High level architecture

VIEW

CONTROLLER

MODEL

XML

.java

Firebase

notify event

Set view

Interact with
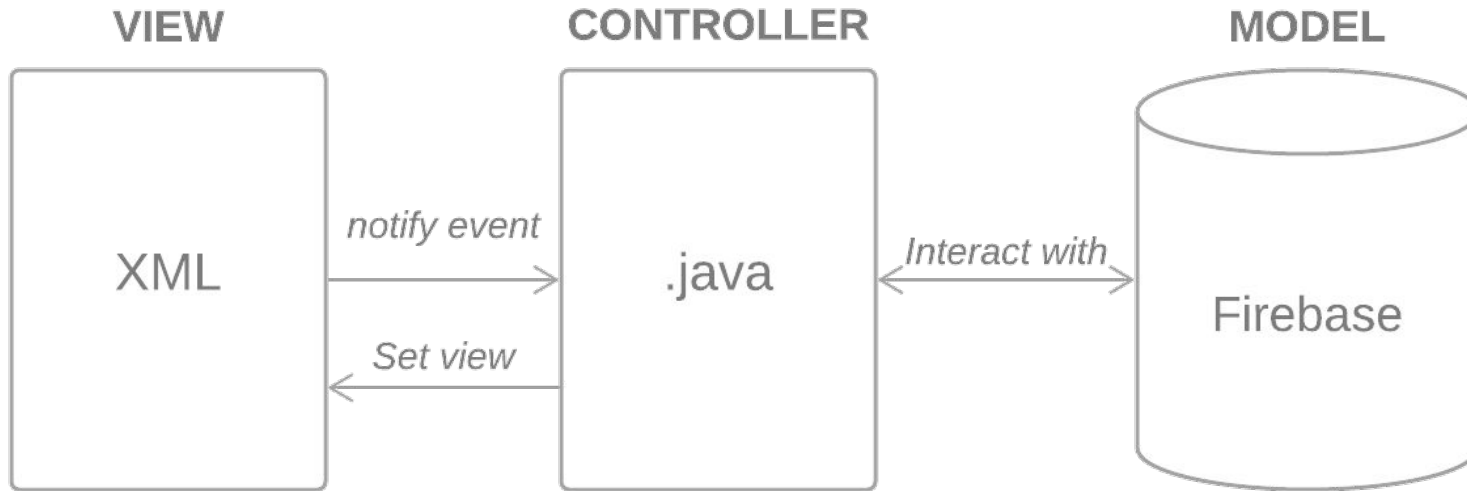
Database architecture

- Firebase - Document based NoSQL DB

- Firebase Authentication - Email - Password

- Collections

  - Toys

  - Trades

  - Users

  - Toy-Frauds

toytrader-18f32

+ **Start collection**

toyFrauds

toys

trades ›

users

trades

+ **Add document**

CmUzoY0CmaPf6hW3Ifyc ›

Q1jtMGZdTxXWr5gGxeAE

vnYxTJW3fBYpRGoJUxNB

CmUzoY0CmaPf6hW3Ifyc

+ **Start collection**

+ **Add field**

cost: 90

end_date: "Wed Nov 18 18:57:28 PST 2020"

ownerid: "DoJ3ONB8KeOLEoanMxAzSOhQ1X83"

start_date: "Wed Nov 18 18:57:23 PST 2020"

toyid: "S6Eeydb3mqPPc353og4P"

toyname: "Toy r us"

type_of_sale: "Buy"

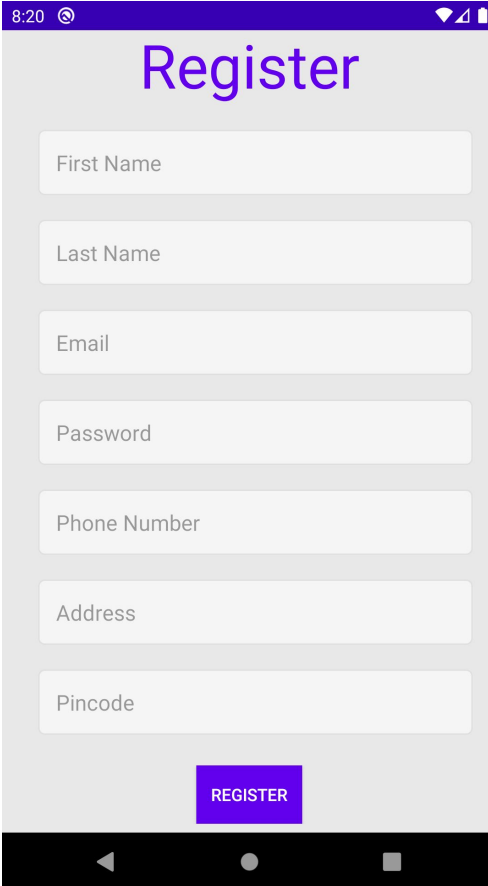userid: "DoywtU1ijHXCLcn83QoXr0TruKb2"

Functional Requirements

- User can Register
- User can Login
- User can change personal data
- User can view Categories
- User can view Toys
- User can Buy/Rent toys
- User can report Frauds
- User can return a rented toy
- Admin can view users
- Admin can view toys and issues with them

Register

- Enter All user details
- Details uploaded to Firebase
- User registered using Firebase Authentication

Login

- Enter email and password
- User Authenticated with Firebase Auth
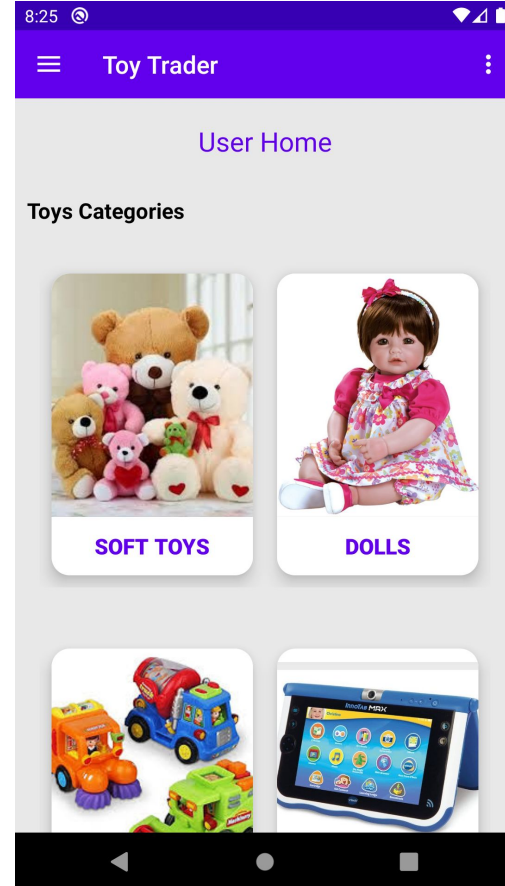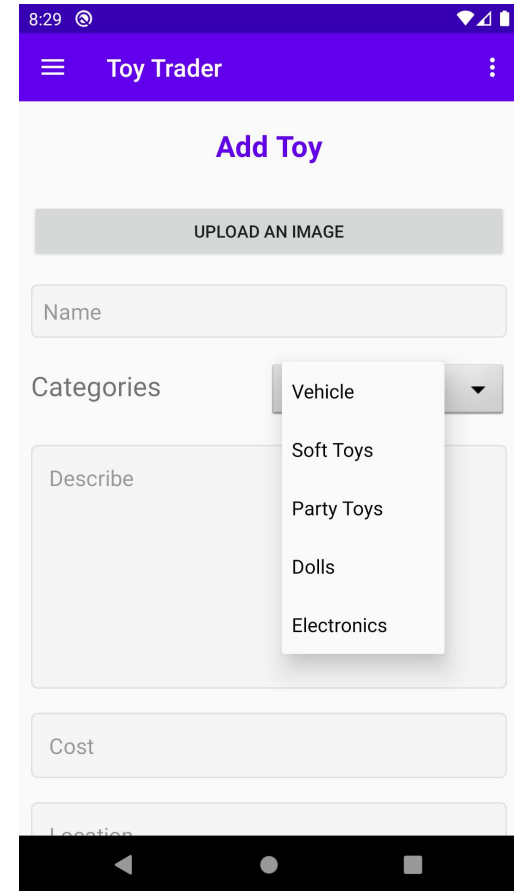- Securely log into the Application

Home Screen

- Home screen for the application
- Select from multiple categories

Upload toy

- User can opt to upload their own toys
- Add a few details with the image and you're good to go
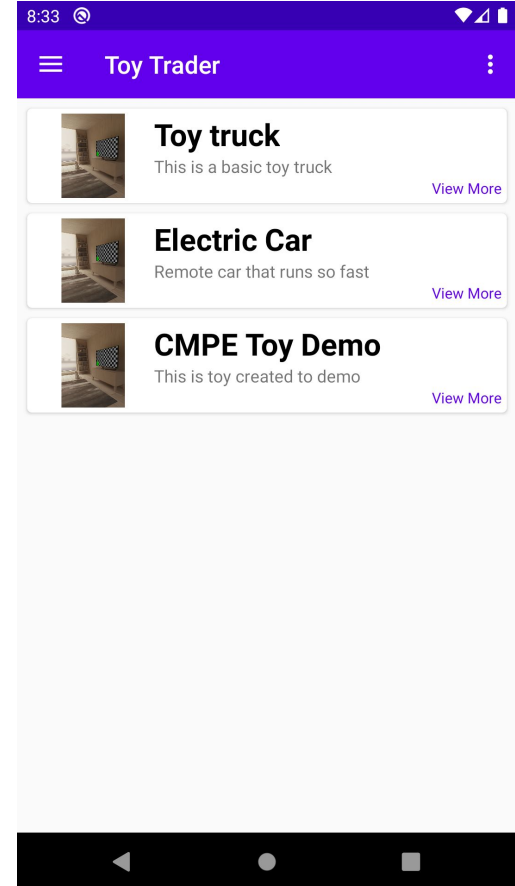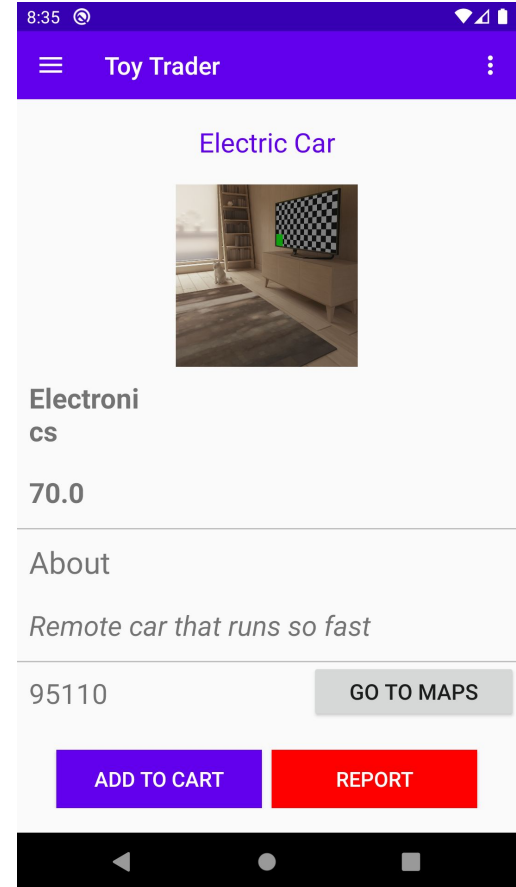
Categories

- User can select any category

- Toys related to that category will be shown here

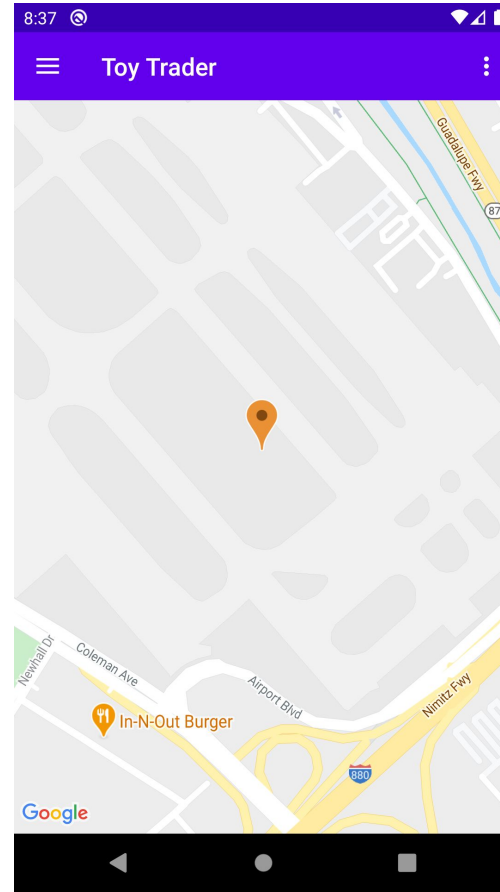- Images are downloaded from firebase storage

Toy Description

- Selecting any toy opens up detail view

- All the details related to that Toy are shown here

- User can

  - Add the toy to cart

  - Report the toy
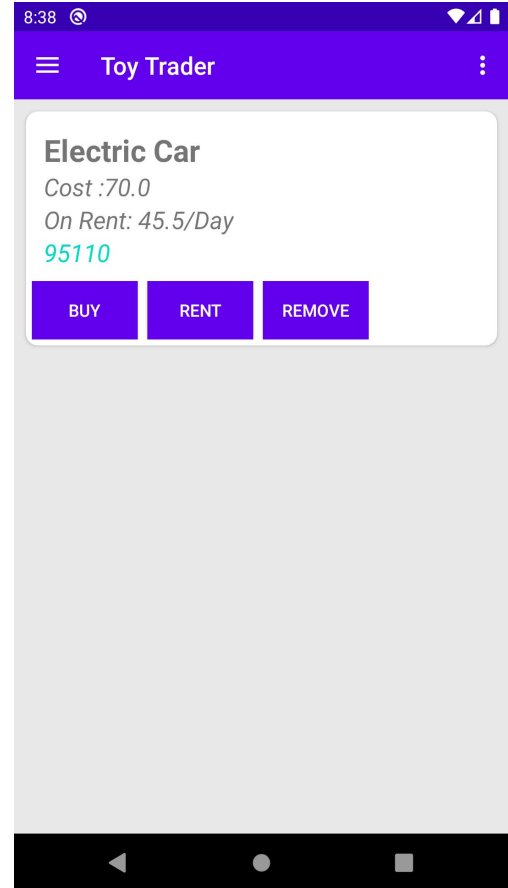
  - View Toy location on Map

Map

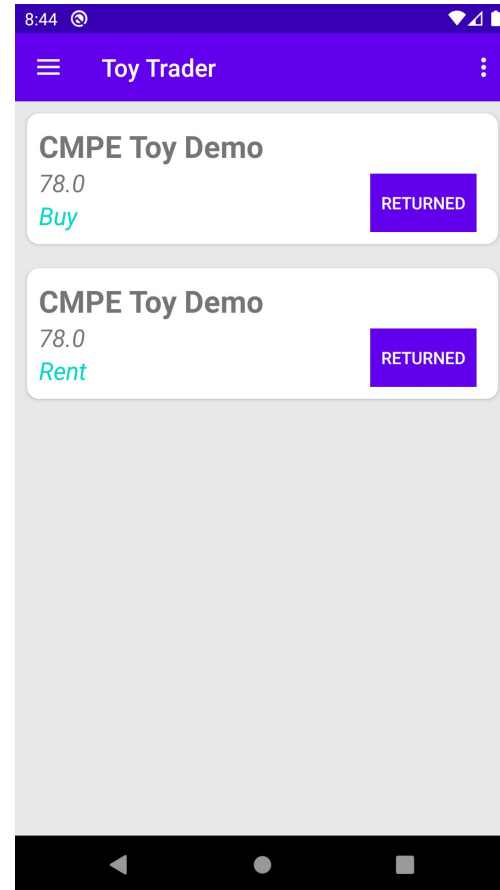- Map view to show the location on the map

Cart

- After the Item is added to cart user can
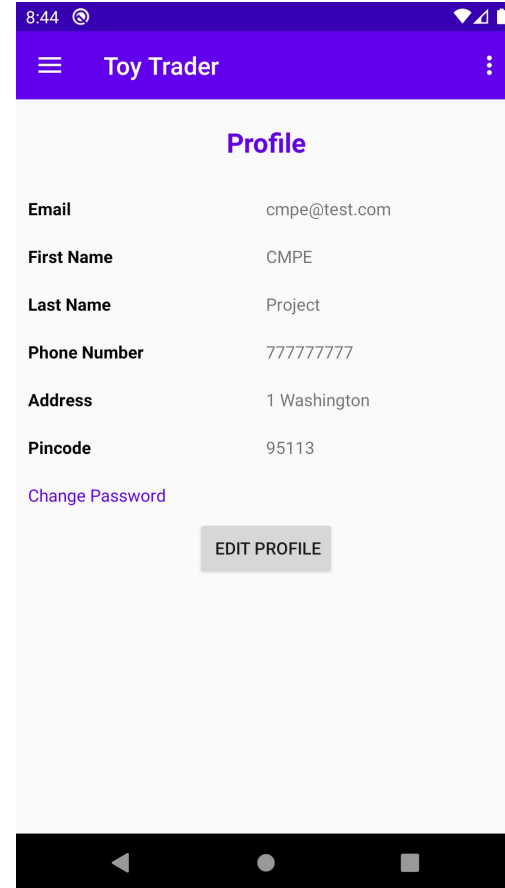 - Buy the item
  - Rent the item
  - Remove the item

Orders

- Orders page to provide user history
- User can view all the items that he has rented or bought
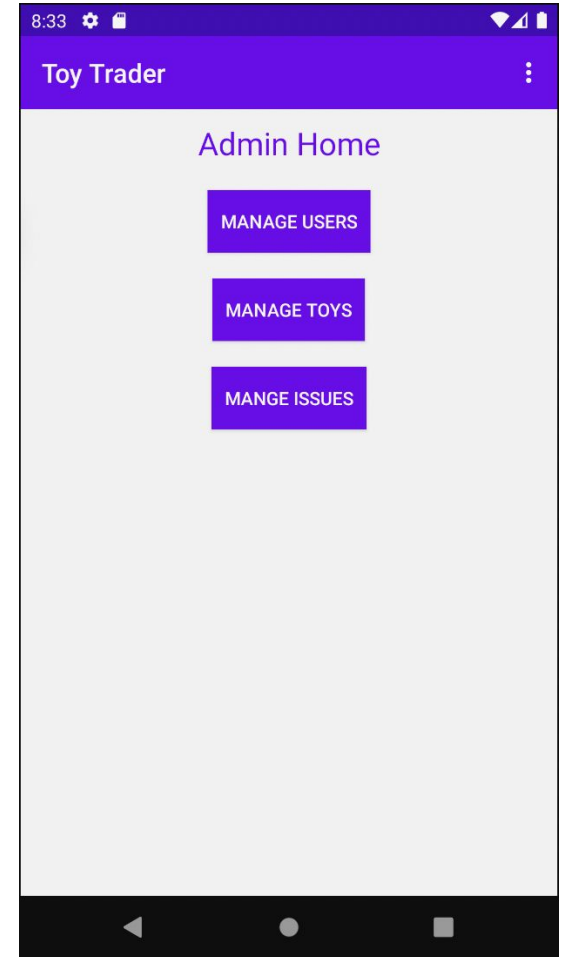
Profile

- Profile page for the logged in user
- View all user details
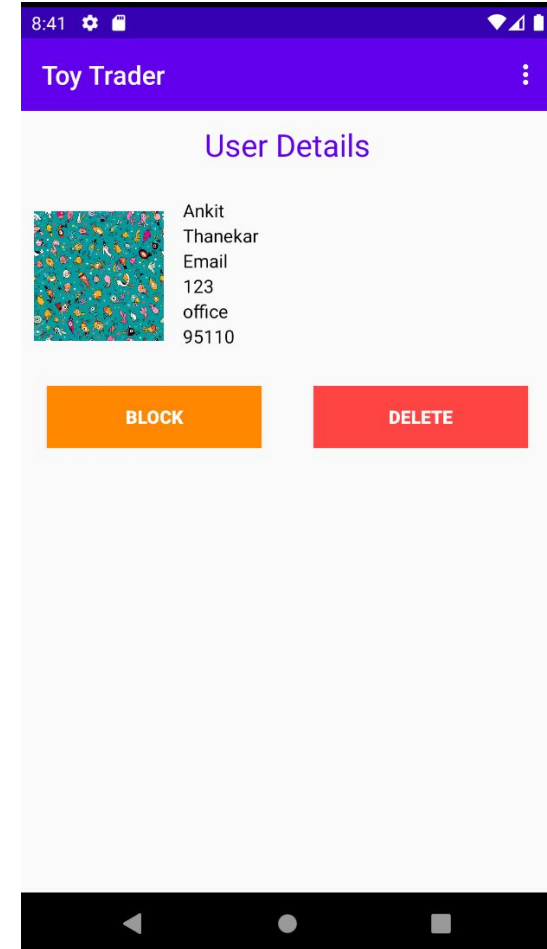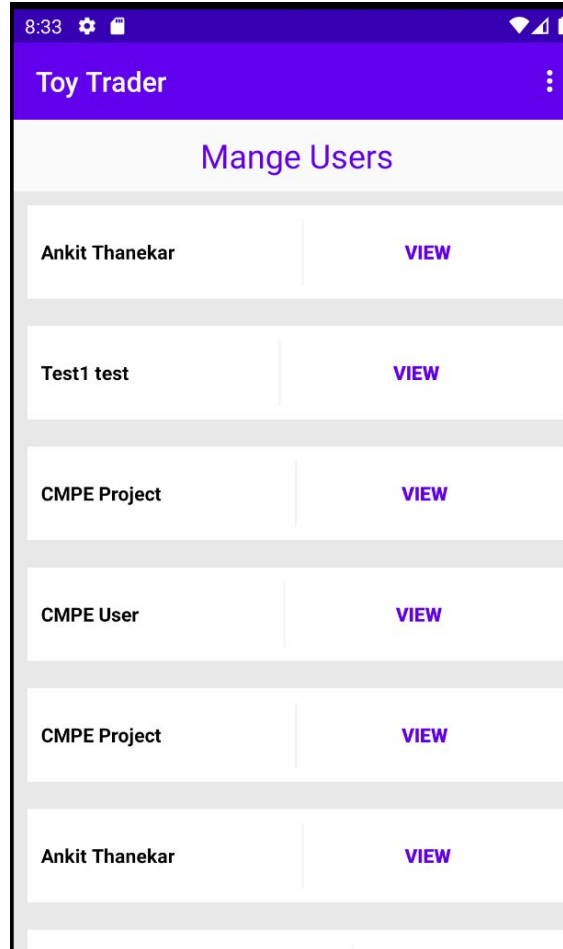- Can edit details
- Can change Password

Admin

- Admin portal is used to manage
  - Toys
  - Users
  - Issues reported by Users
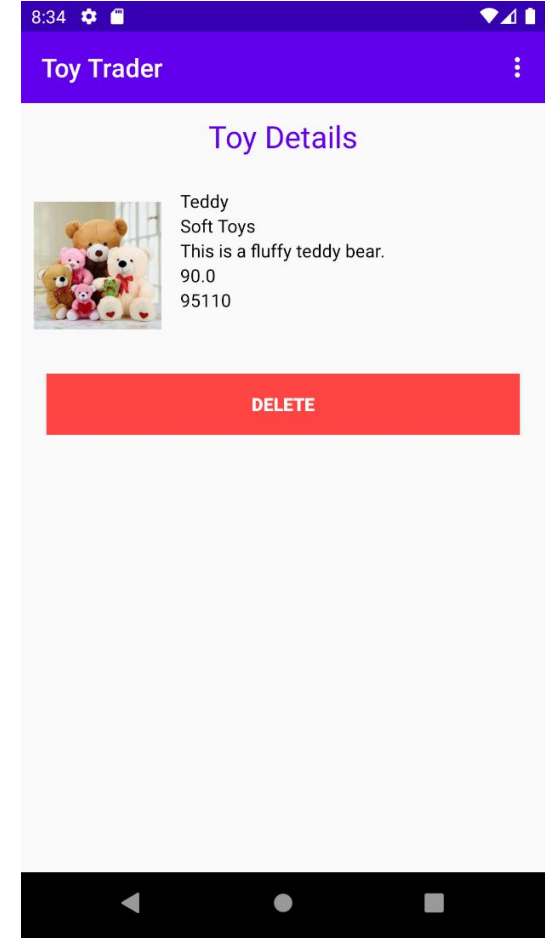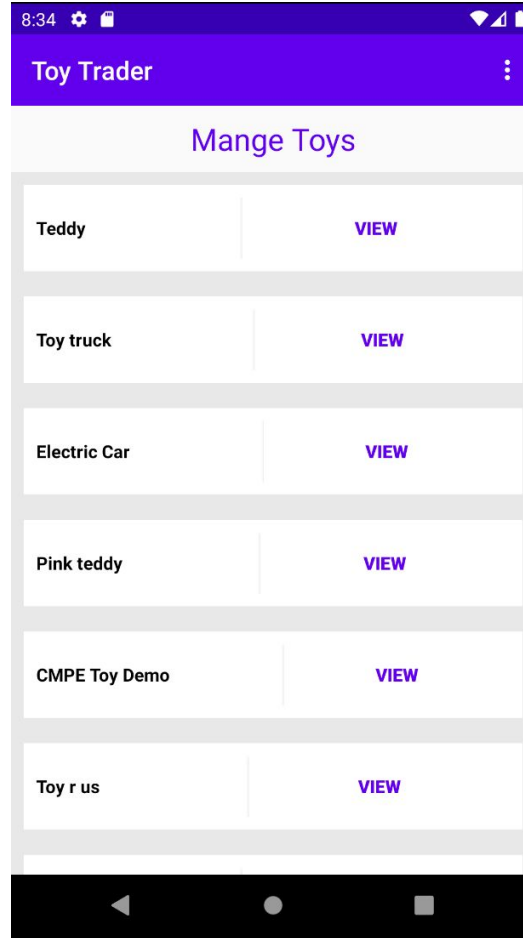
Admin - Manage Users

- Admin Can Block the user
- Admin can Delete the user

Admin - Manage Toys

- Admin can view list of toys
- Admin can delete the toy

Admin - Manage Issues

- Admin can view the reported issues