

University of Science

Advance Program in Computer Science



Midterm Project CS426

Mobile Device Application Development

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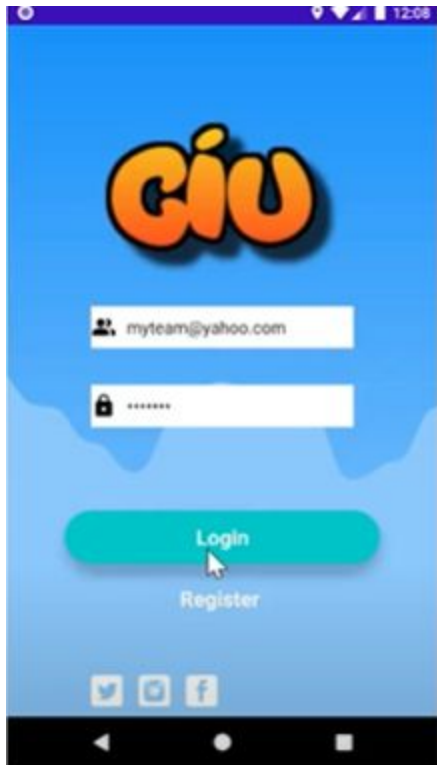
1. Target:

Every day, each of us often has problems that we cannot foresee, for example, broken wheels, broken pipes, injured needing help, ... These problems need specialized people to solve it. So our team application was born to somewhat reduce that. Our app connects people in need, they will go to the app and create a number of markers on google map with information about their status, address, phone number indicating their need status on a scale of severity. And the helpers such as car mechanic, plumber, home doctor, ... who want to earn extra income, can through our app that they can meet and interact with each other in an easier way.

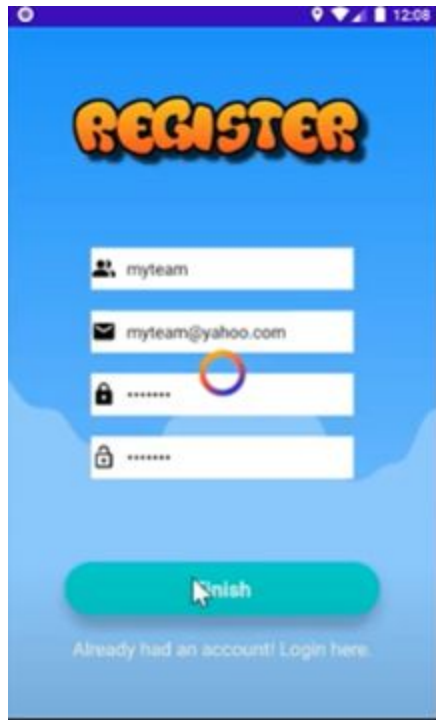


2. Main function and description

- **Log in:** If the user already has an account, just log in. Otherwise, they have to register first. The username is the email that they have already registered. And the password is just the password in the register screen. We designed a login to control all users and we can ban a short time or remove users that have some destructive activities such as spam, fake information, cheating, etc...



- **Register:** The user has to register before login. With this one, we can have information about users for further use. Email in the register has to be in format. We don't check email whether valid or not, we just check its format. Besides, two passwords have to be the same. If violating these restrictions, the system will notify errors.



REGISTER

myteam

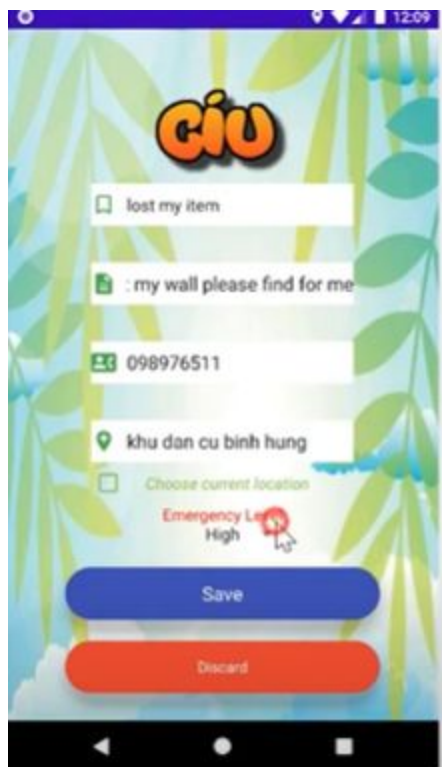
myteam@yahoo.com

Finish

Already had an account? Login here.

The image shows a mobile app registration screen. At the top, the word 'REGISTER' is written in a large, orange, bubbly font. Below it are four input fields: a username field with 'myteam', an email field with 'myteam@yahoo.com', a password field with a rainbow circular icon and six asterisks, and a confirm password field with six asterisks. A green 'Finish' button is at the bottom, with a link 'Already had an account? Login here.' below it. The status bar at the top shows the time as 12:08.

- **Create request:** Users can create many requests. The request must include the description of the problem, phone number and location.



Ciu

lost my item

: my wall please find for me

098976511

khu dân cư bình hưng

Choose current location

Emergency Level High

Save

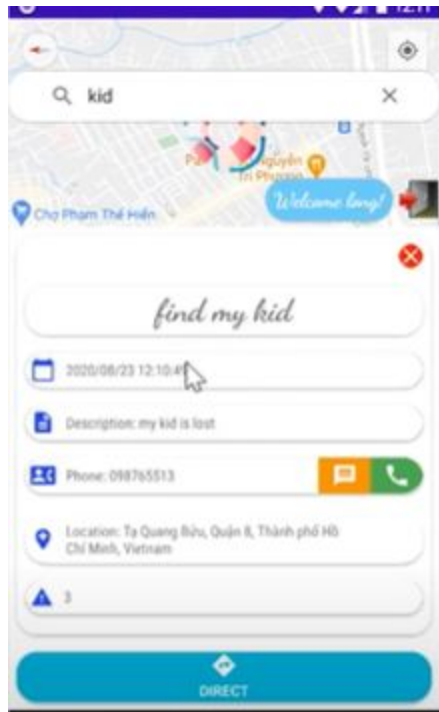
Discard

The image shows a mobile app screen for creating a request. The background has a green leaf pattern. At the top, the word 'Ciu' is in a large, orange, bubbly font. Below it are four input fields: a text field with 'lost my item', a text field with ': my wall please find for me', a text field with the phone number '098976511', and a text field with the location 'khu dân cư bình hưng'. Below these fields is a green button labeled 'Choose current location'. At the bottom, there is a red button labeled 'Emergency Level High' and two buttons, 'Save' (blue) and 'Discard' (orange). The status bar at the top shows the time as 12:09.

- **View request:** The user can see that the help request shown on the map is a triangular icon (marker) colored according to the severity of the condition that the person placing it is facing. When clicking on each marker, users can see detailed location information, content to help, contact information and a number of other functions built into each marker.

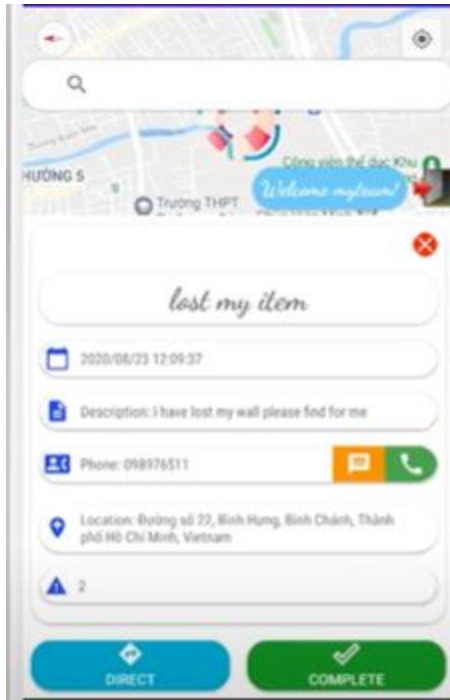


- **Find request:** When there are too many requests required, finding the right request to help will be very difficult, so we integrate a marker search function based on the name of the request and sort the requests based on severity. first and get the first. In addition, when the result is returned, rotate the camera on the map to immediately the marker returned so that the user can communicate with the patient more easily.

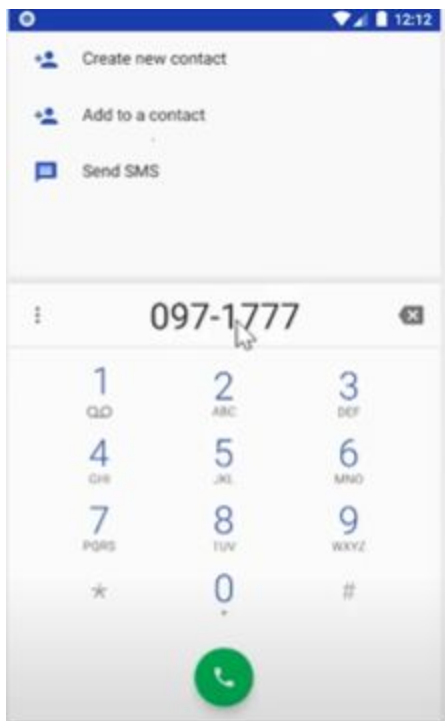


- **Get direction:** When selecting a marker, the user can select Get Direction so that they can see the path from the current position to the marker placement. This function makes helping a lot more convenient, especially in places with complicated roads like Ho Chi Minh City and Hanoi.





- **Phone call/SMS:** This is also a function when pressing the marker similar to the directions function, when pressing the call or sms function, the user can call or text the marker to get more information to help.



- **Update request real time:** Since we use the database to store markers as well as accounts, everything can be said to be updated fast in real time.
- **Notification:** The function of reporting newly created requests at the location closest to the current location of users
- **Complete Request:** To show that the request is solved and it will be removed from the map. The important thing is that only the user who created the request, can complete the request.



3. Technology

- **Database:** We use the database(firebase) to store accounts as well as user requests (markers) to update information in real time. Also, using the database helps
- **Google Map API:** We use the google map API to place markers, get directions and generate camera zoom effects against markers. Besides, using google maps to search based on address is very effective and accurate. And what's special about it is that it updates from time to time.
- **UI design:** Full featured, user-friendly, easy to use

4. Demo(Video):

<https://drive.google.com/file/d/1nJazRwLETqdhpFCuBZpDnatZ6UPD00ZU/view?fbclid=IwAR2KNyd5ijupnCRA-1oZwlSedx3NlyFIUkEqA3TSfNeTWkSm2z3nLNzfNpw>