








# User Manual

## *Welcome to the Intelligent Transportation App!*

Our goal is to keep you safe while you are driving a vehicle and save your time at the same time by providing you with the exact times you have to wait at traffic lights. You need to follow these steps in order to use the app. To start:

1. Download the app .
2. Open the app.
3. Wait until the home page shows up .
4. Choose from the bottom navigation the functionality you want to use .
5. For viewing real-time traffic light information follow function **(a)** steps on page 4 .
6. For logging in follow function **(b)** steps on page 5 .
7. For viewing car information or finding car functions follow function **(c)** steps on pages 7-8 .
8. For using traffic controller functions as a **Traffic controller** follow the function **(d)** steps on page 9 .



**NOTE:** IN ORDER TO USE THE FUNCTIONS IN STEP 7 OR 8 YOU NEED TO FOLLOW STEP 6 FIRST AS ALL OF THESE FUNCTIONALITIES REQUIRE THE USER TO BE LOGGED IN.

**MAKE SURE:** You're connected to Wifi and have given the location access to the app.

After you open the app you can see the following screen:

### Main Page

This is a Splash Screen! You need to wait a moment until it brings you to the homepage.

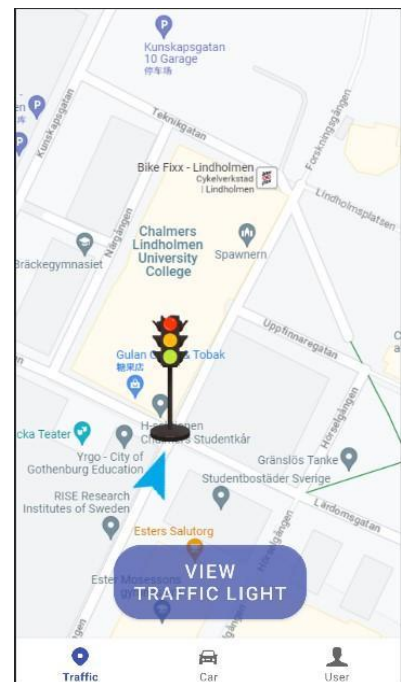


### Home Page

This is the home page from which you can choose any option out of the several options given to choose from.

This page can also take you to the traffic light view page. Once a user clicks on the “**view traffic light**” They will be taken directly to the relative page.

\*For further details on traffic light view head to page 4.



## **BOTTOM NAVIGATION**

At the bottom of each page you will find these bottom navigation options. Upon clicking on them you can switch to different pages which contain different functionalities for you.



The icon which is coloured indicates that you're currently on that page. For example:

1. In the image above you're on the **Traffic control/view** page which can be accessed by clicking on the left icon '**Traffic**'.
2. The right-most icon 'User' takes you to the **Login page** for the user.
3. The bottom navigation icon 'Car' in the middle takes you to the **Car page** where all the functionalities are related to the car.

## (a)Traffic Light view

On this page the user can view the current traffic light status, congestion, and exact times left for each traffic light in each direction. It can be useful for both pedestrians and vehicle drivers.

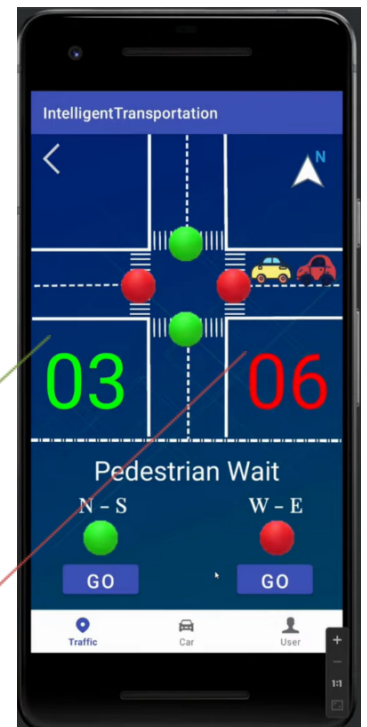
On the home page click on the “**view traffic light**” to navigate to this page.

Key:

- ❖ N-S: North-South Traffic
- ❖ W-E: East-West Traffic
- ❖ Number of car emojis showing the state of congestion

Time lapse for  
N-S

Time lapse for  
W-E



## (b)Log In

When the user clicks the “**User**” navigation button they will be directed to the login page where they can log in.

To log in to your account follow these steps:

1. Fill in your username and password.
  - We have two kinds of users, one is “**Admin**” which has the username “**Police**” and the password is “**police**”.
  - The other one is “**General user**” which has the username “**General**” and the password is “**general**”.
2. Click ‘**LOGIN**’



The image shows a mobile application login screen. At the top, the word "Login" is displayed in a large, white, sans-serif font against a dark blue background with a subtle light effect. Below the title, there are two input fields: the first is labeled "Username" with a person icon and contains the text "Username"; the second is labeled "Password" with a lock icon and contains the text "Password". Both fields have a light blue border and rounded corners. Below these fields is a large, rounded blue button with the word "LOGIN" in white, uppercase letters. At the bottom of the screen, there is a navigation bar with three icons: a location pin labeled "Traffic", a car labeled "Car", and a person labeled "User". The "User" icon is highlighted with a white border.

Once you put in the right cardinalities and login in successfully then you will be directed to the appropriate user page.

### “Admin” 🚔 sign in page

- Here you have the admin signed-in page which has two click-on buttons, “**Bind car**” and “**log out**”.
- The “**Bind car**” button allows the users to bind their car to the app and get access to more functions.

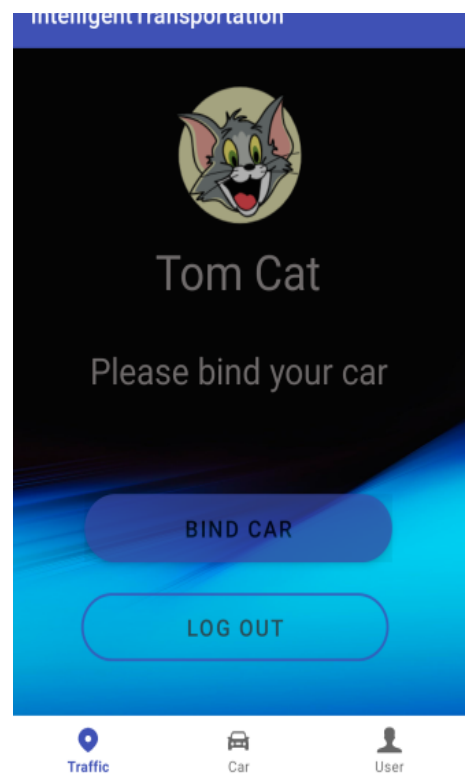
\*For further details on Car Functionality head to page 7.

- The other button is “**LOG OUT**” button, once the user clicks on it:  
the user will be “**Logged out**” from the app.



### “General User” 🧑 sign in page

\* The same as the admin sign in page.



## (c)Car Console

On this page the user can view real-time information about their registered car and find their car with the help of this app.

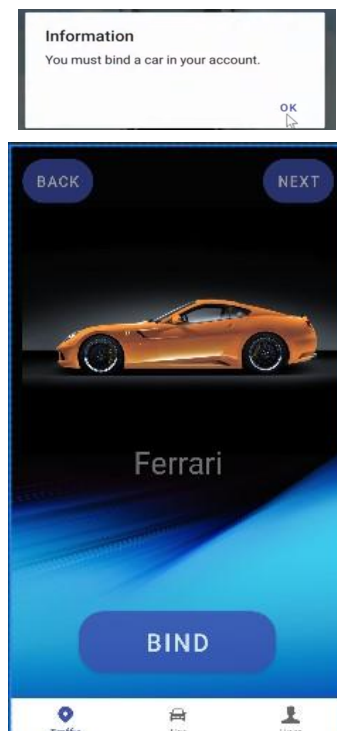
The information which would be displayed is

- The front and back safety distance (in centimeters) for the car.
- The car would sound a buzzer with changing frequencies according to how much safety distance is exceeded.
- Different colors are displayed on this page for safety level indication. Their meaning is explained below:
- - Red: *The car is in the danger zone, too close to surrounding objects! Can crash.*
  - Yellow: *The car is beginning to get too close to surrounding objects. Be careful.*
  - Green: *The car is at a safe distance from surrounding objects. Nothing to worry about.*
  - Blue: *No object detected in surroundings.*



Steps to follow for viewing the car information are:

1. You must be logged in in order to use this function. For further instructions for (b) Log in function see page 5.
2. If it is your first time and you have not bound your car before, Bind your car. **If you have already bound your car, you can skip all the steps (3-6) related to binding the car.**
3. A message asking you to bind your car would appear, simply click ok to be navigated to the page for the next steps.
4. Click on **Bind Car**
5. Select a car from the given options. You can press '**Next**' or '**Back**' to switch between the options.
6. Once you have selected a car just click '**Bind**' as shown here —>>
7. Now the car console page would show you real-time information about your car's safety distance. If your car would be in a warning or danger zone, the app would make the car alarm ring accordingly.



## FIND MY CAR

*This function rings a buzzer in the car which helps the user find their car when they cannot find it or have forgotten where they parked.*

Steps to follow for using this function:

1. If you have already followed steps (1-6) on the previous page then there is nothing to worry about, you can hop to step 2 on this page directly. But if you haven't then please follow steps (1-6) on the previous page before following step 2 on this page.
2. Click on the “**car**” icon in the bottom navigation button to get to the Car console page.
3. Click on the “**car image**” on this page to ring the buzzer and find your car.





## (d)Traffic Control

On this page the admin user can view real-time traffic light information and control it.

**NOTE: You must be logged in as an admin in order to use these functionalities.**

\*Head to function (b) Login in, 'page 5 for detailed steps to log in.

Admin users are given the same traffic **view** functionalities as general users.

However, admin users are given the following special traffic control functionalities in the app:

- ❖ They can pause the traffic lights for all four roadsides, north, south, east and west. This might be used in the state of accidents or during any such urgent circumstances.
- ❖ They can resume the traffic lights **if** paused before to let the traffic flow normally.
- ❖ They can manually control which traffic road should quickly turn **green**, reducing the time-lapse. This can be used to let the congested side of traffic pass first to normalize the flow of traffic.

**Click these buttons to use the functionalities listed above. They are labeled below along with the functionalities they provide to guide you.**

