

Application Development for Mobile Devices

Report



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Introduction

In this paper I will design an app to help users enter the station then evaluate them based on the station's criteria kinds of facilities that station there. in this application users can search with station name and they could see the station share information with the assessment and therefore the comparison between the station together. The application also allows the use of positioning to help locate the user does not know.

Section 1. Table of features of the application and execute

Feature	Implementation
Enter the station	Fully implemented
Add Review of Station	Fully implemented
View Review detail of Station	Fully implemented
Search, delete and update Station	Fully implemented
Delete and update review	Fully implemented
Get location auto and add photo of station in data	Not fully implemented

Section 2. A concise list of any bugs and/or weaknesses in App.

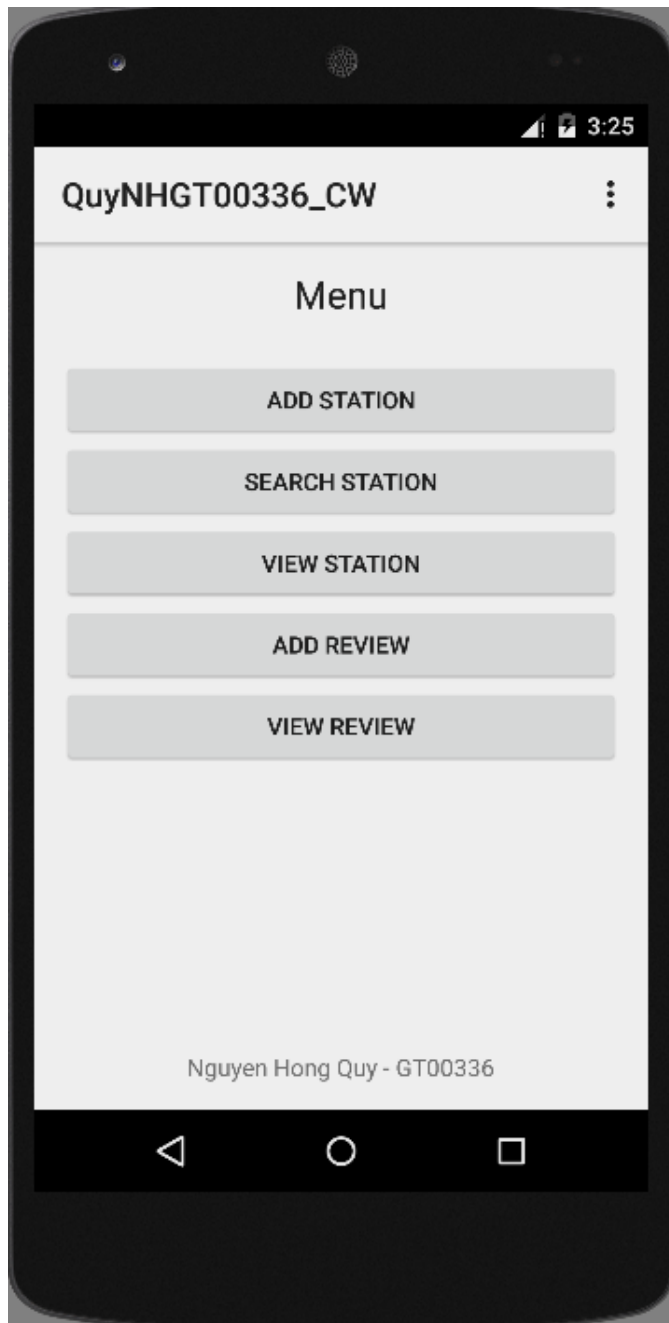
Weaknesses in my application are:

- Add review function for the station has not really perfect because users can still add the review to a service attribute does not have in that station.
- App often automatically exit the application or stopped suddenly because code not standardized and catch exceptions not fully.
- Weaknesses in the application interface: the interface simple yet not beautiful and display data are yet consistent.
- The function is ineffective, slow speed

Section 3.

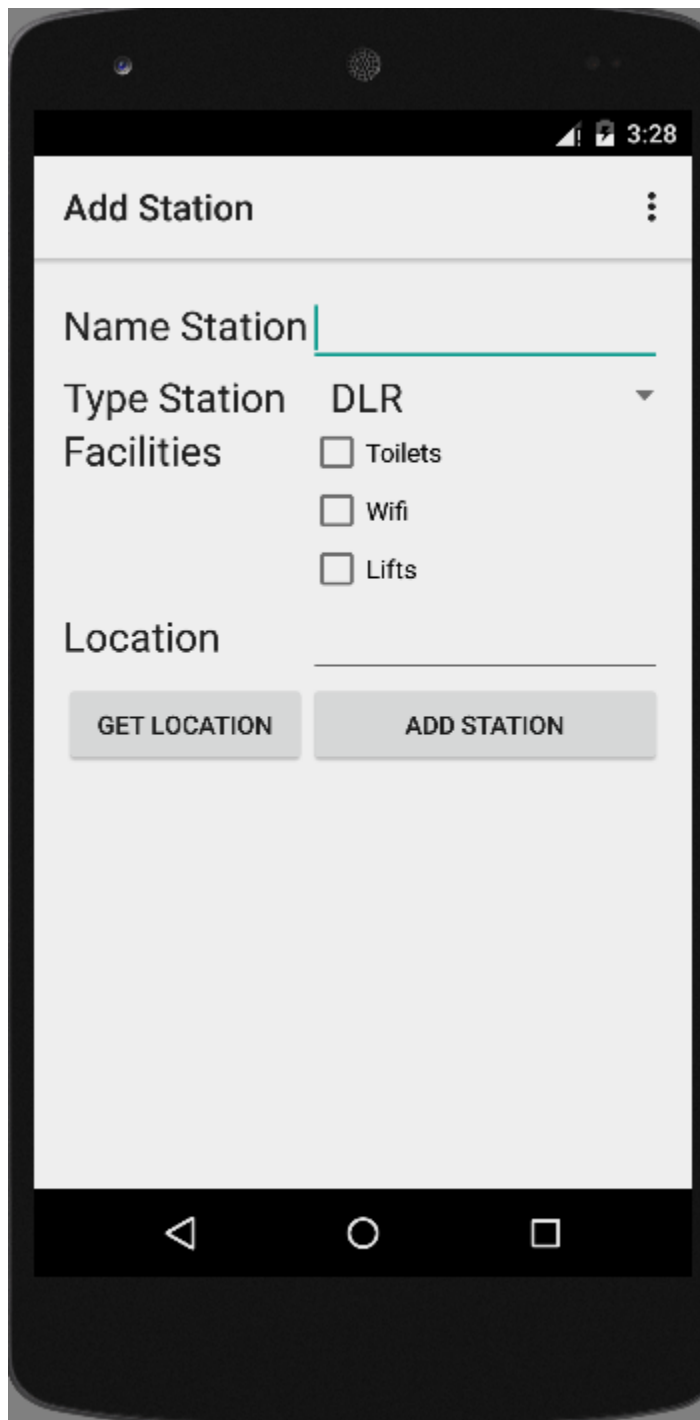
The strength of the application is for users with the most intuitive view of a station with an assessment of the facilities and services of the station, users simply search and then click on the station they want to see can see detailed evaluation of this station directly below the station list, showing how this can help users compare between multiple station evaluated together with ease. the details of the assessment are shown with name, date of assessment, content evaluation and assessment with the stars from one to five, with the way this show can help users recognize military officials about details the evaluation through the display of star rating.

Section 4. Screen shots demonstrating each of the features that i have implemented.



Images 1.1: Home App

Home page application will perform the functions of the application buttons, users can interact with their button corresponding to the function they wanted.



The screenshot shows a mobile application interface for adding a new station. The title bar at the top is labeled "Add Station" and includes a three-dot menu icon on the right. The status bar at the very top shows a signal strength indicator, a battery icon, and the time "3:28".

The main form area contains the following elements:

- A text input field labeled "Name Station" with a blue cursor.
- A dropdown menu labeled "Type Station" with "DLR" selected.
- A section labeled "Facilities" containing three checkboxes:
 - ☐ Toilets
 - ☐ Wifi
 - ☐ Lifts
- A text input field labeled "Location".

At the bottom of the form are two buttons: "GET LOCATION" and "ADD STATION". The "ADD STATION" button is highlighted with a darker background. The bottom of the screen shows the standard Android navigation bar with back, home, and recent apps icons.

Images 1.2: Add Station

When users select the add button next station will forward the application to the user screen data entry to add a new station, here the user can use the function

automatically get location to retrieve the current location as the location of station by pressing the button the get location.

Station Type have 3 properties is : Underground, National Rail, DLR.

Type of facilities have 3 properties is : wifi, toilets, lifts.

The screenshot shows a mobile application interface for adding a station. The title bar at the top says "Add Station" with a three-dot menu icon on the right. The status bar at the very top shows "3G", a battery icon, and the time "3:33".

The form contains the following fields and controls:

- Name Station:** A text input field that is currently empty. A red exclamation mark icon is positioned to its right, and a red tooltip bubble points to it with the text "Name must not empty!".
- Type Station:** A dropdown menu with "Underground" selected.
- Facilities:** A section with three checkboxes: "Toilets", "Wifi", and "Lifts". All three are currently unchecked.
- Location:** A text input field.

At the bottom of the form are two buttons: "GET LOCATION" and "ADD STATION".

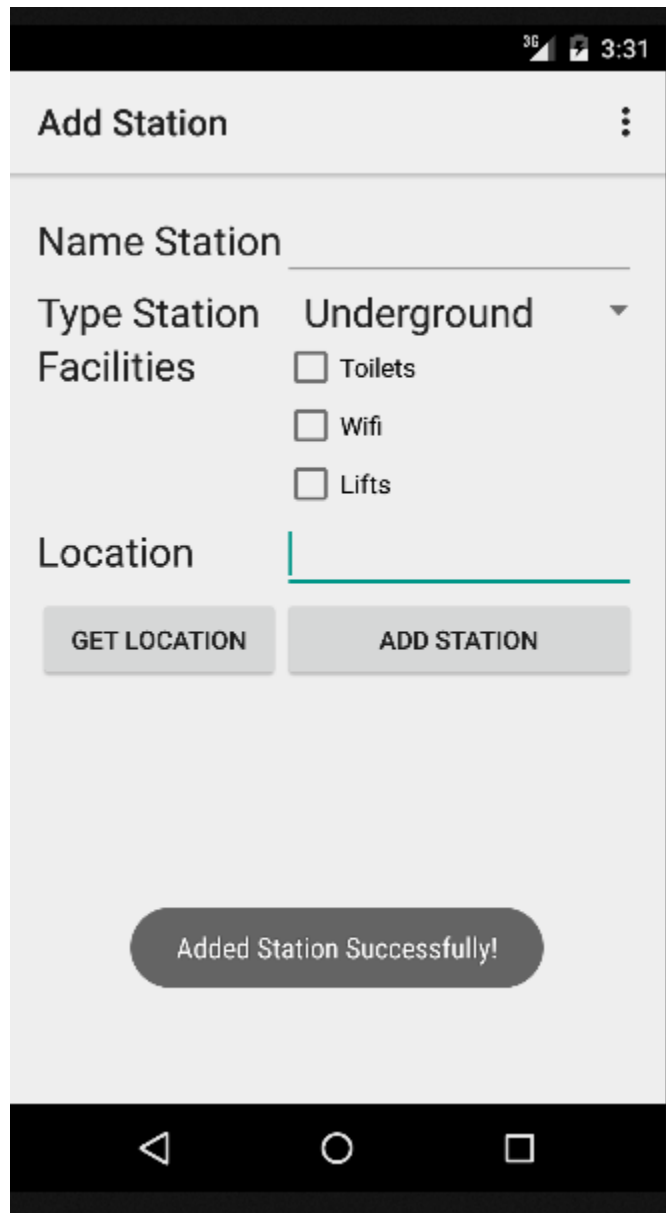
Below the form, there is a grey rounded rectangle containing an error message:

Error:
You need select Facility!

The bottom of the screen shows the standard Android navigation bar with back, home, and recent apps icons.

Images 1.3: Validate data input

Data will be validated when you enter, the required fields will be required to enter.



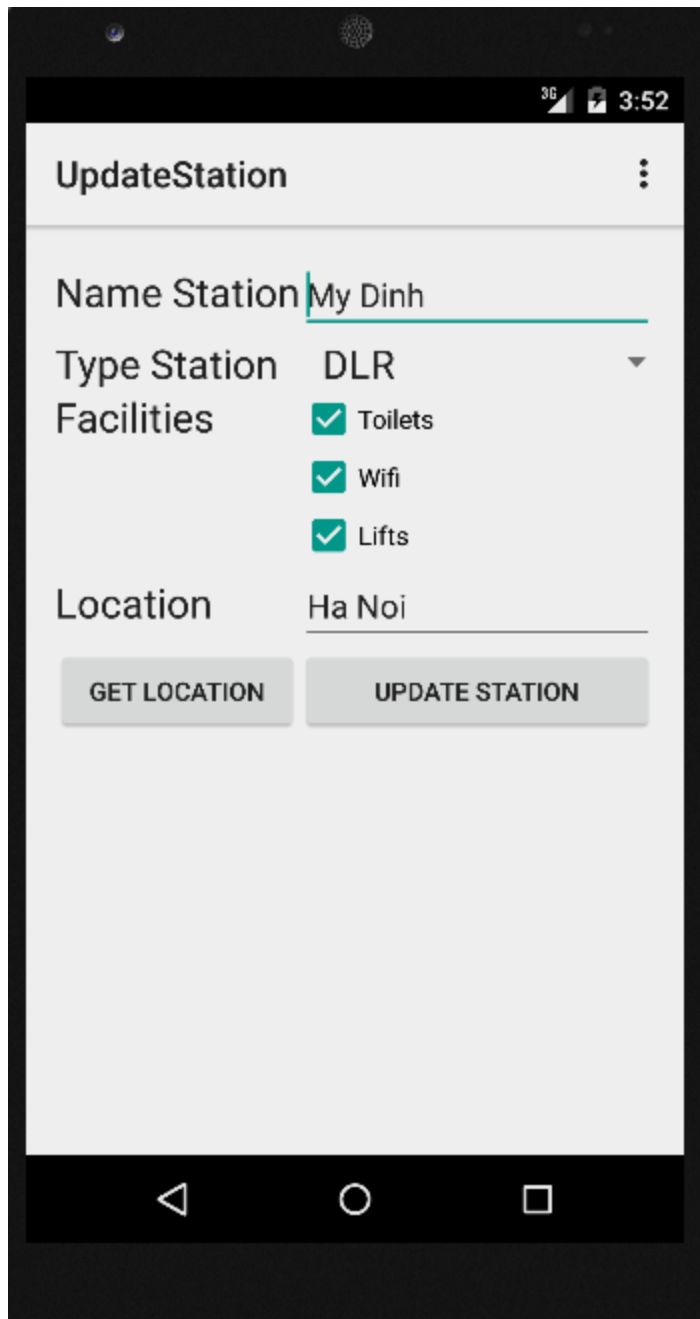
The screenshot shows a mobile application interface titled "Add Station". At the top, there is a status bar with "3G" and a battery icon, and a clock showing "3:31". Below the title bar, there is a form with the following fields and options:

- Name Station**: A text input field.
- Type Station**: A dropdown menu currently set to "Underground".
- Facilities**: Three checkboxes labeled "Toilets", "Wifi", and "Lifts", all of which are currently unchecked.
- Location**: A text input field with a red underline, indicating it is a required field.

Below the form, there are two buttons: "GET LOCATION" and "ADD STATION". At the bottom of the screen, there is a dark grey rounded rectangle containing the text "Added Station Successfully!". The bottom of the screen shows the standard Android navigation bar with back, home, and recent apps icons.

Images 1.4: Add station successfully!

When users add their success station will receive a message "Add station successfully!"



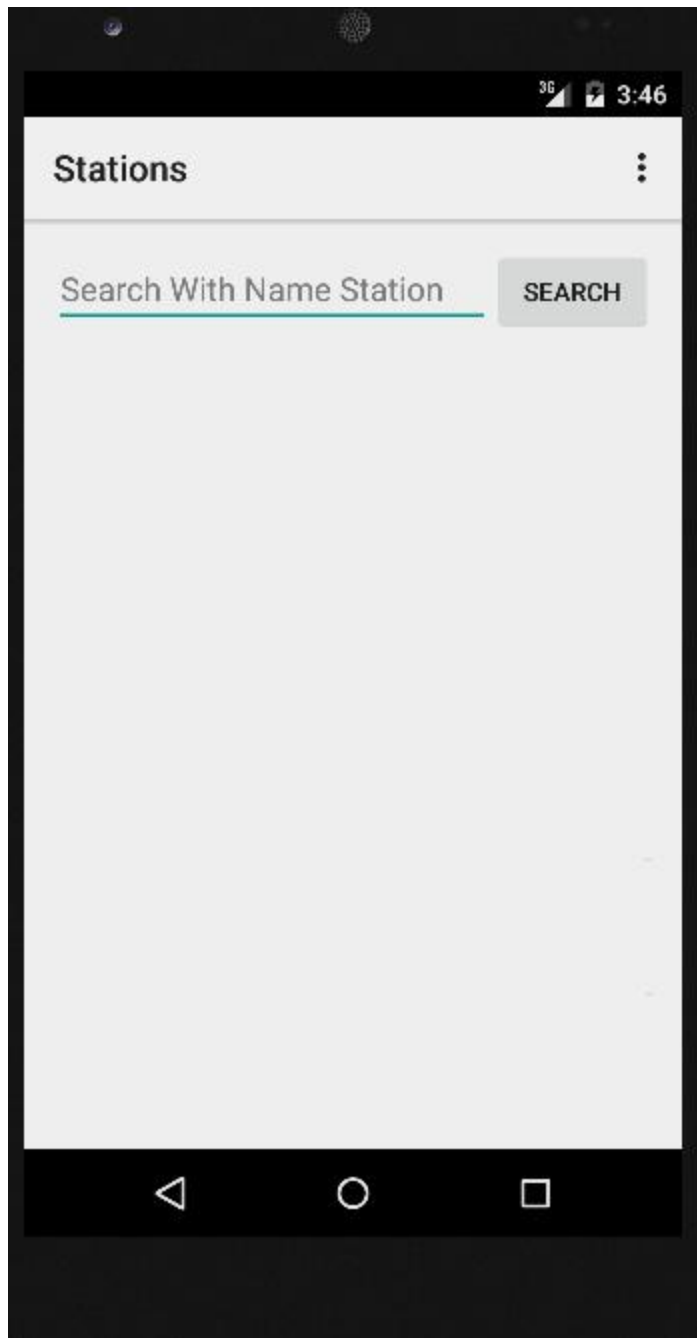
The screenshot shows a mobile application interface titled "UpdateStation". At the top, there is a status bar with "3G" signal, a battery icon, and the time "3:52". Below the title bar, the form contains the following fields and controls:

- Name Station:** A text input field containing "My Dinh".
- Type Station:** A dropdown menu currently showing "DLR".
- Facilities:** A list of three items, each with a checked checkbox:
 - ☒ Toilets
 - ☒ Wifi
 - ☒ Lifts
- Location:** A text input field containing "Ha Noi".

At the bottom of the form, there are two buttons: "GET LOCATION" and "UPDATE STATION". The entire interface is set against a light gray background with a dark header and footer.

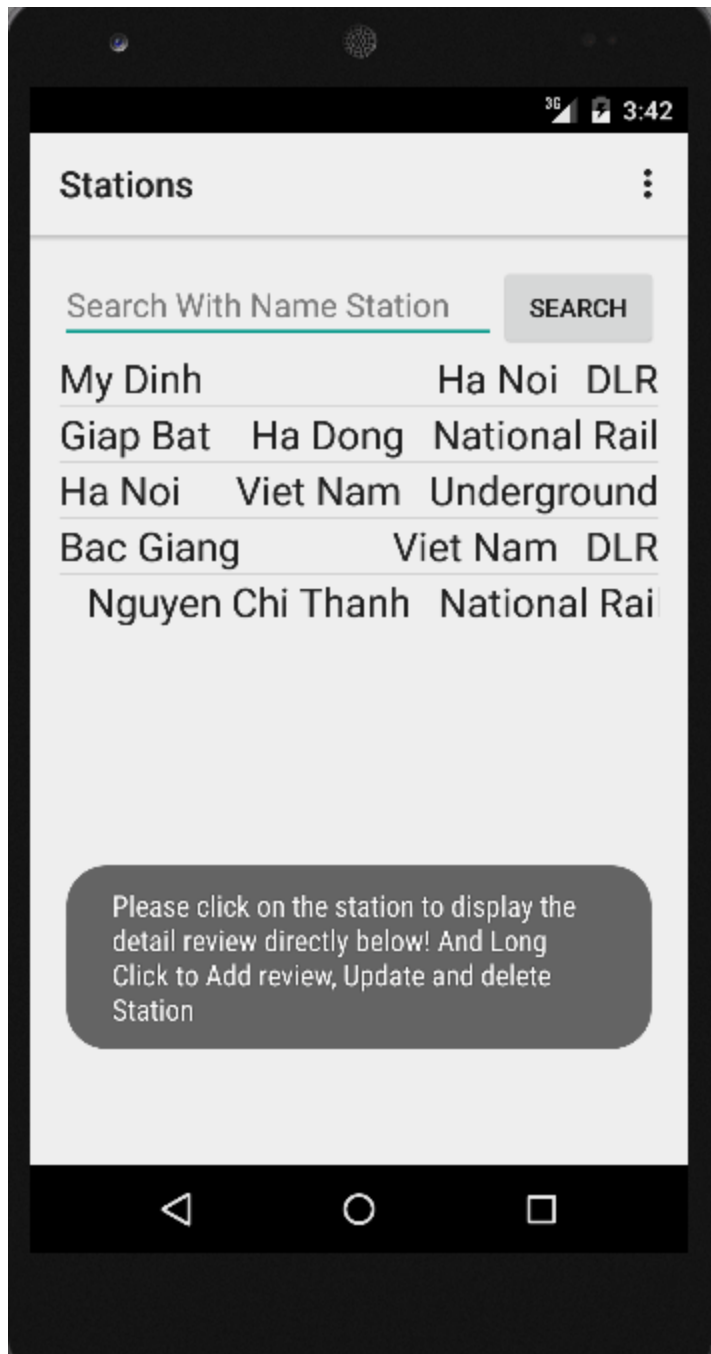
Images 1.5: Update station

Users can update the information of station



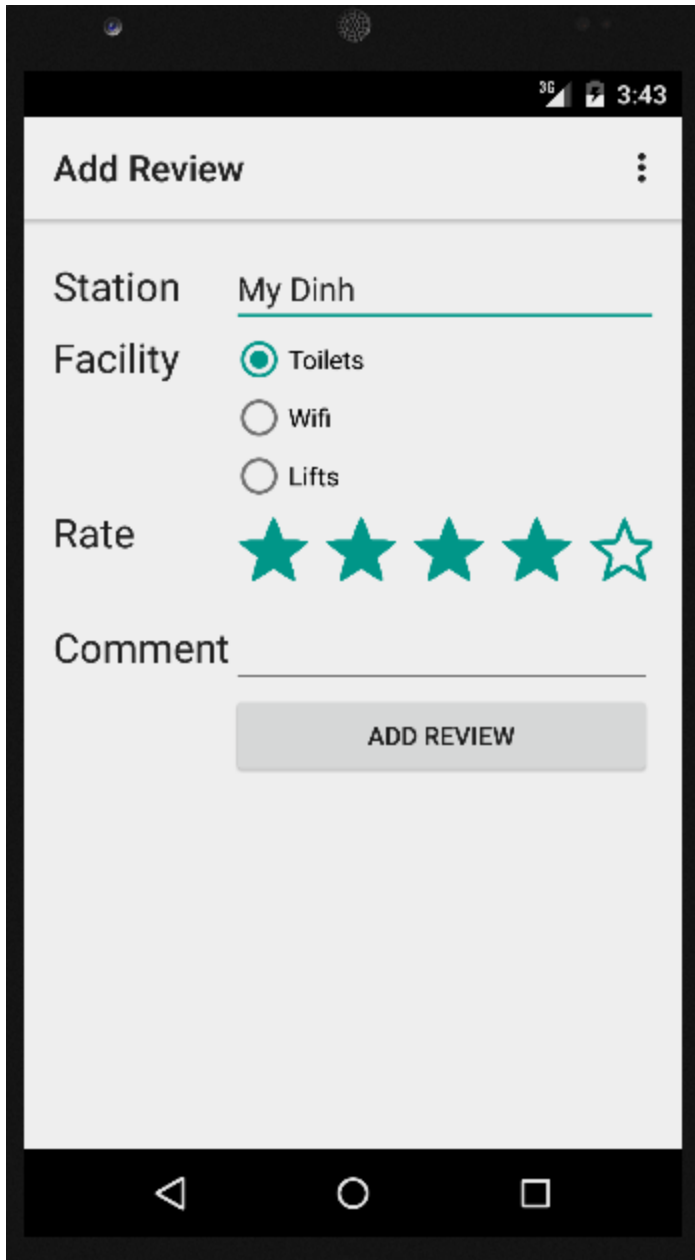
Images 1.6: Search station with name

Users can Search station with name station



Images 1.7: List Station

Station list is displayed and announced to help users learn and using applications.

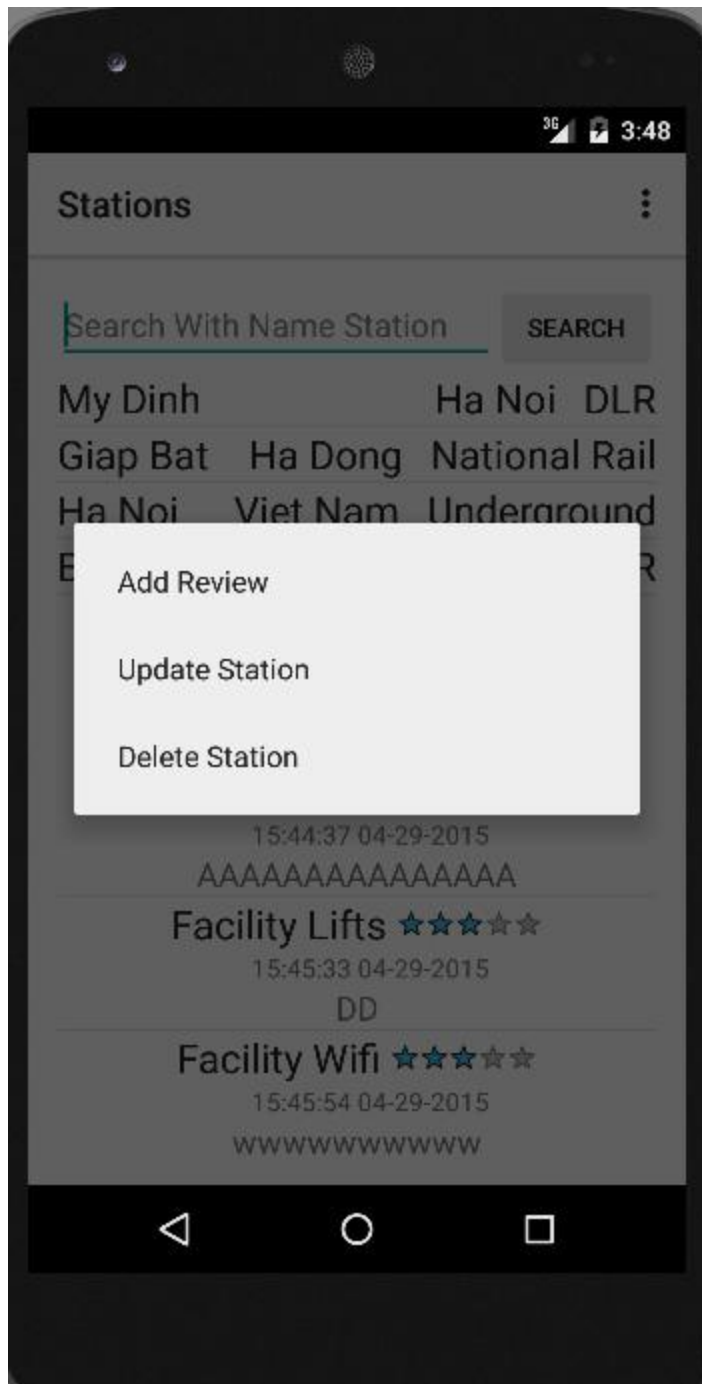


The screenshot shows a mobile application interface for adding a review. At the top, the status bar displays '3G', a battery icon, and the time '3:43'. The app's title bar is 'Add Review' with a three-dot menu icon on the right. The form consists of several sections: 'Station' with a text input field containing 'My Dinh'; 'Facility' with three radio button options: 'Toilets' (selected), 'Wifi', and 'Lifts'; 'Rate' with a five-star rating system where the first four stars are filled and the fifth is empty; and 'Comment' with a text input field. Below the comment field is a grey button labeled 'ADD REVIEW'. The bottom of the screen shows the standard Android navigation bar with back, home, and recent apps icons.

Images 1.8: Add review of station

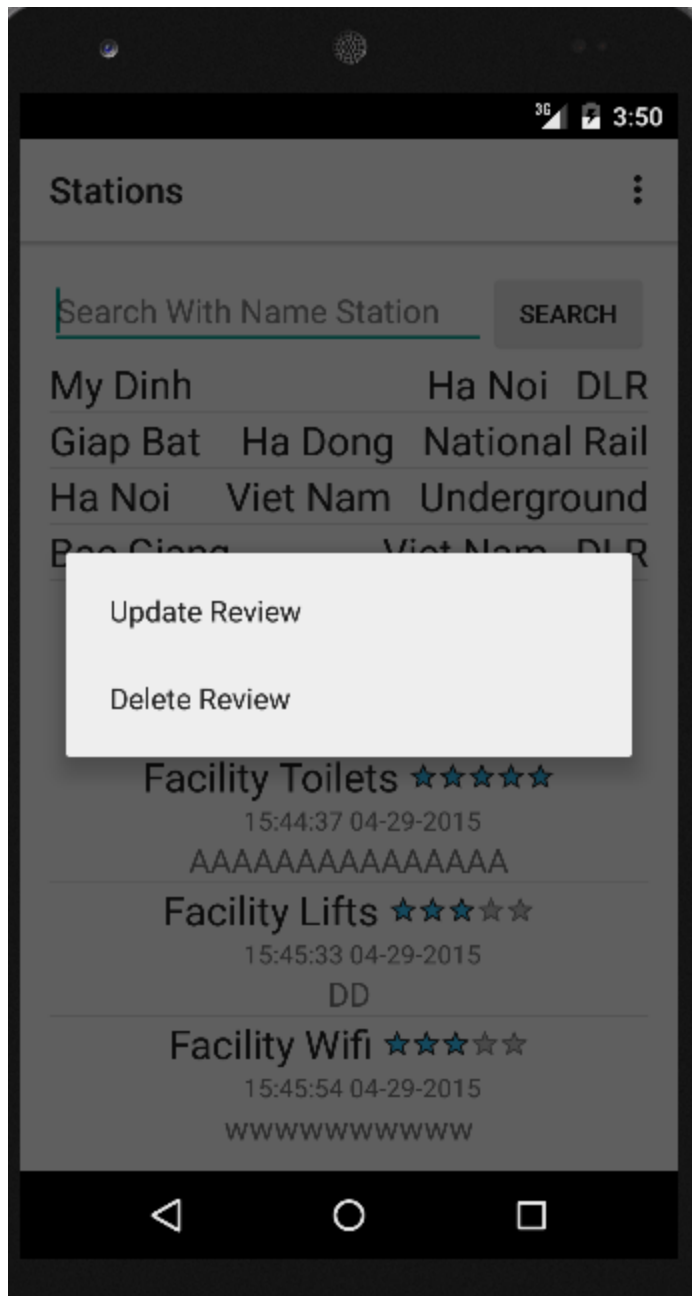
Users can choose to evaluate station with stars and comment

every once rated users can only add 1 assessment for a facility



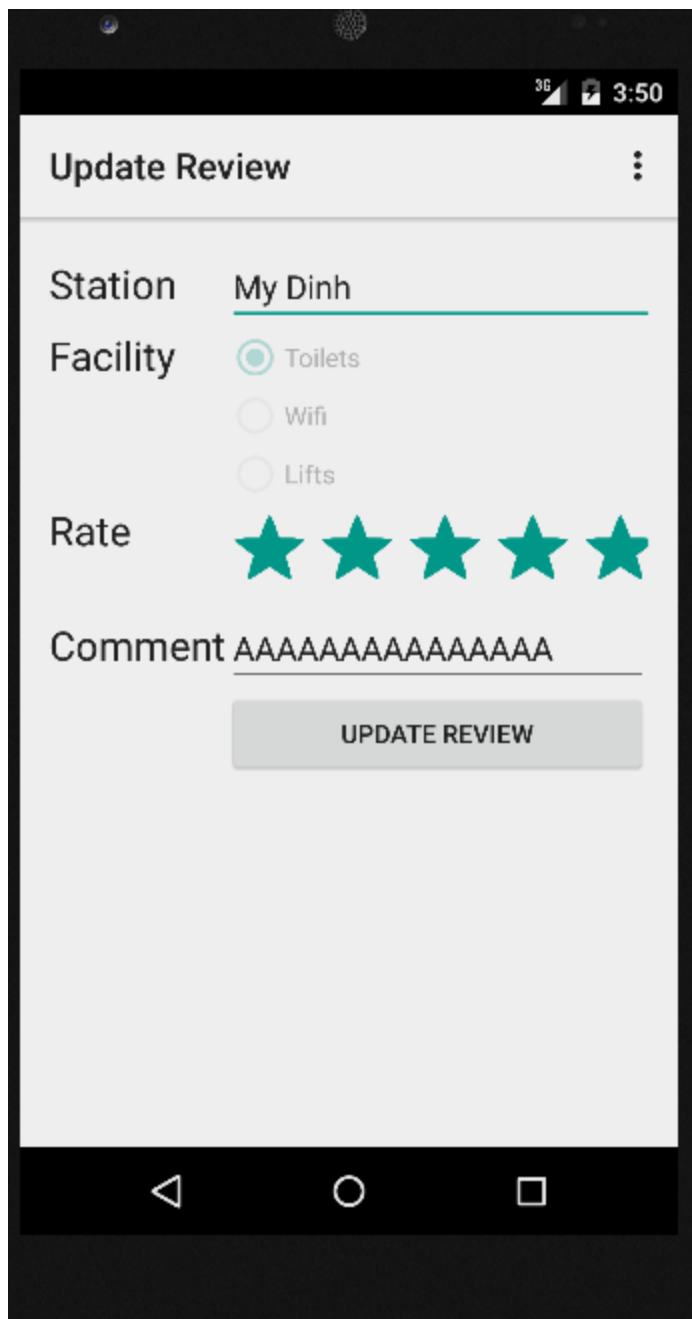
Images 1.9: Menu Options when long click item Station

Users can select the function when dragon click on the list item station station.



Images 2.1: Menu options of review

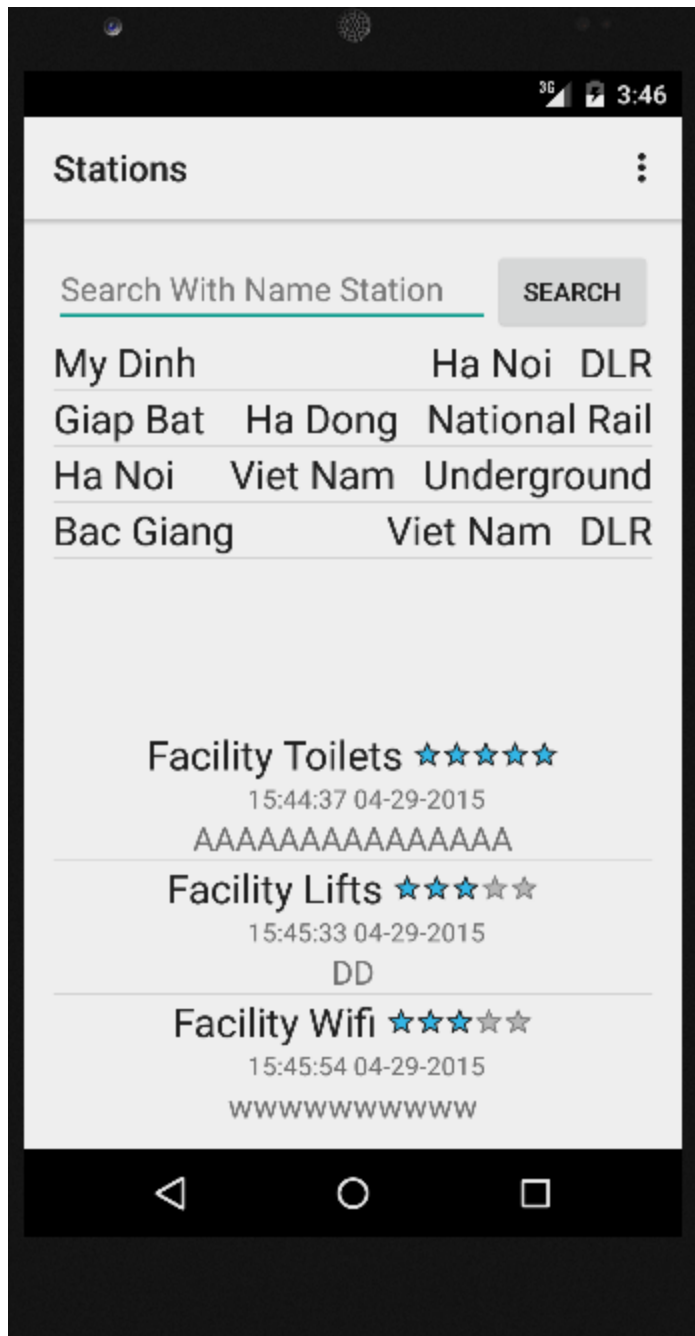
Users can update or delete the dragon click on a specific review of station



The screenshot shows a mobile application interface for updating a review. At the top, the status bar displays '3G', a battery icon, and the time '3:50'. The app's header is 'Update Review' with a three-dot menu icon on the right. Below the header, the 'Station' is set to 'My Dinh'. The 'Facility' section has three radio button options: 'Toilets' (selected), 'Wifi', and 'Lifts'. The 'Rate' is displayed as five green stars. The 'Comment' field contains ten 'A' characters. At the bottom, there is a grey button labeled 'UPDATE REVIEW'. The entire interface is framed by a black border, and the bottom of the screen shows standard Android navigation icons.

Images 2.2: Update review

While the type of facility review update will hide not allow users to choose again for this update for a specific facility.



Images 2.3: View station and review with station

Users can view and review station on a site for comparison between the station

Section 5. Evaluation

Interface:

- Application have simple interface friendly, the main interface consists of the main function buttons, information on specific nodes and concise, user notifications are displayed as a pop-up screen messages shaped, with each function will have informed help users understand and interact more easily, easy interface to interact with the functionality, the user primarily uses the dragon clicks and click to use the functions, interfaces and station information display detailed review and understand. search function arranged at the beginning to help users search for the station that interests you.

Functional:

- Application has almost completed all the functionality with additional features such station, more reviews, edits and reviews as well as delete station. the basic functions are working well, the data entered will be checked and communicated to the user for each function, such as a station with additional functions when the user does not enter a name they will get the message right hence their name and interact with the application easier.

Advanced functions of the system are being finalized, due to a number of reasons so that functionality is not complete and put into operation.

Search function by name of station operating in accordance with set targets users enter letters contained in the name search is to search the station, no need to lick the search button the data will be filtered and pay the results to the user always.

Human computer interaction:

- Today, with the development of computer and network entertainment needs of users growing besides applications are also developed more. however the current trend is shifting applications for mobile devices with the number of smart phones is increasing and the needs of users of

interactive entertainment and work right on your phone is very high. However, to meet the needs that are not necessarily easy when the first thing a developer must mention is that the interaction between the user and the mobile device or computer, this interaction effectively or not depends largely on the research and design of the application interface, so in this application have designed a simple interface, easy to interact with buttons that users can understand and use at first use when they use applications, the buttons are arranged according to its function eg additional functions must precede functional display, edit or delete.

Security

- Security is a very important issue in each software or application, once completed or application software must ensure the confidentiality and security standards respectively, in this exercise I have organizing interactive classes with the entity data and layout displays with interactive classes together to ensure security, data is stored with the data tables that tie, however the security methods nor necessary for a specific application and open with this application is the application of quality assessment is an application station for the social community should demand data security at normal levels, with applications This application will have to upgrade to the high-level security such as encryption account only for logged in users can interact with the application ..

Conclusions and future enhancement.

- Through this project, I learned a lot of experience helped me develop future projects and it helps me study better android OS. This project was completed according to the set but still many deficiencies. I will overcome and perfected it in the next steps of the project later.
- Thank Mr. Pham Van Vung helped me complete this project as well as the teacher has taught me to have knowledge of complete the project.