

CitySolution: Complaint Management Applications for Smart City Corporation

Documentation/ User Manual



About

Two Android applications streamline municipal complaint reporting and management. The User app allows citizens to report issues by capturing images, which are automatically categorized using a deep learning model trained on 5494 images across four complaint categories. The Authority app provides city corporations and higher authorities with categorized complaints, location details, and status updates, enhancing transparency and efficiency in municipal operations and promoting smart city development.

Device Requirement for Using the Apps

- **Operating System:** Android 7.0 (Nougat) or above
- **Minimum API Level:** 24
- **Optimized for:** Android 12L (API Level 32)

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CitySolution (User Application)

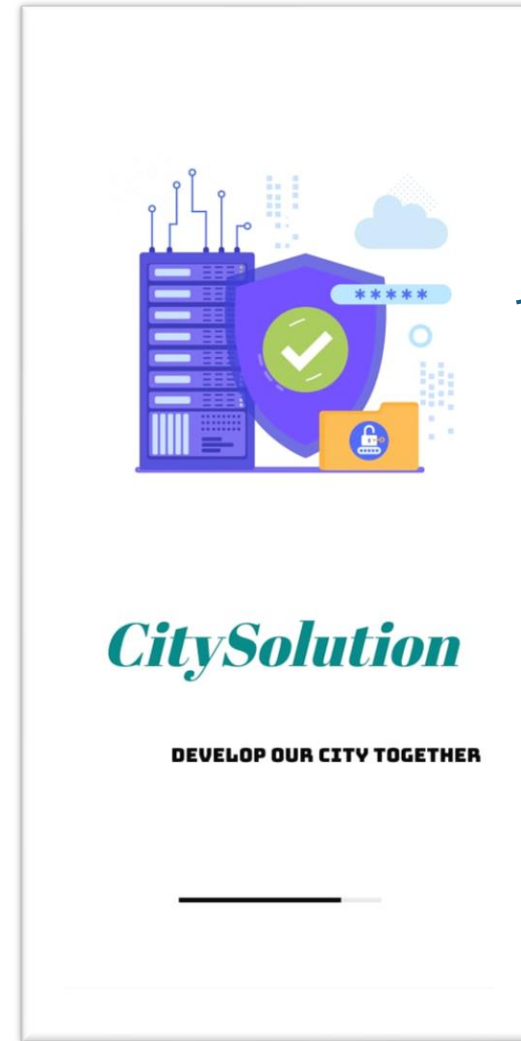
Installation

The user version application of CitySolution can be found here:

<https://github.com/Shama-33/CitySolution/tree/main/apk/user>



App Icon




Splashscreen

Registration

For Sign Up all the categories must be filled properly.

Login



[Forgot Password?](#)

SIGN IN

Not Registered Yet? [Sign Up](#)

Sign Up

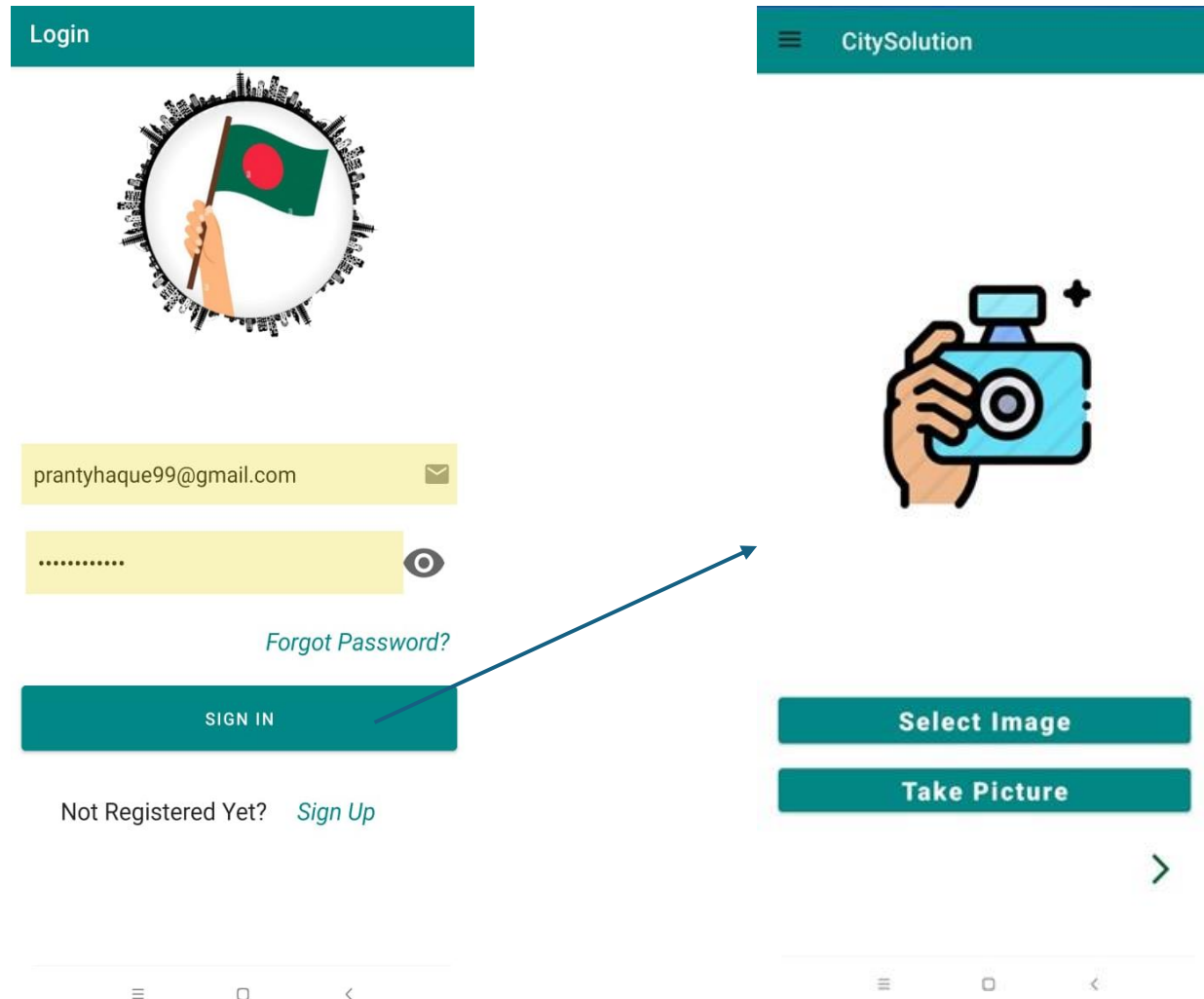
SIGN UP

Already have an account? [Sign In](#)

The email must be valid. After pressing the button “Sign Up”, A verification email will be sent to the email account. After verifying, click next on the application and the home page will appear.

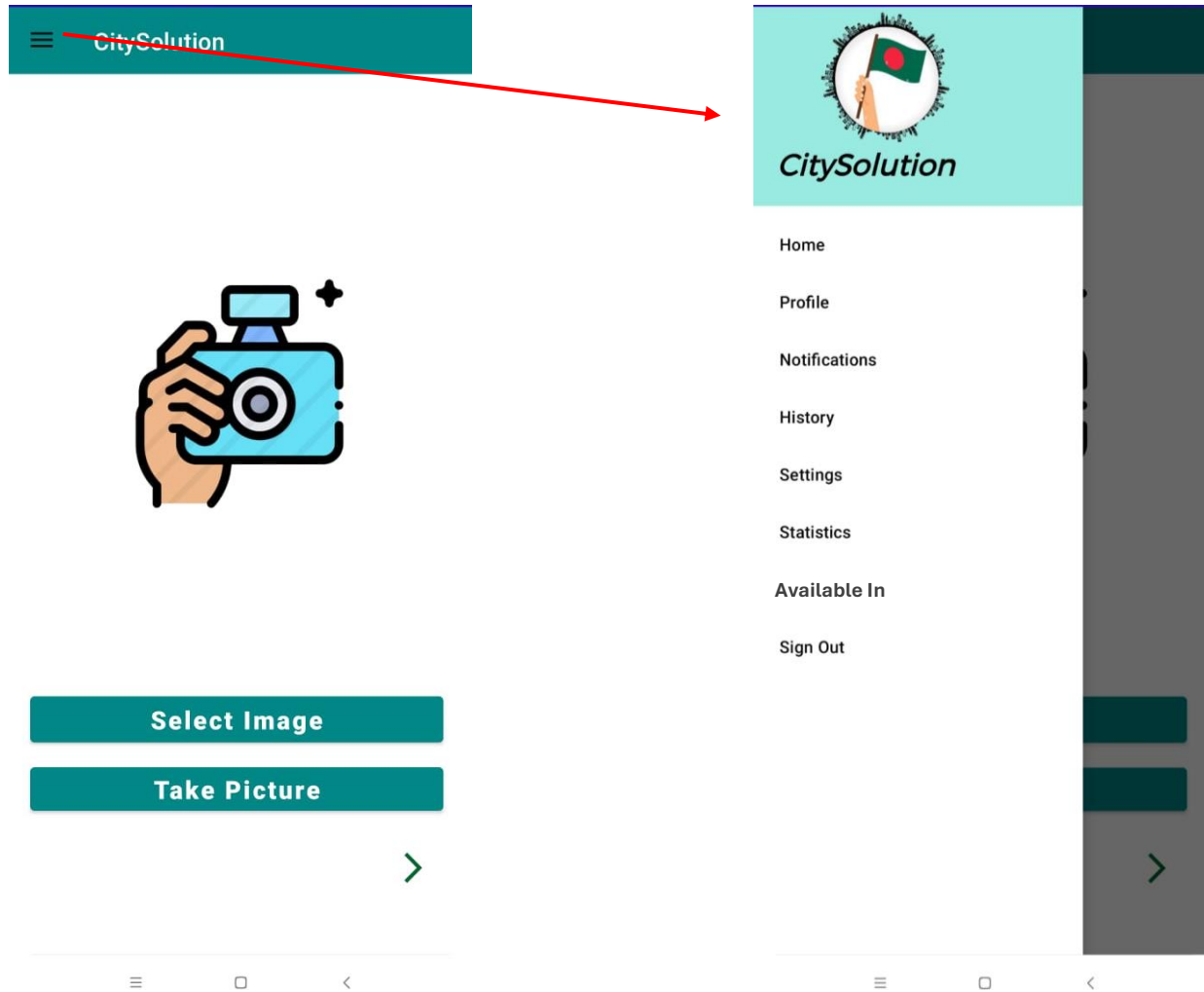
Login

In case of a registered user, he/she can login directly.



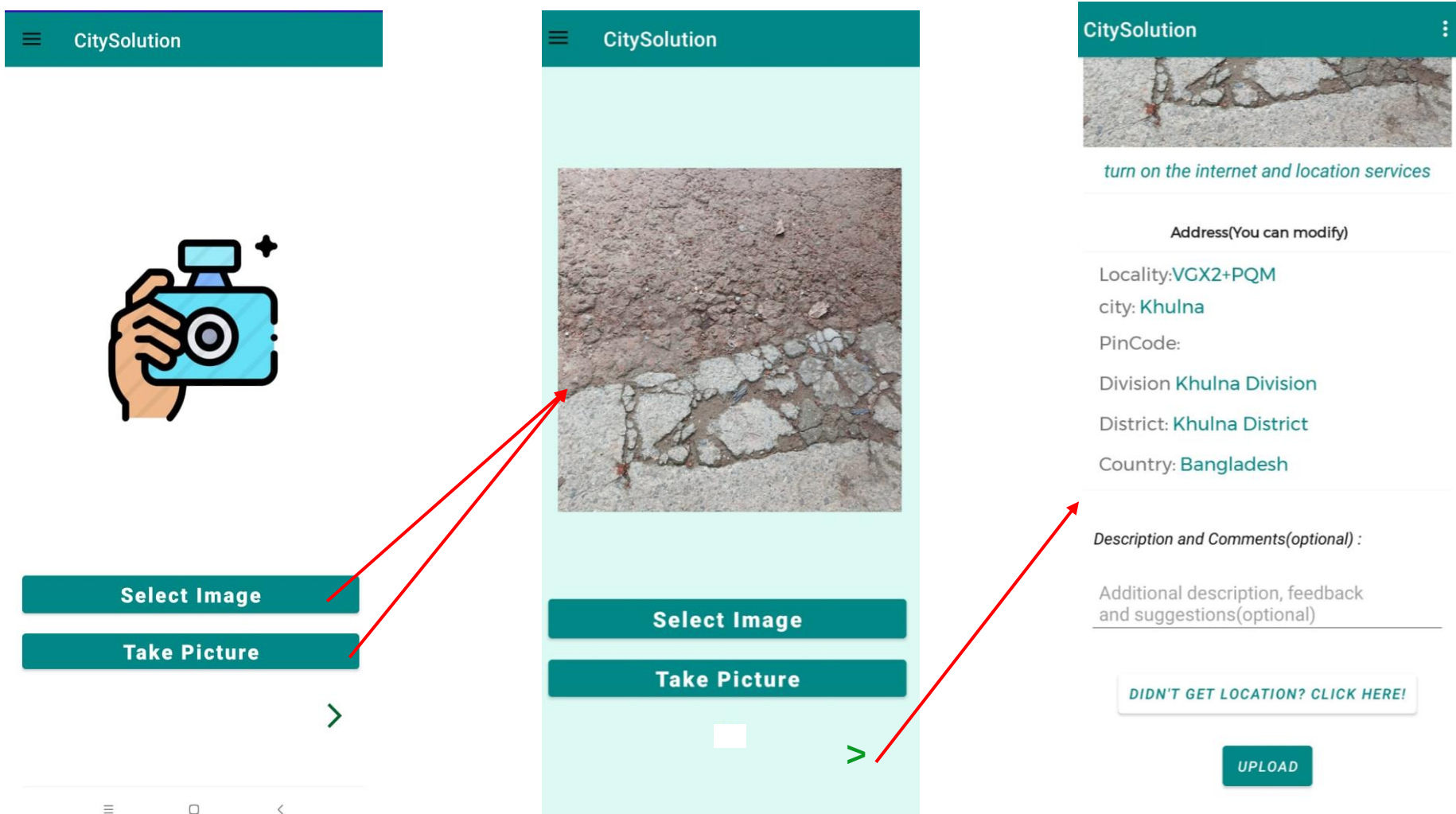
Homepage and Options

From homepage, complaints can be uploaded and different options are displayed on sidebar.



Upload Complaints

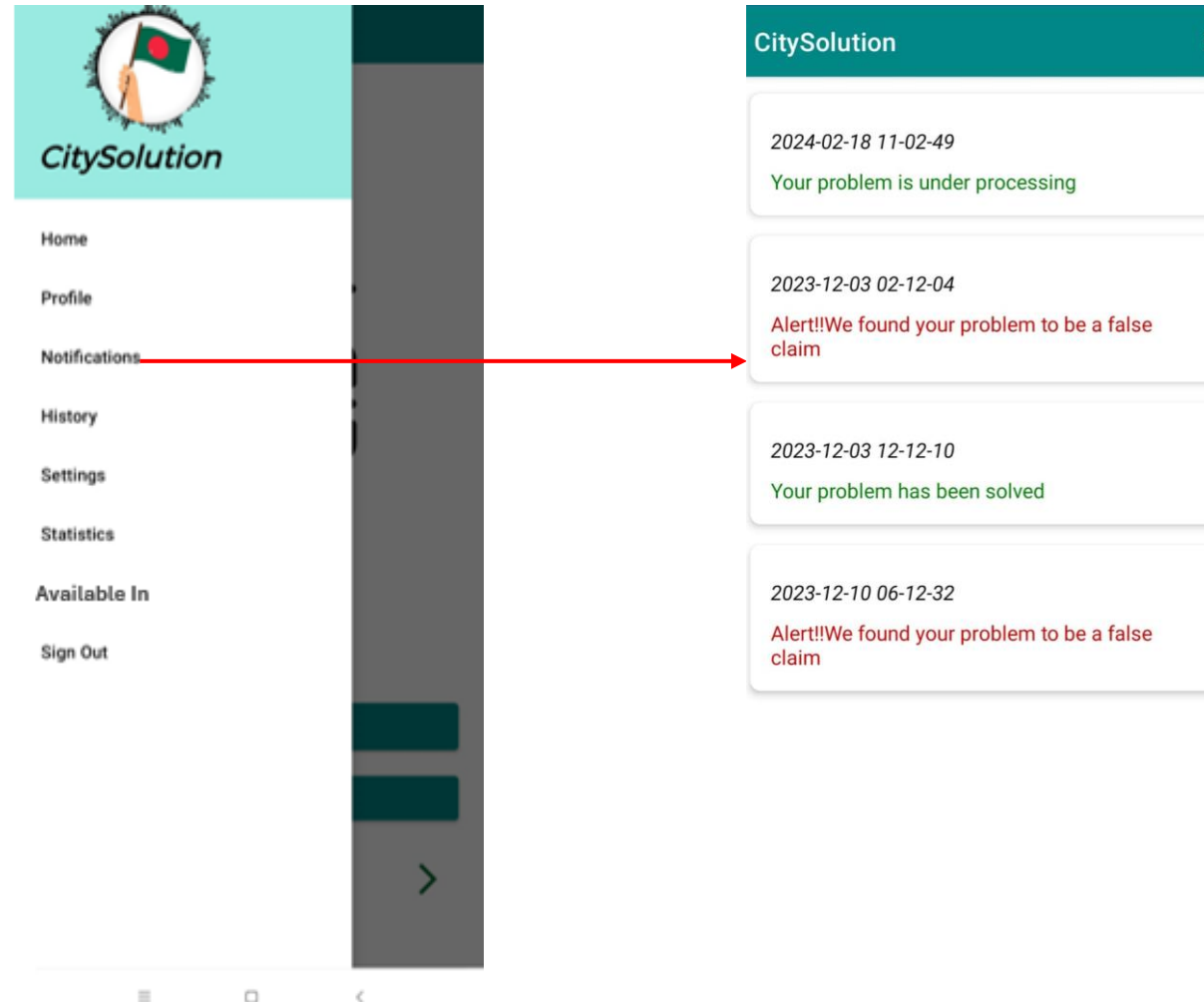
The automatically fetched location can be manually changed. **The country must be Bangladesh.** Available cities can be found in “Available In” option in menu.



Press Upload for complaint submission.


In App Notifications

The notifications about any update from city corporation are displayed. Different colors signify different updates.



History

History shows the problems uploaded by the user. Clicking on a problem shows details.



CitySolution

Home

Profile

Notifications

History

Settings


Statistics

Available In

Sign Out


CitySolution

Search




SORT BY


No Filtering




Islampur
Jamalpur
03-12-2023
processing




Islampur
Jamalpur
03-12-2023
processing



Dewanganj
Jamalpur
03-12-2023
Pending




Chor
Jamalpur
03-12-2023
pending



Chor
Jamalpur
03-12-2023
pending

CitySolution



Address

Locality:VGX2+PQM

city: Khulna


PinCode:

Division Khulna Division

District: Khulna District


Country: Bangladesh

SEE LOCATION ON MAP




Uploaded

19-02-2024



Processing




Solved

Description and Comments :

5:12 AM

← KUET, Khulna, 9203, Khuln... X



Club Building

পোস্ট হাউজ

কাম ক্লাব হা

See similar places

Khulna University of Engineering & Technology

খুলনা প্রকৌশল বিশ্ববিদ্যালয়

Khulna University of Engineering & Technology

খুলনা প্রকৌশল বিশ্ববিদ্যালয়

4.6 ★★★★★ (2,940)


Public university · 8 hr 4 min


Closed · Opens 8 AM

Directions

Start

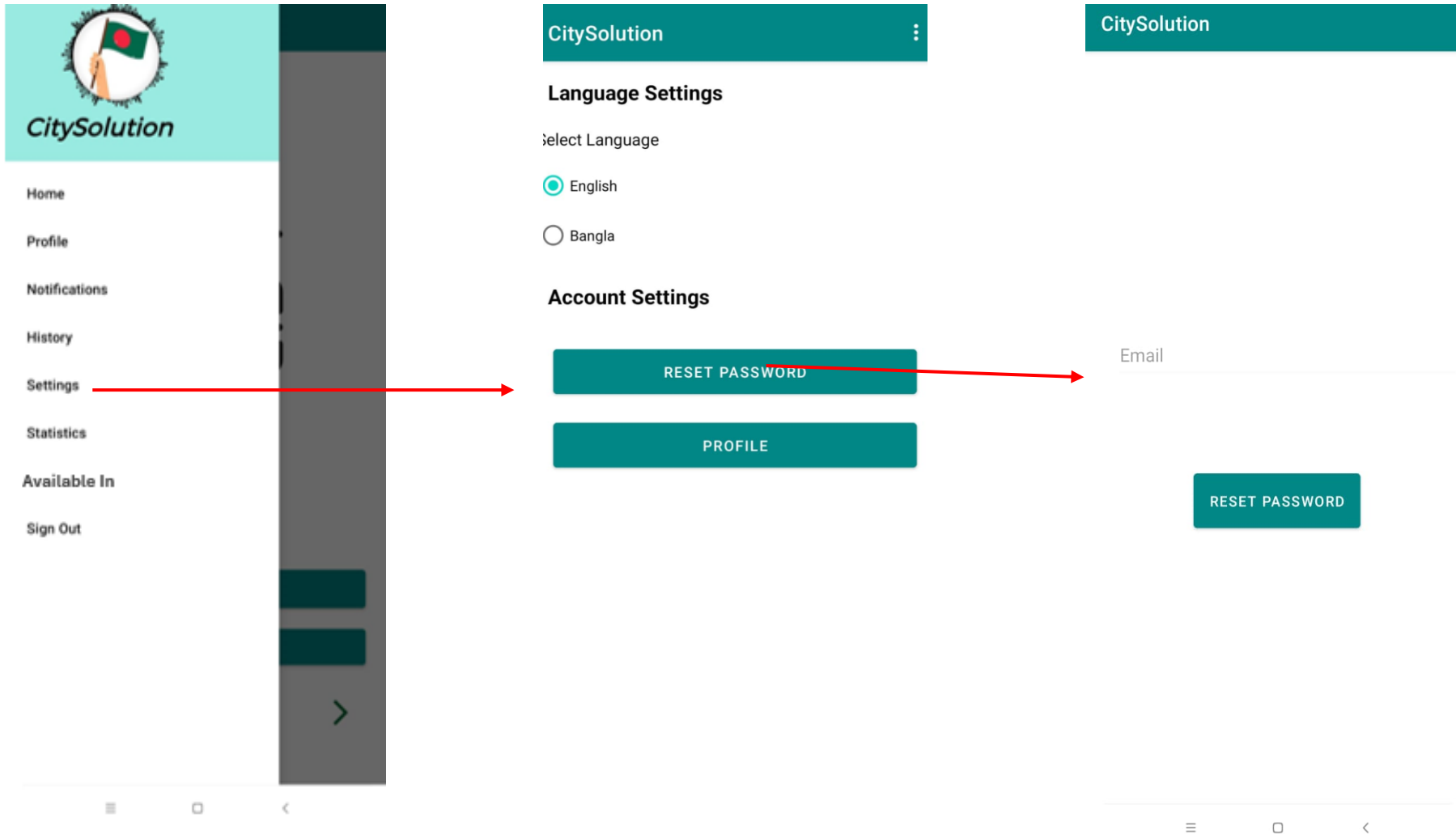
Directory





Settings

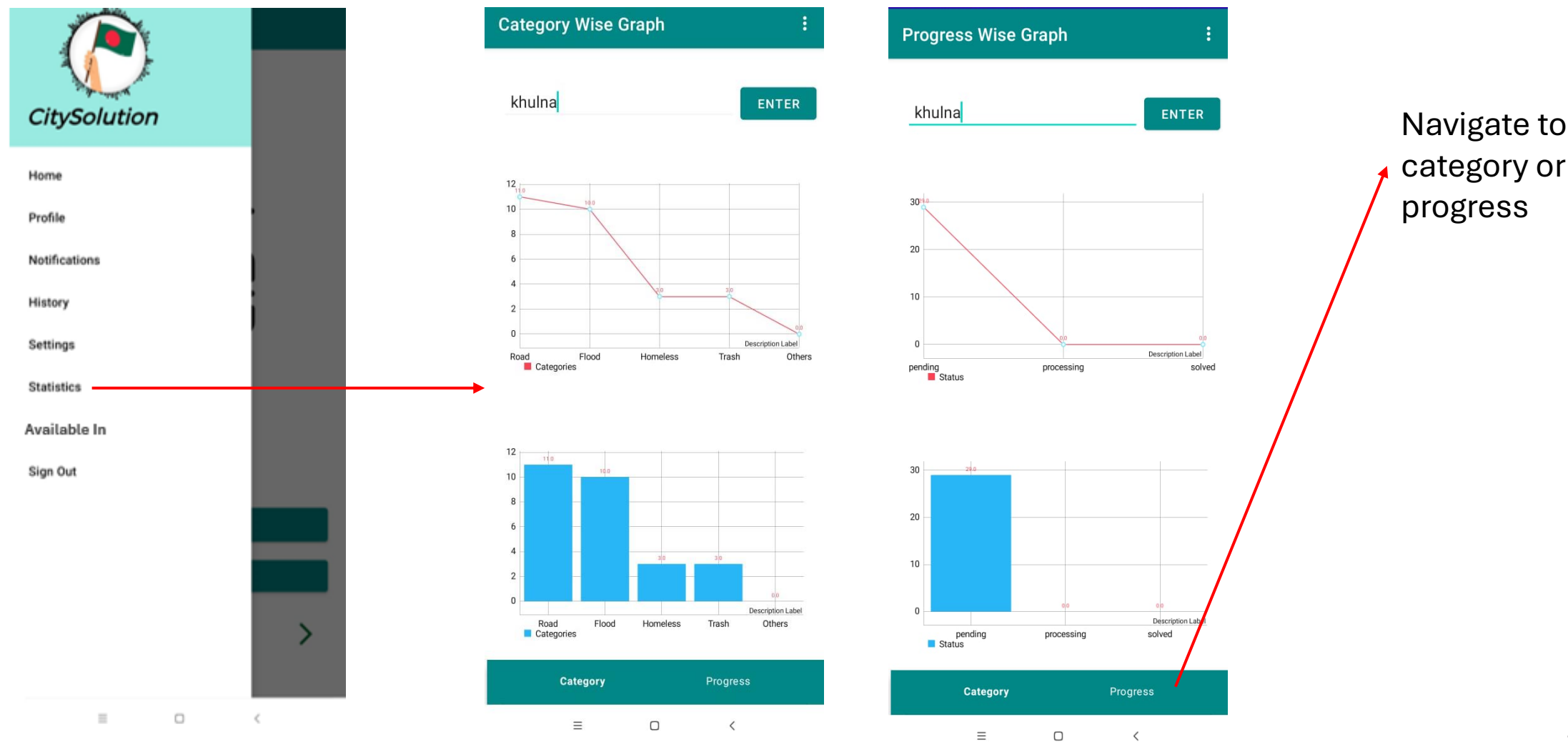
Switch languages between Bangla and English. Reset password and view profile.



Enter email and click on reset password. An email will be sent to the account for updating password.

Statistics

View the category and progress wise graph of any city.



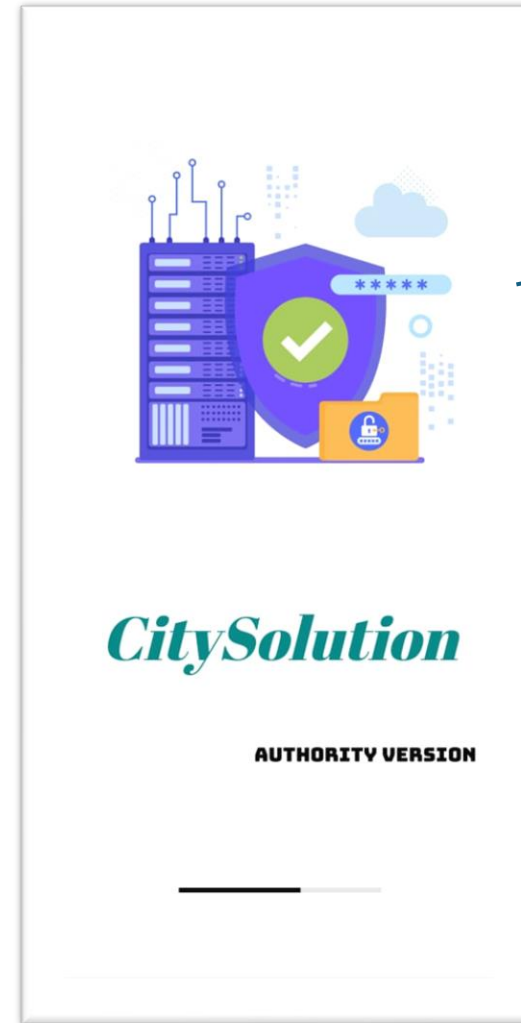
CitySolution (Authority Application)

Installation

The user version application of CitySolution can be found here:
<https://github.com/Shama-33/CitySolution/tree/main/apk/authority>



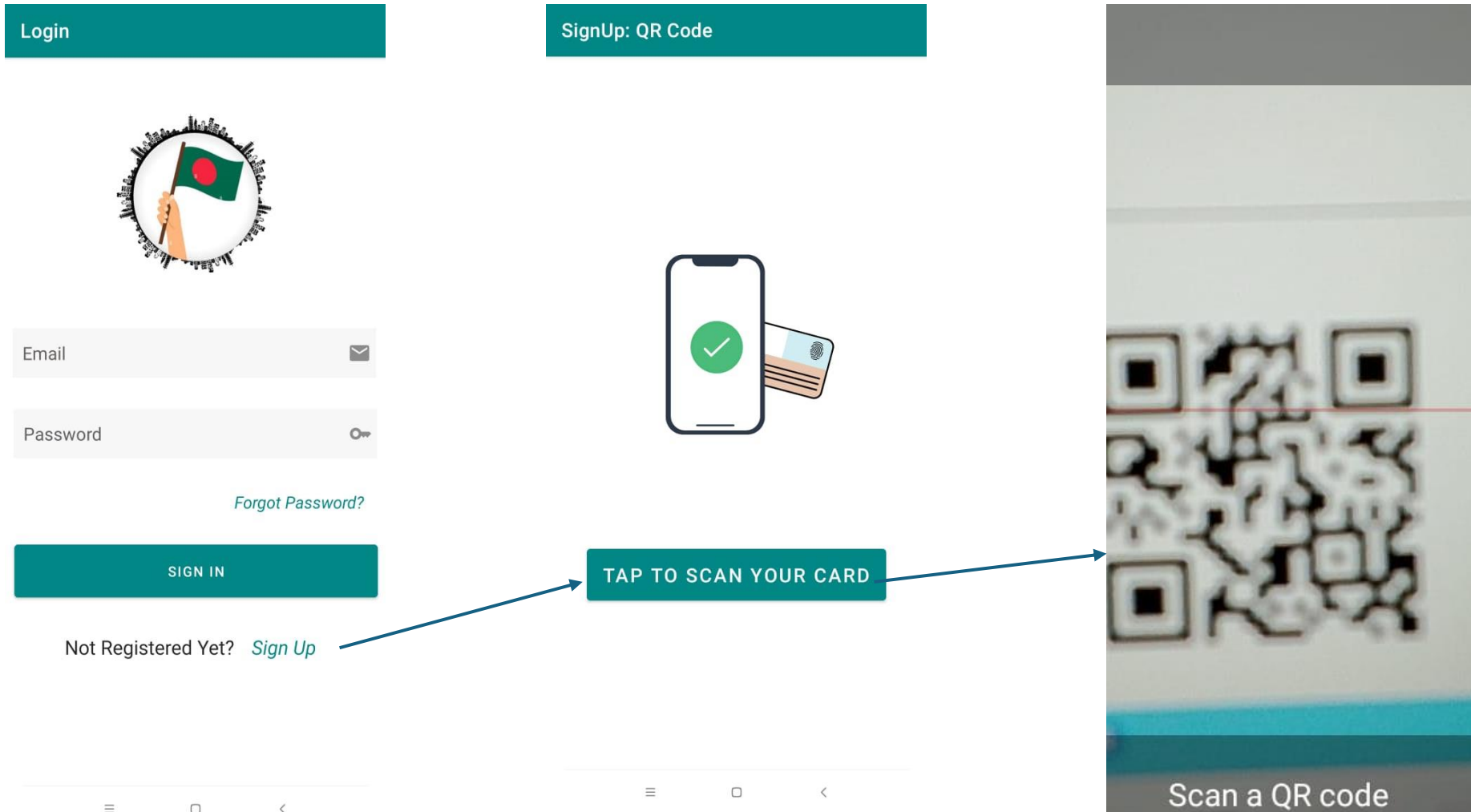
App Icon



Splashscreen

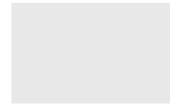
Registration

A QR code scan must be done at first. The QR code will have the information-employee id, first_name,last_name,city.

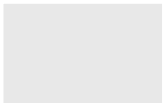


Registration (Cont'd...)

A QR code can be used 1 time only. The QR code is provided by the central authority for registration. Here are two example QR codes generated by central authority.



Sally Jackson Dhaka



Albert Einstein Khulna



Registration (Cont'd...)


After QR code scanning, the next page will appear with name, id and city fields already filled (unchangeable). Fill up the rest of the fields to sign up.


Sign Up


Eda Lavals


120

Dhaka

+880 Phone Number (ex.1999999999) 

Email 

Password 

Confirm Password 


SIGN UP

Already have an account? [Sign In](#)

The email must be valid. After pressing the button “Sign Up”, email verification will be done. After successful verification, the corresponding city information will appear.

AuthCitySolution

A verification Email has been sent to your Account:

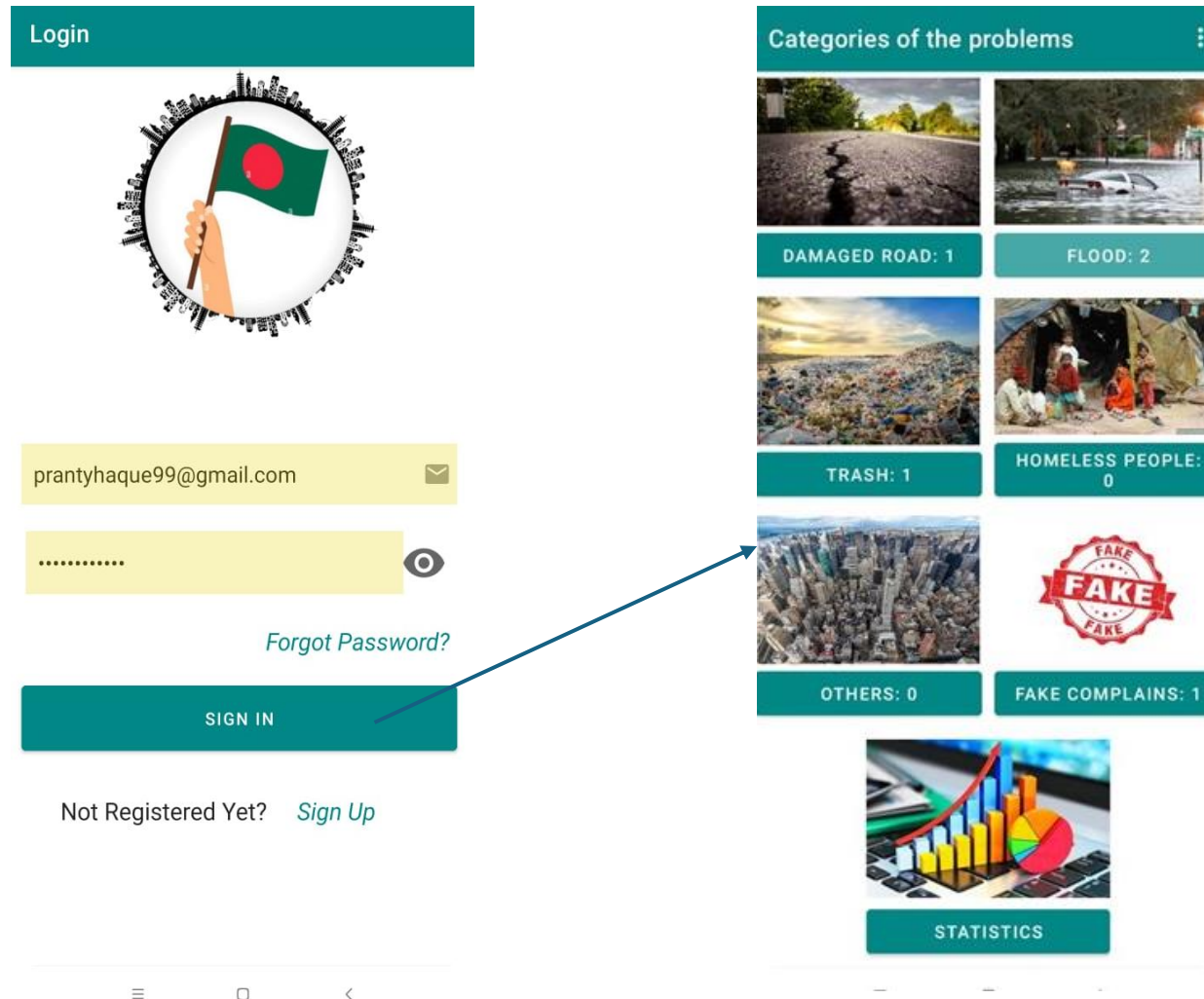
@gmail.com

Verify to Proceed

NEXT

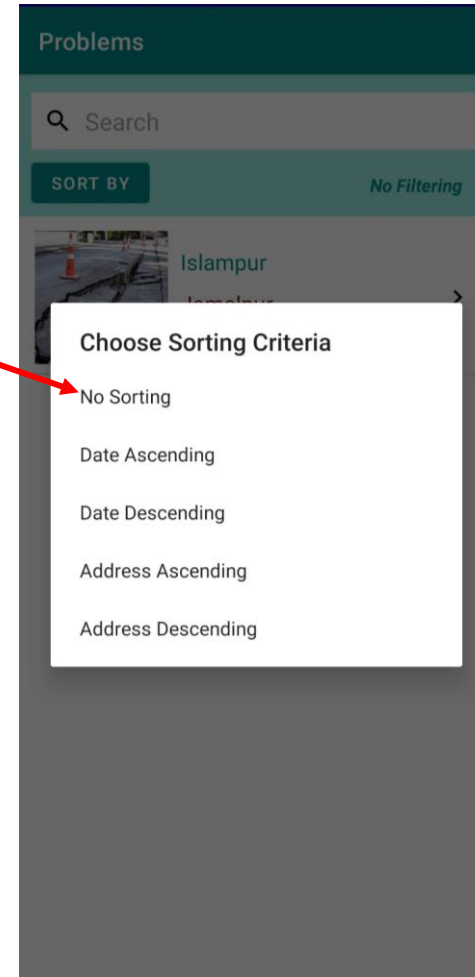
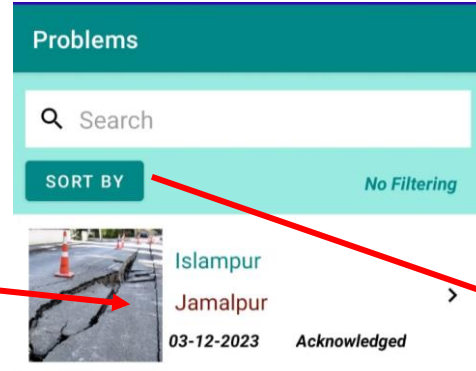
Login

In case of a registered user, he/she can login directly.



View Complaints

Successful signup redirects the employee to his/her city page. On clicking on a category in this page, the complaints of that category will be shown along with sorting options.



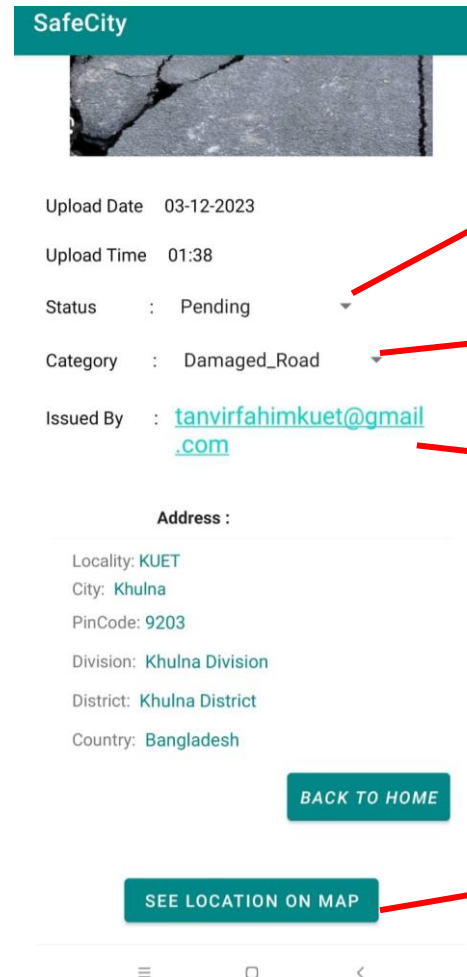
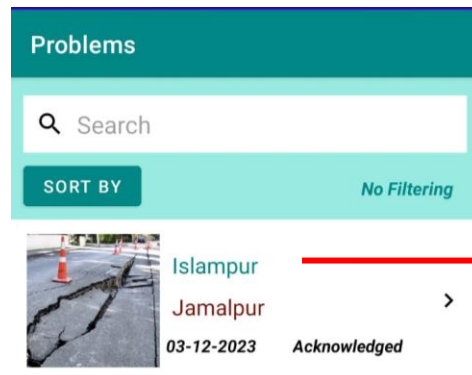
Searching can be done by city areas.

Statistics shows the graphs of any city



View Details and Change Status

Clicking on a particular complaint will result in details of that problem from where status can be changed.



Change status-
"pending","processing","solved"

Switch Category in case of wrong
prediction or identify as fake complaint
manually

Redirect to gmail app

Redirect to google map for precise
location

Central Admin Login


Central Admin has an account with a fixed ID and password. Registration is not needed.

Central Admin can only view cities of Bangladesh.

ID : mizan@admin.cc.bd

Password: mizan1234

Login





[Forgot Password?](#)

SIGN IN

Not Registered Yet? [Sign Up](#)

Higher Authority

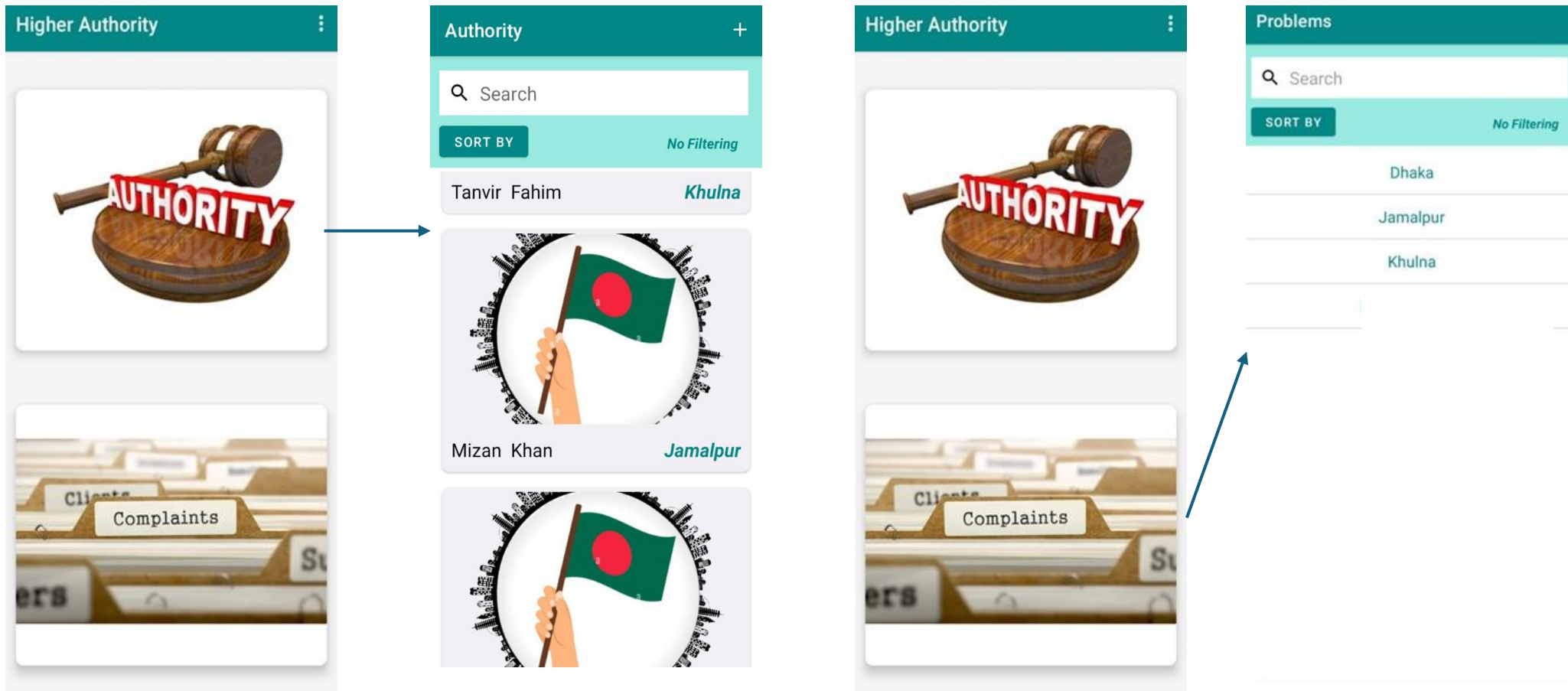




View Password

Central Admin Homepage

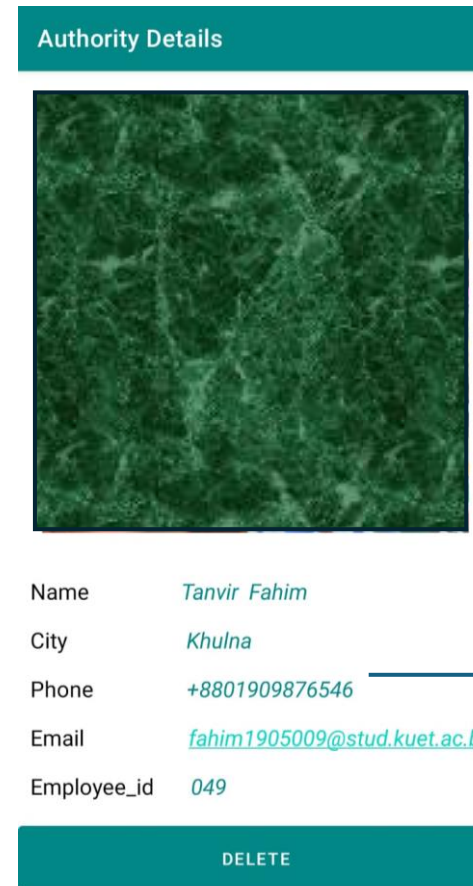
The homepage shows two icons- authority and complaints. Authority option is for city corporation authority deletion and for generating the QR code- which is required for city corporation authority registration. Complaints shows list of cities with complaints.



Authority List

Authority page shows list of all authorities with sorting and searching options. Tapping on an employee shows details with employee delete option. A deleted email cannot be registered again.

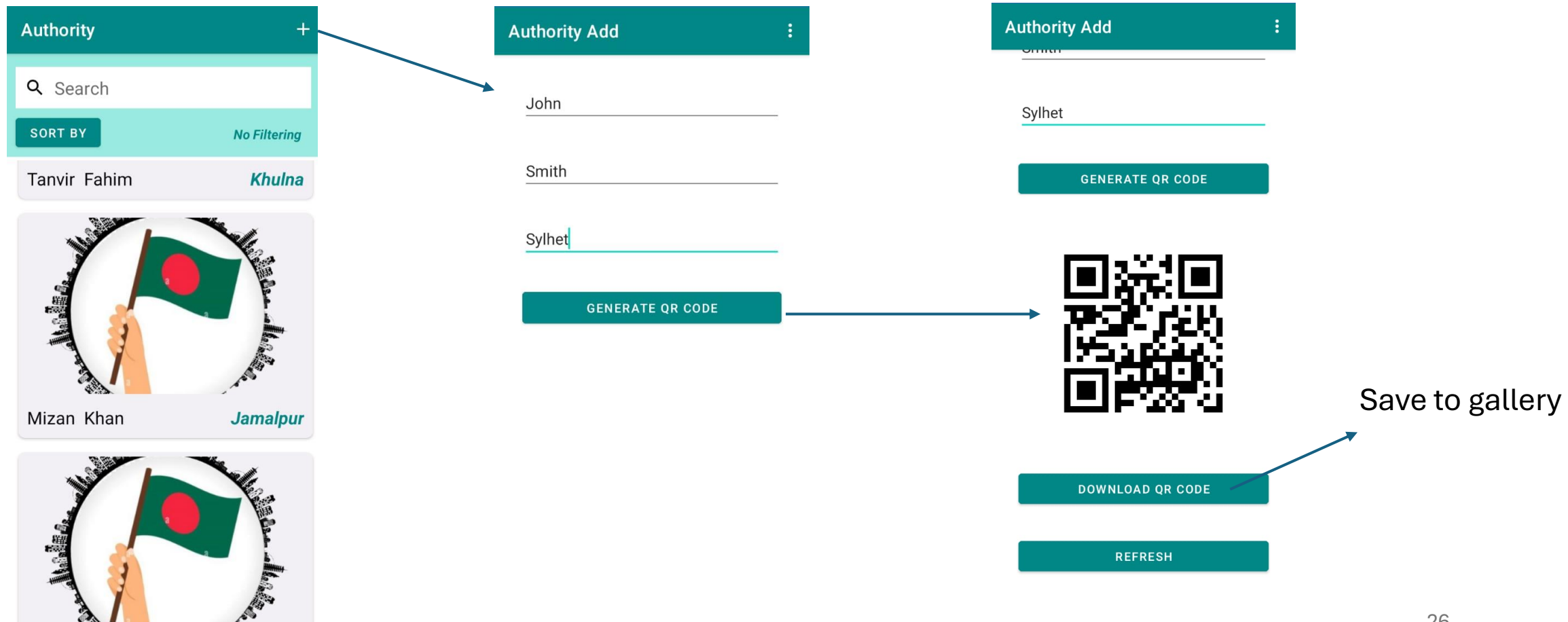
Sort /search
By employee
name or city



Phone/gmail redirect

Generate QR code for Authority registration

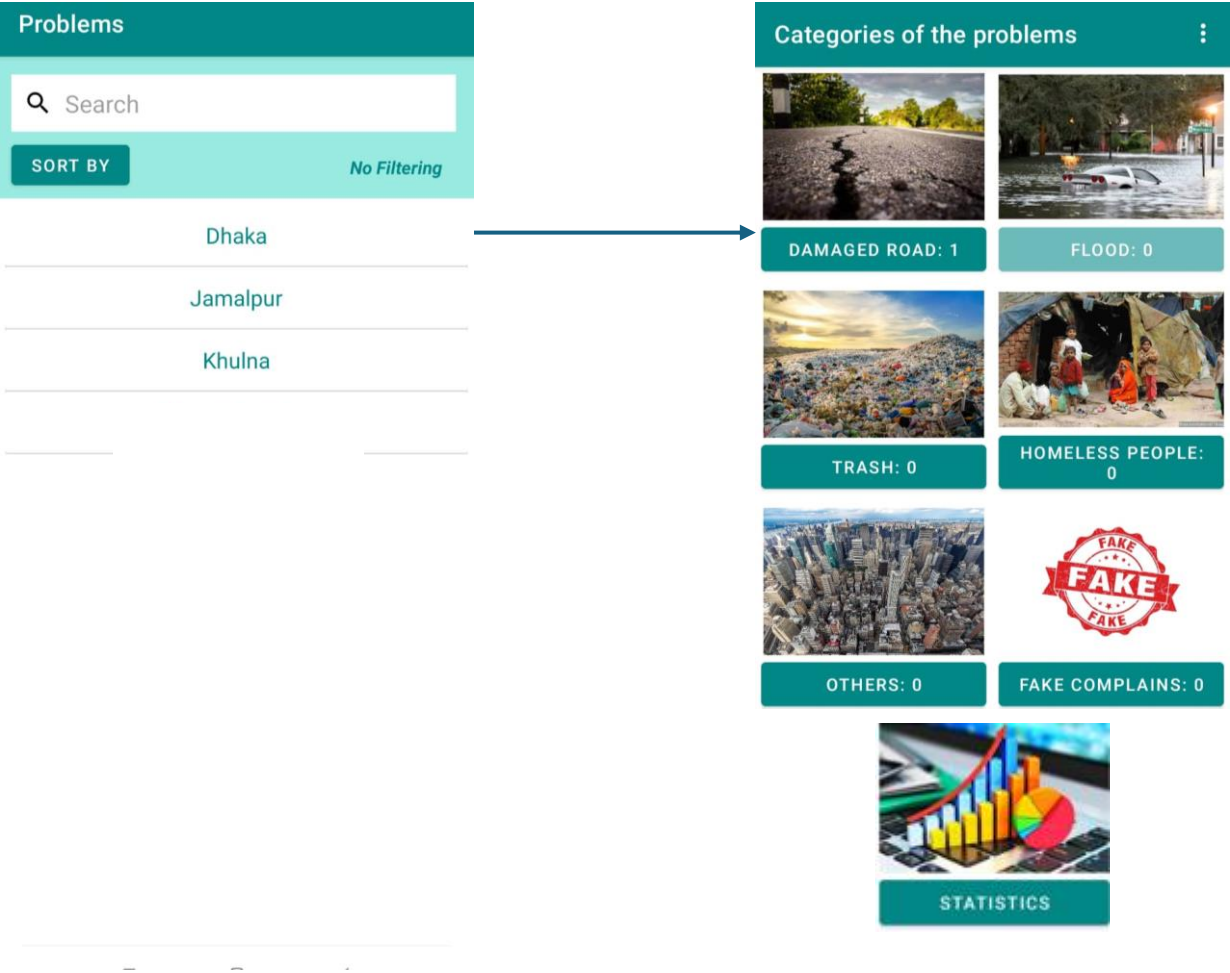
A QR code is generated with employee name and city. A unique id is assigned automatically. The information is then stored in database. Only the people with this QR code can register As city corporation employee.



City Details

Tapping on a city results in the categories of problems and statistics of that city.


In city list, only the cities that have received complaints are shown.




Complaint List and Details

Tapping on a category shows the next page with complaint list. And tapping on the complaint shows details (scrollable).


Categories of the problems




DAMAGED ROAD: 1




FLOOD: 0




TRASH: 0




HOMELESS PEOPLE: 0




OTHERS: 0



FAKE COMPLAINS: 0



AUTHORITY




STATISTICS

Problems


SORT BY

No Filtering



QCWW+RJX
Dhaka
02-05-2024 pending

AuthCitySolution



Upload Date : 02-05-2024
Upload Time : 18:47
Status : pending
Category : Damaged_Road
Issued By : seaweedbrainhu
mangps@gmail.com

Address :
Locality: QCWW+RJX
City: Dhaka
PinCode:
Division: Dhaka Division
District: Dhaka District
Country: Bangladesh

BACK TO HOME

SEE LOCATION ON MAP

Description and Comments :
the road is damaged for a long time.please take urgent steps

For Any Queries

Contact :

- Farhatun Shama – farhatunshama@gmail.com
- Lamisa Bintee Mizan Deya – lamisa.deya2001@gmail.com
- Abdul Aziz - abdulaziz@cse.kuet.ac.bd