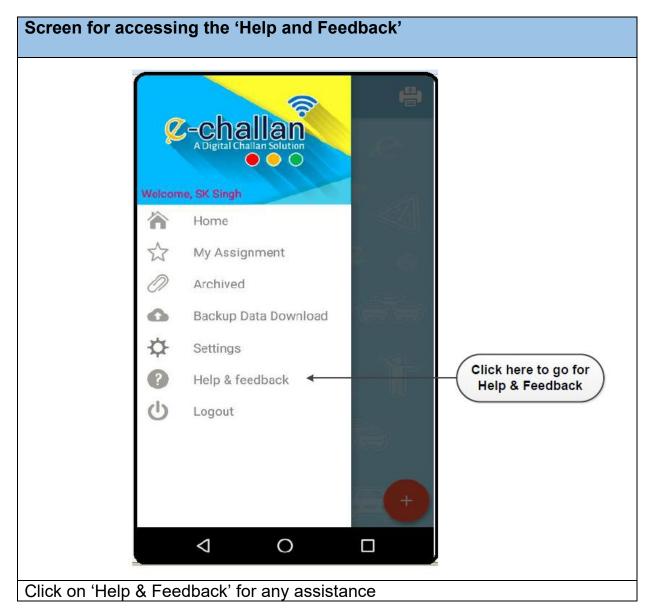




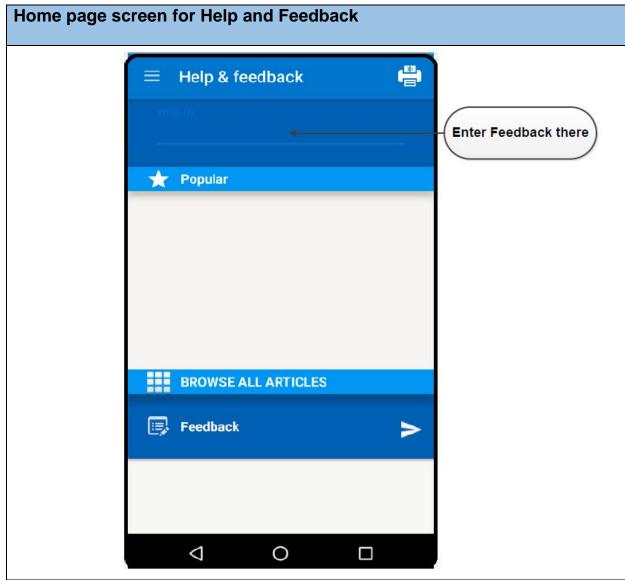


Upon clicking on 'Settings' A new screen appears where the user can able to change the application settings of 'Notification', 'Auto Sync', 'Notification Sound' and 'Optical Character Recognition'.

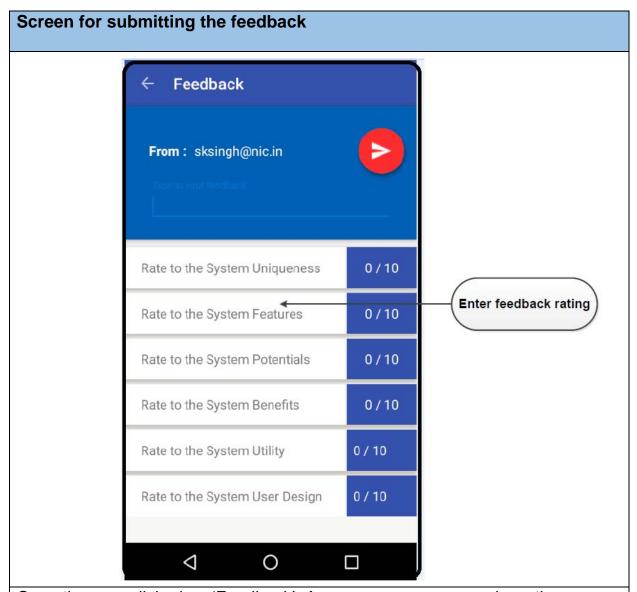






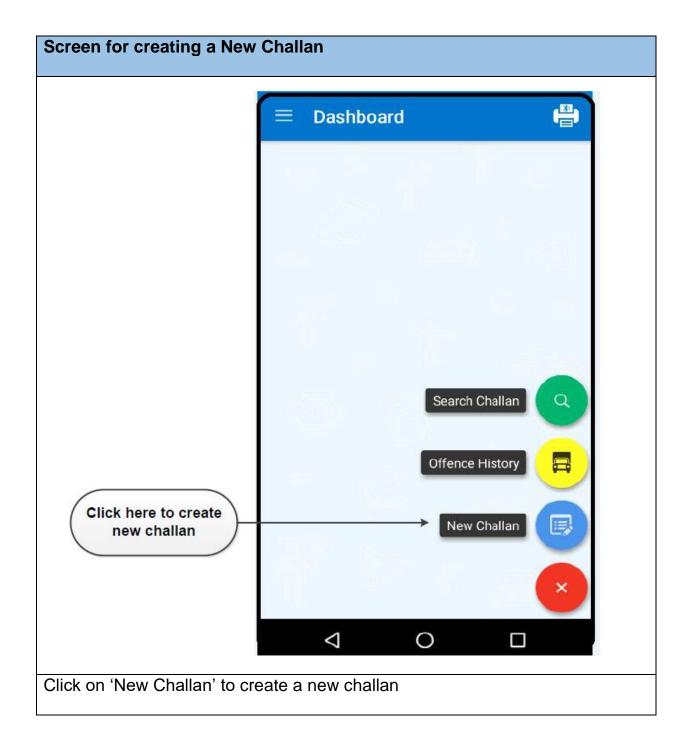




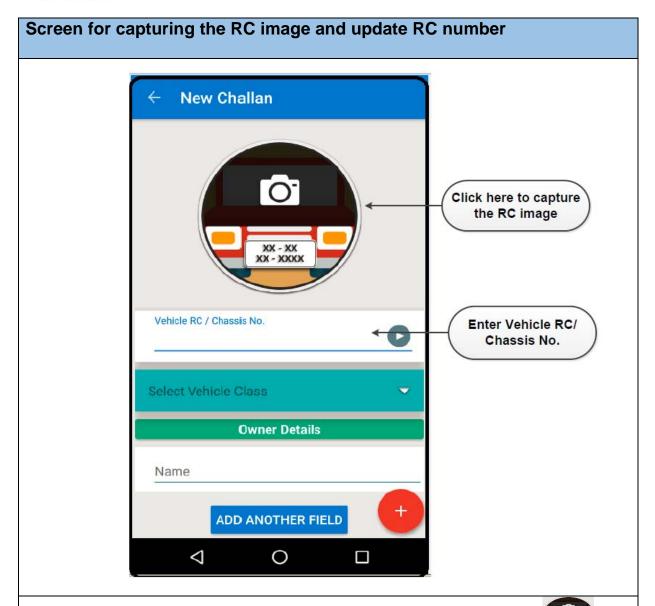


Once the user clicked on 'Feedback', A new screen appears where the user can provide his feedback and click on 'Send' to submit the feedbacks



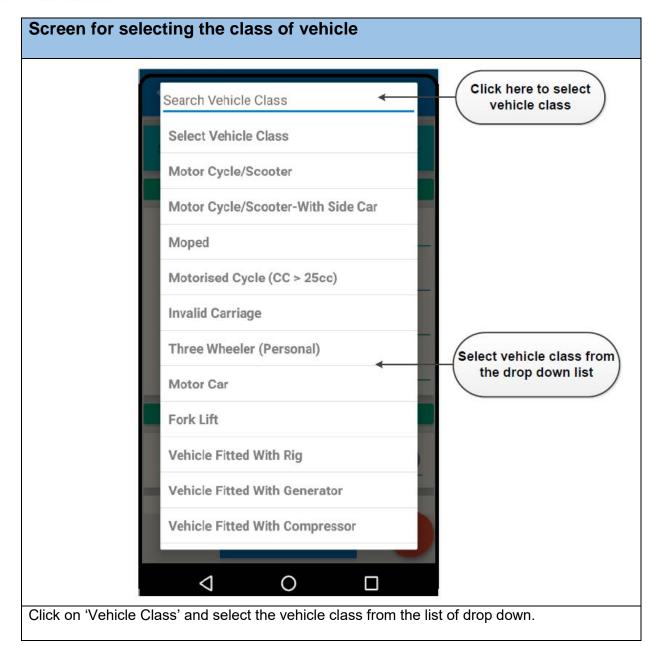




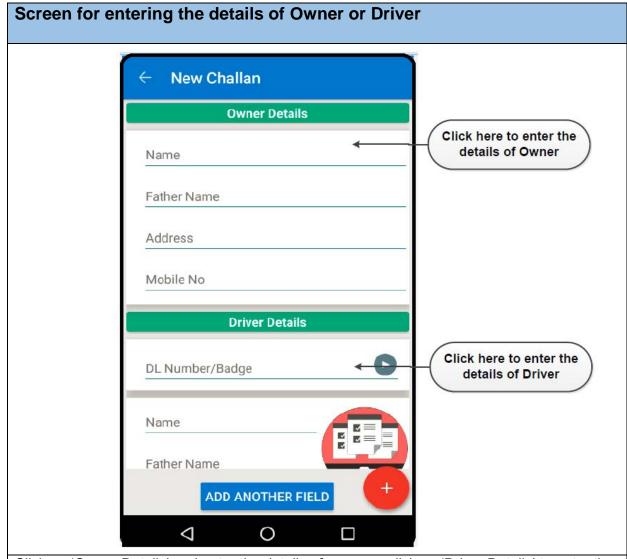


Upon clicking on 'New Challan', A new screen appears where the user click on 'Conto capture the picture of the vehicle registration number and enter vehicle details on 'Vehicle RC/ Chassis No'.



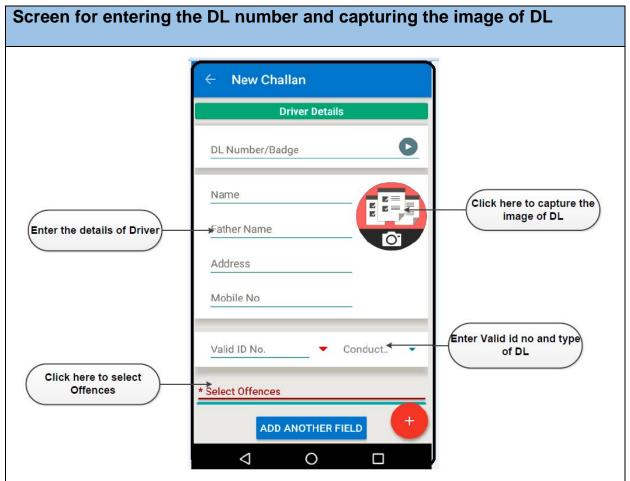






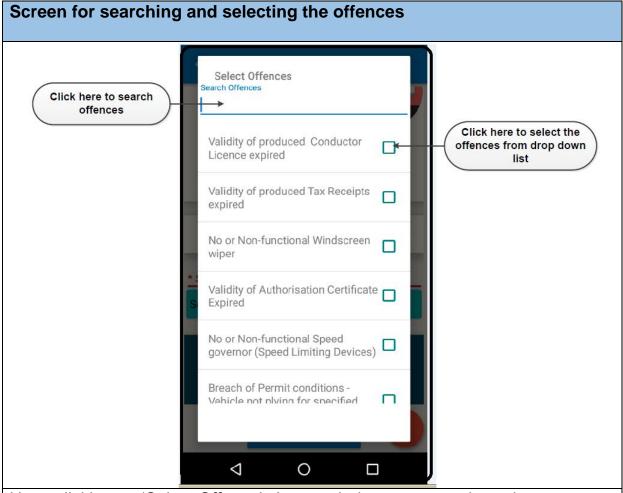
Click on 'Owner Details' and enter the details of owner or click on 'Driver Details' to enter the details of driver





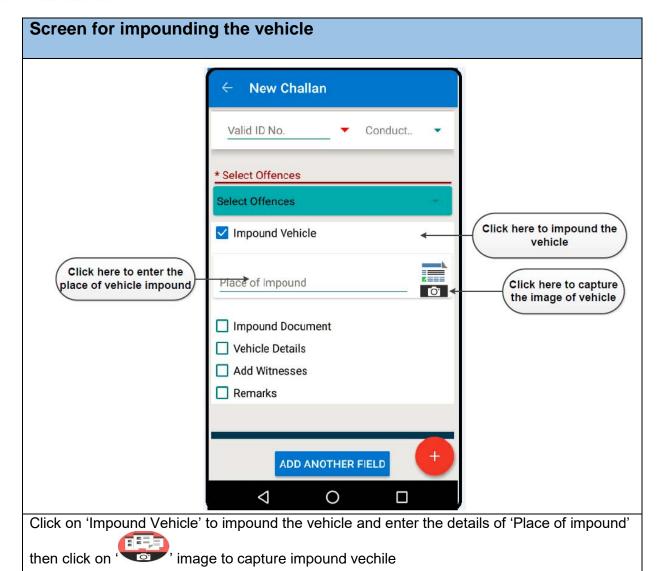
Upon clicking on 'Driver Details' A new window appears where the user enter the details of driver and click on 'Select Offence' to select the offence.



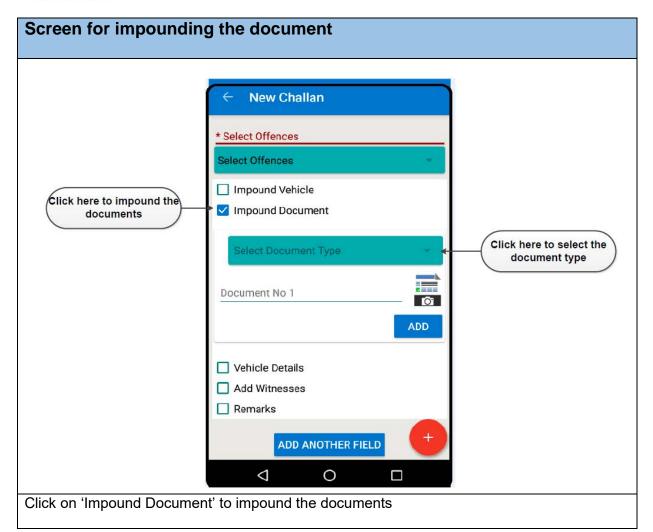


Upon clicking on 'Select Offence', A new window appears where the user search and select the offence from the list of offence.

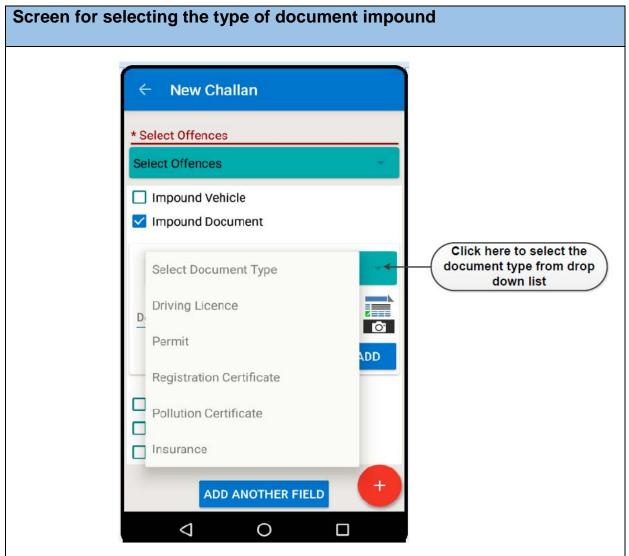






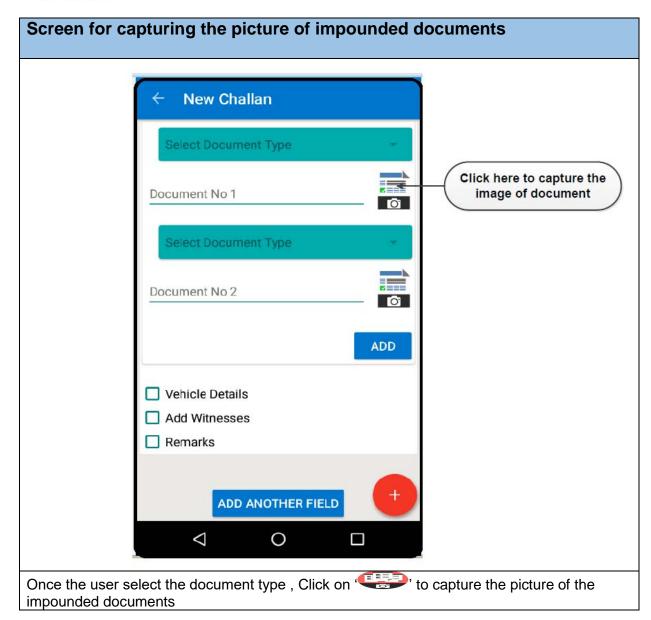




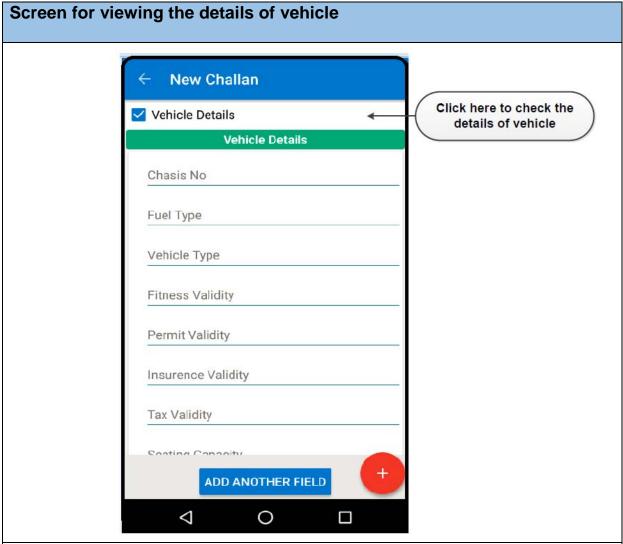


Upon clicking on 'Impound Document', A new window appears where the user select the document type from the drop down list



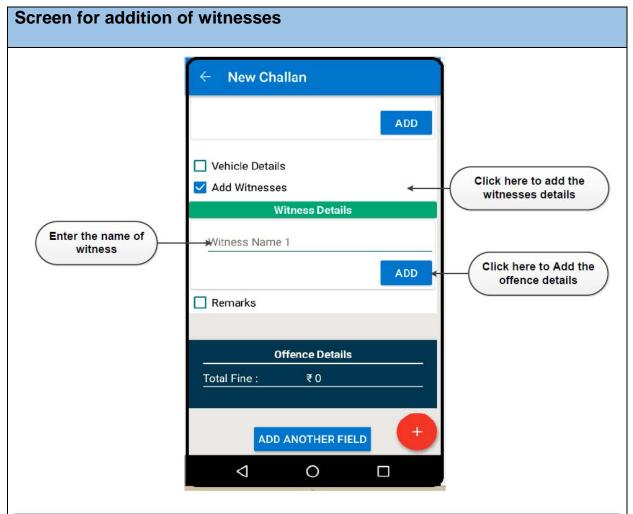






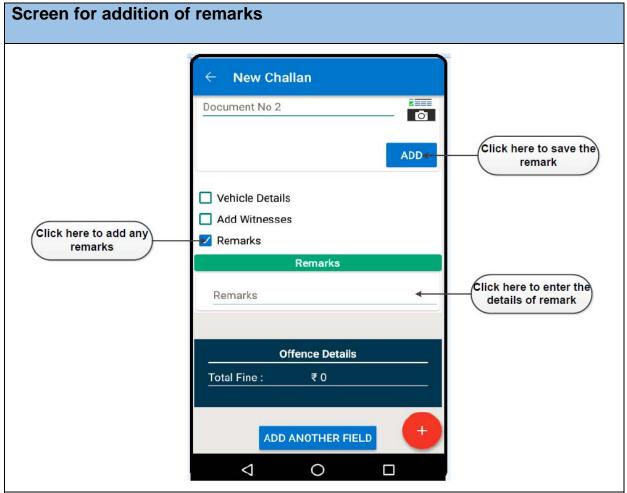
Click on 'Vehicle Details' to check the details of vehicle such as chassis no, fuel type, vehicle type, vehicle validity etc.





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



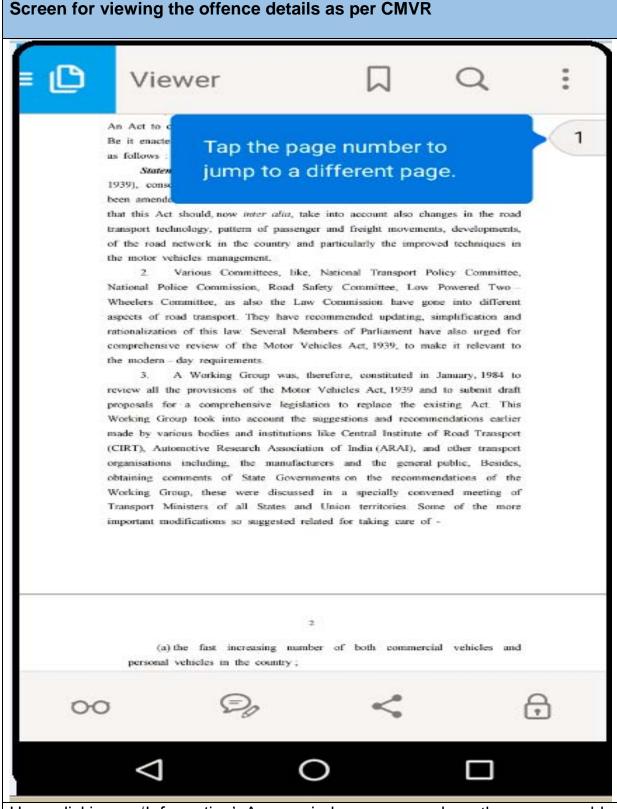


Click on 'Remarks' in case of any additional information required to be added on



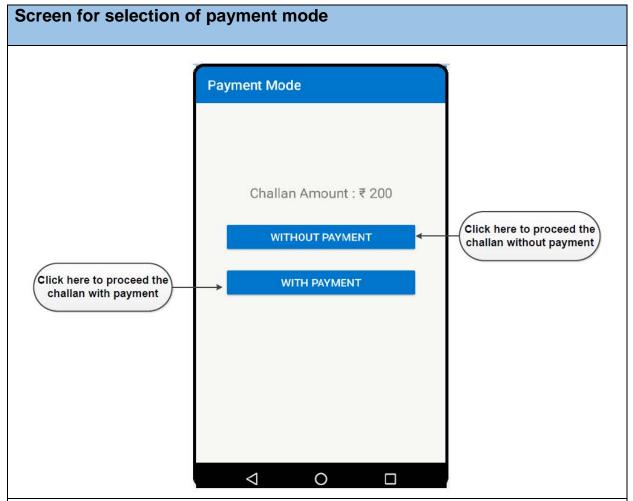
Click on 'Information' to check any information related to offence or click on 'Pay and Print' to proceed for payment of the challan.





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





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

Print Details



UP Transport Department, Noida

Challan No.: UP160502024307

Challan Date: 02-05-2016

DL23CC2345 Vehicle No.:

Vehicle Class: Moped

SJDJ Owner Name:

Owner Address: Dkk

SJ Driver Name:

Driver Address: Dm

No or Non-functional

Windscreen

Offence Committed: wiper, Validity

of Authorisation

Certificate Expired

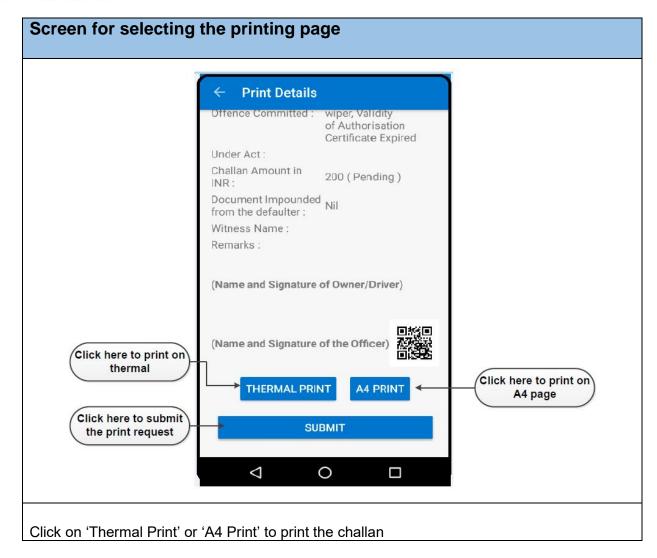
Under Act:

Challan Amount in

200 (Pending)

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

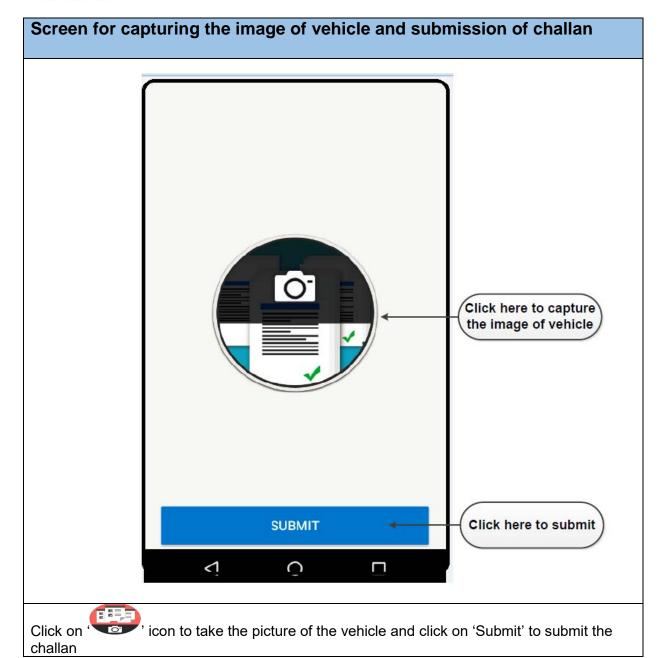




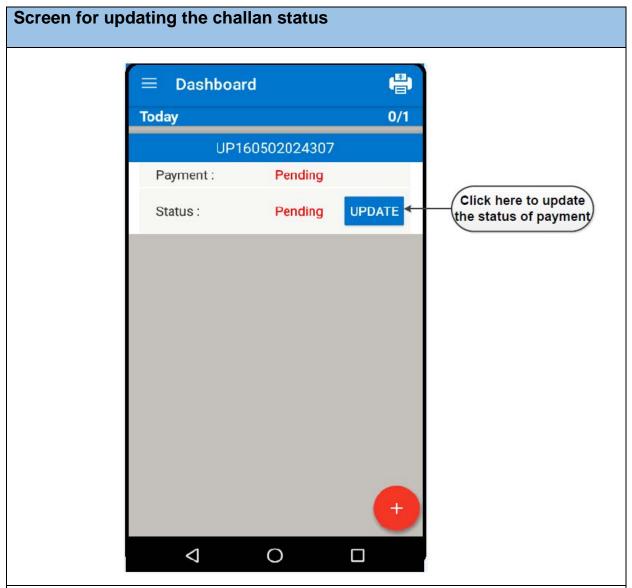






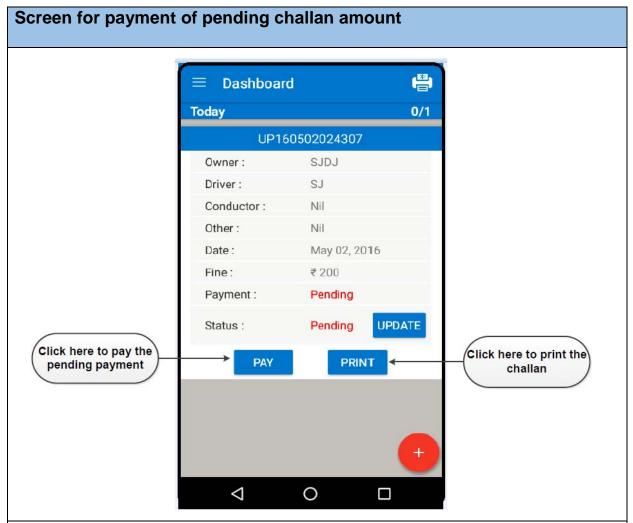






Upon clicking on 'Submit', A new screen appears where the user click on 'Update' to update the status of the challan





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