TRAFFIC FINE MANAGEMENT SYSTEM

GROUP No.10

GROUP MEMBERS:

- Priya Sharma:LCS2020078
- Sai Rohit Chappa:LCS2020048
- Ashu Jathin Matam:LIT2020057
- Kaithepalli Kotiswar:LIT2020044
- Namgyal Angmo Shakspo :LCS2020079
- Routhu Shashank:LCS2020050

WORK DISTRIBUTION:

- Priya Sharma:Threading, Police.java
- Sai Rohit Chappa:Networking, Customer_care.java
- Ashu Jathin Matam:File Handling in User.java
- Kaithepalli Kotiswar:File Handling in Police.java
- Namgyal Angmo Shakspo :Login.java
- Routhu Shashank:User.java

IDEA:

The idea of the project is to create a platform that enables the process of traffic fine management easier to both police and the customer

MOTIVATION:

- To help the Indian Traffic management system to be more efficient.
- To create an user friendly environment that motivates user to pay fines easily and securely.
- To make it easier for the police to register the fines easily.
- To help the government keep proper records of all the traffic violation cases.

DESCRIPTION:

Login.java

- This is made to make a login page where the system differentiates between a police officer and the person who has to pay the penalty.
- An username and password is asked for policemen to authenticate them, and vehicles no and phone no. Is asked from users for the same.
- Concepts of Constructors and Threading are used.

Police.java

- It is a class which contains the details of the vehicle which has violated the traffic rule.
- It stores the vehicle no of the user along with the rule which he has violated and provides the amount of penalty which the user has to pay for the violation.
- This class contains file handling through which all the user details along with date and time and the user photo is being stored in the databases.
- This class also has a use of networking through which all the details of the vehicle and the user is being send to the control_room.

User.java

- A user object is created if the program is executed by a user.
- Once the user object is created, the function checks whether there are any challan dues, by passing the username with the help of login object which is passed as a parameter in the function.
- If there are no pending challans, the function exits. If there are penalties, the function asks the user whether to display the image of the violation or not.
- Then, the function asks whether the user wants to pay the complete pending challans or not. The function asks the user to choose the mode of payment for the transaction.

- After completing the transaction, the function clears all the pending penalties.
- Further, the function asks whether the user has any queries, so that he could contact the customer care.

Control_room.java

- It's a server made by using sockets, that gets the data such as Vehicle Number, Traffic rule violated, Penalty Cost from the Police officer

Customer_care.java

- It's a server made by using sockets and it's a kind of a chatting platform where the customer care at the server-side resolves the queries of the user.

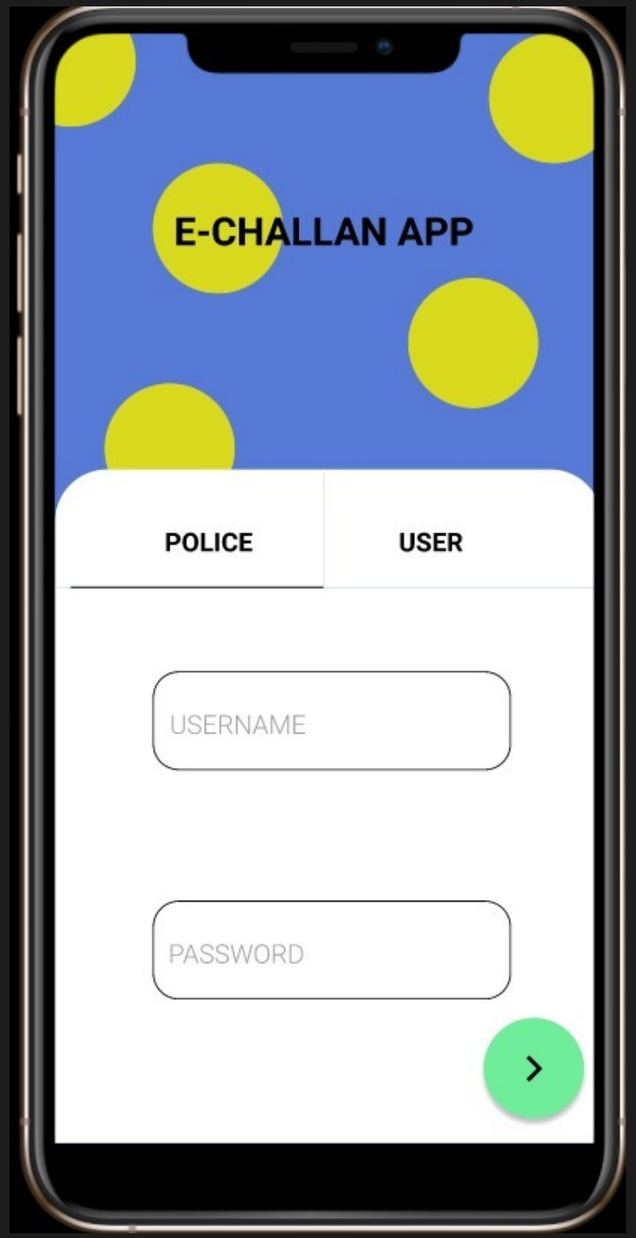
Main.java

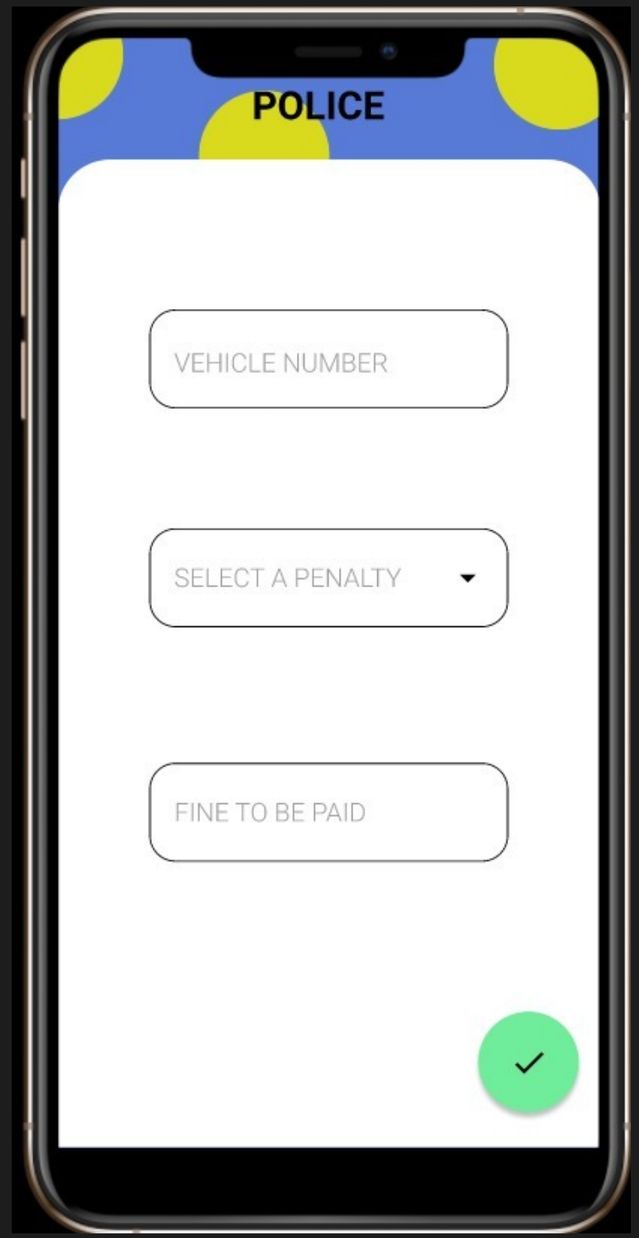
- First we imported the scanner class to take inputs from the user to perform operations.
- Then we initialised Login class object to test whether the user is customer or police.
- Then after validating if the user is customer or user we initialise respective class objects accordingly
- If the user is police we initialise the police class object to enable police class functionalities
- If the user is customer we initialise the user class object to enable user class functionalities

FUTURE SCOPE

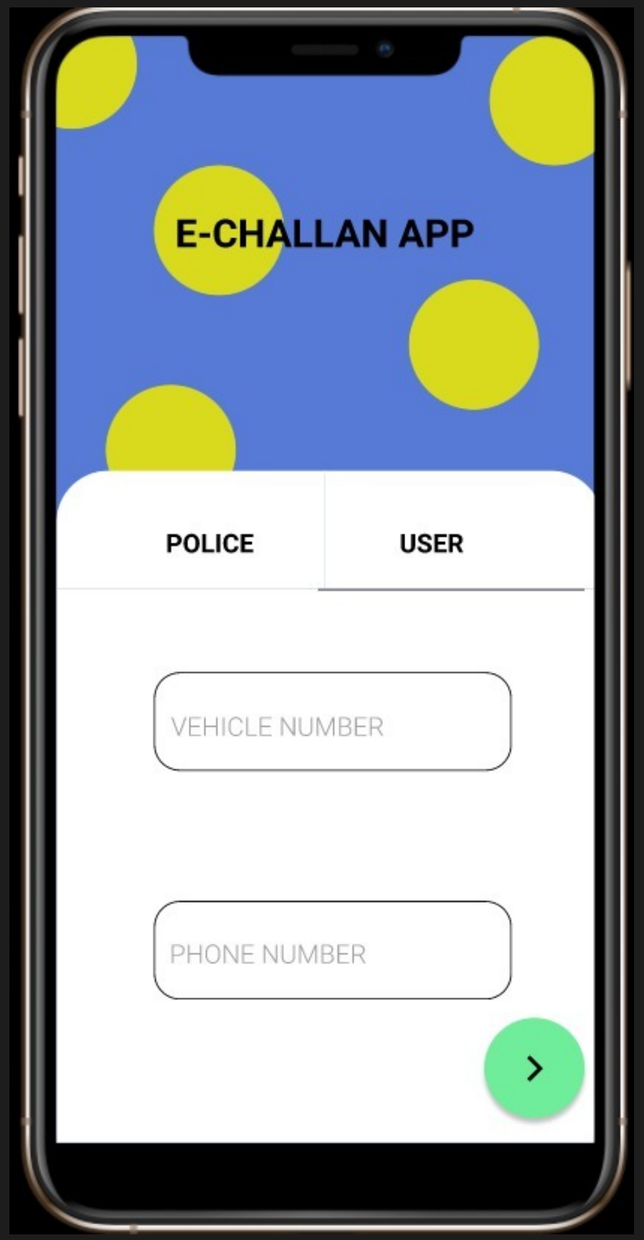
- This JAVA code has the scope to be turned into a mobile app so everybody can easily access it anywhere.
- By using node.js and socket.io to replace control_room.java and customer_care.java we can create a server.
- We plan to replace the server.txt file with an SQLite database.
- Sending this data from the node.js server to an SQLite database where the data will be stored and using specific calls will enable us to retrieve the data from the database when required.

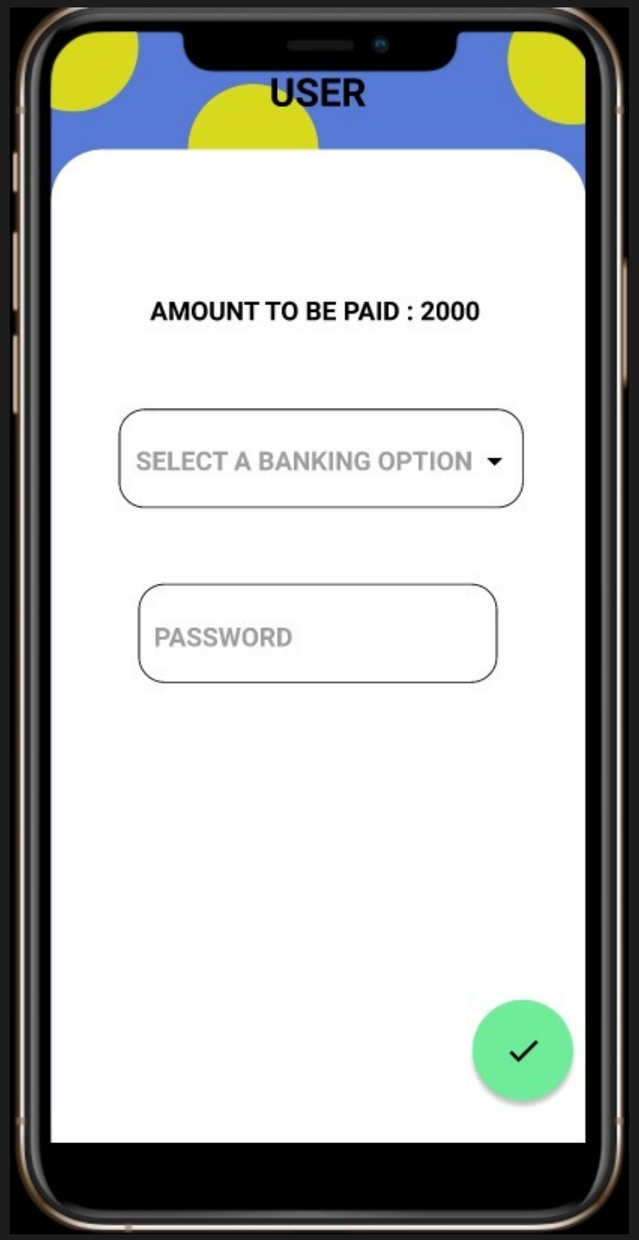
POLICE UI:


E-CHALLAN APP
POLICE
USER
USERNAME
PASSWORD


POLICE
VEHICLE NUMBER
SELECT A PENALTY
FINE TO BE PAID

USER UI:


E-CHALLAN APP
POLICE
USER
VEHICLE NUMBER
PHONE NUMBER


USER
AMOUNT TO BE PAID : 2000
SELECT A BANKING OPTION
PASSWORD

THANK YOU