UNIVERSITY of GREENWICH

COMP1786 - Application Development for Mobile Devices

Coursework 1

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Introduction.

I-Rating application is designed and developed with features that allow users to rate restaurants.

1. Table Feature of application.

The Restaurant-Rating application and android native application has been implemented successfully with the following features implemented.

No.	Feature	Implementation
1	a) Design input screen.	Fully implemented.
2	b) Design I-Rating screen.	Fully implemented.
3	c) Validation input screen.	Fully implemented.
4	d) Design dispaly screen for database.	Fully implemented.
5	e) Search function	Fully implemented.
6	f) Add a note input screen	Fully implemented.
7	g) Native android app	Fully implemented.
8	h) Add additional features	Fully implemented.

Table 1 I-Rating feature.

2. Bug and weaknesses of application.

- I-Rating application

The I-Rating application is currently running without any errors. Because during the construction of the I-Rating app, the developer used the Jira app to track and manage the I-Rating app's bugs and problems. Jira makes it easy for developer to manage application bugs and crashes. Therefore, the project was completed on schedule and there was no error in using the application. The figure below demonstrates that the manager used Jira to manage bugs of the I-Rating application.

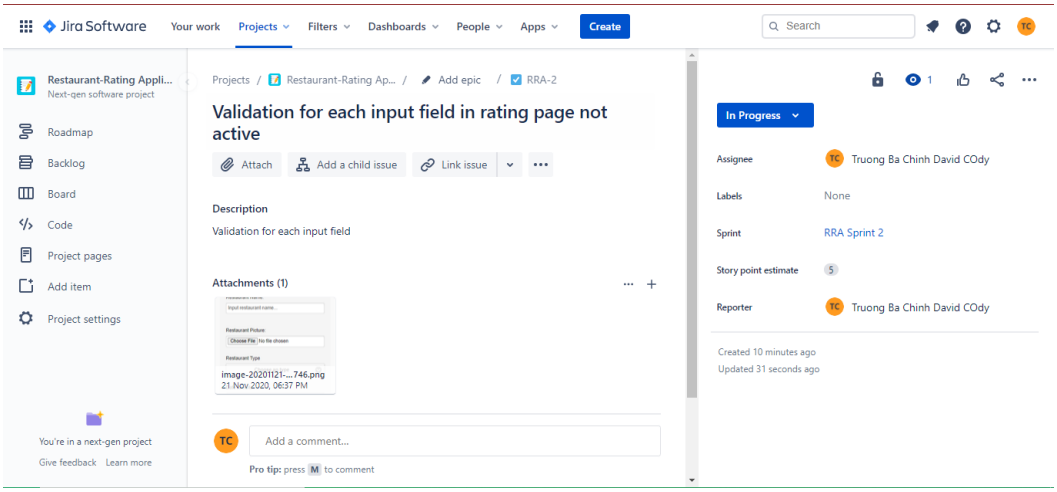


Figure 1 Create Bug.

However, the Rating Restaurant app has the following few weaknesses, But it doesn't take too much of an effect on the quality of the I-Rating app.

I-Rating App	Type Weakness	Weakness
Phone Gap application.	Source Code	• Source code is not really optimized. But it's still clear and easy to observe.
	Feature	• When users add too many restaurant reviews records. The I-Rating app takes some time to display them.
	High performance	• The speed of the application is not really fast when the user performs the application's features. • Pagination is not used yet in I-Rating Mobile application so when too many records are stored in “indexedDB”. It will affect the user experience.
Native android application – Details input screen	Feature	• Not many features for users to experience.

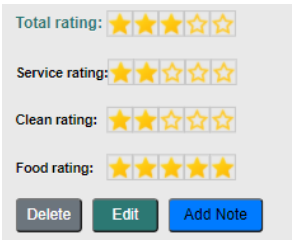
Table 2 Weakness of application.

3. Strength of I-Rating application.

Firstly, I-Rating application is designed with the main colors below figure to design for all pages. This makes the interface of the application always designed consistently. So the app looks clean, simple and structured.

Figure 2 Main color of application.

All features are made and designed with these colors (figure 2). The table below is the strength of the I-Rating application.

No.	Feature	Type Strength	Strength
1	**a) Design input screen.**	Interface	• The user can rate the restaurant by star rating.
	b) Design I-Rating screen.	Interface	• The display shows total rating of restaurant by Star imge with the rounded value. It makes the application look more professional. • The interface is designed to look eye-catching. Buttons such as (delete, edit, add note) are used to allow users to perform the functions right at this page. 

		Feature	• The collected data is numeric, and it is calculated using the “Math.round()” method to round the data before rendering it.
3	**c) Validation input screen.**	Feature	• Validation is displayed as soon as the user enters data in the input field. This ensures that the user has correctly entered all input fields before submitted rating restaurant.
4	**d) Design dispaly screen for database.**	Interface	• Users can view a list of all the restaurants in the app that completely delete and view restaurant details. 
		Feature	• Users can edit, delete and view restaurant details through clicking the delete, edit, detail buttons.
5	**e) Search function**	Interface	• Search results are displayed quickly as soon as the user enters search data into the search field.
		Feature	• User can search all records by search category such as restaurant name, restaurant type, restaurant total rating or reporter, etc.

6	**f) Add a note input screen**	Interface	• The interface of the notes is designed and setup at view I-Rating detail page(viewDetail.html). This makes it possible for users to see in detail all the reviews related to the restaurant.
		Feature	• Allows users to add more note data(includes: title, content, url) for a restaurant. • Allows the user to delete any notes that need to be deleted.
7	**g) Native android app**	Feature	• User can upload picture for restaurants. • The date and time are automatically updated based on location.
8	**h) Add additional features**	Features	• User can upload URL location of restaurant. • User can upload picture for restaurants and added to the restaurant data stored. • User can take picture from camera and add them to restaurant data stored. • User can update picture for restaurants.

Table 3 Strength of I-Rating application.

4. Screen shots Restaurant Application.

a) Design input screen and h) Adding additional features.

The input screen is designed with full of input fields. In addition, the input screen also has an additional photo upload field that allows users to upload restaurant photos.

The pictures bellow is input screen with describe.

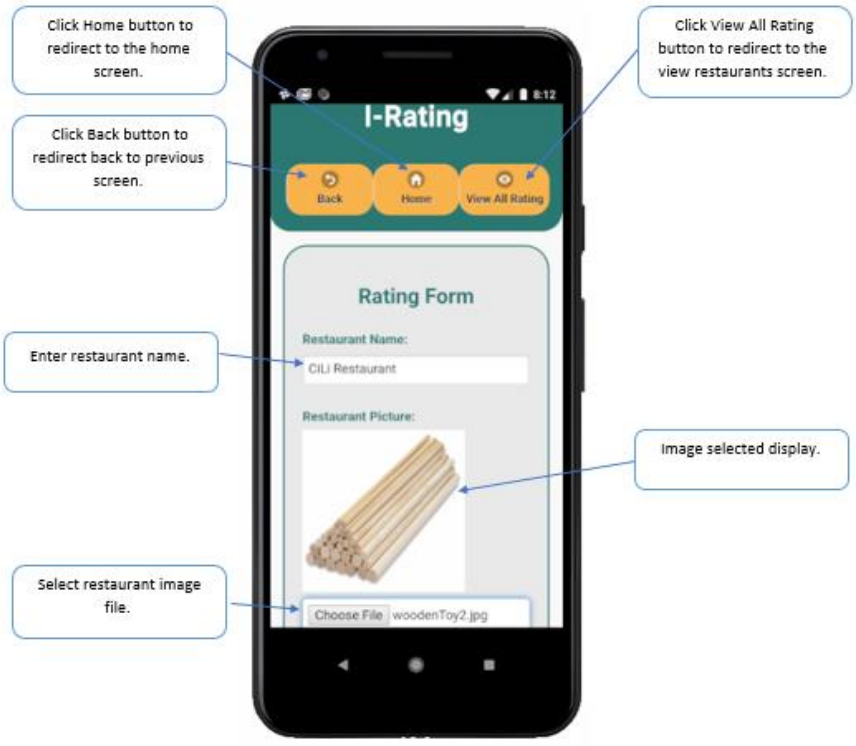


Figure 3 top screen of input.

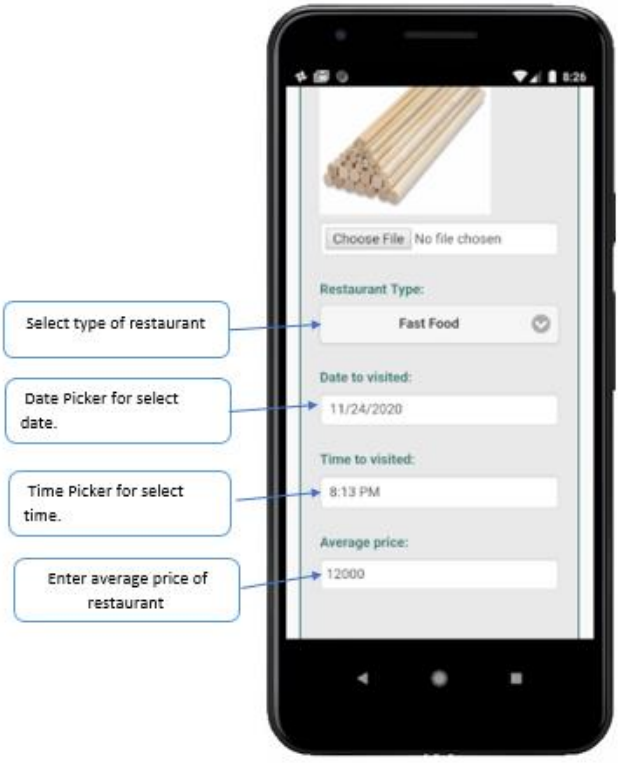


Figure 4 input middle screen.

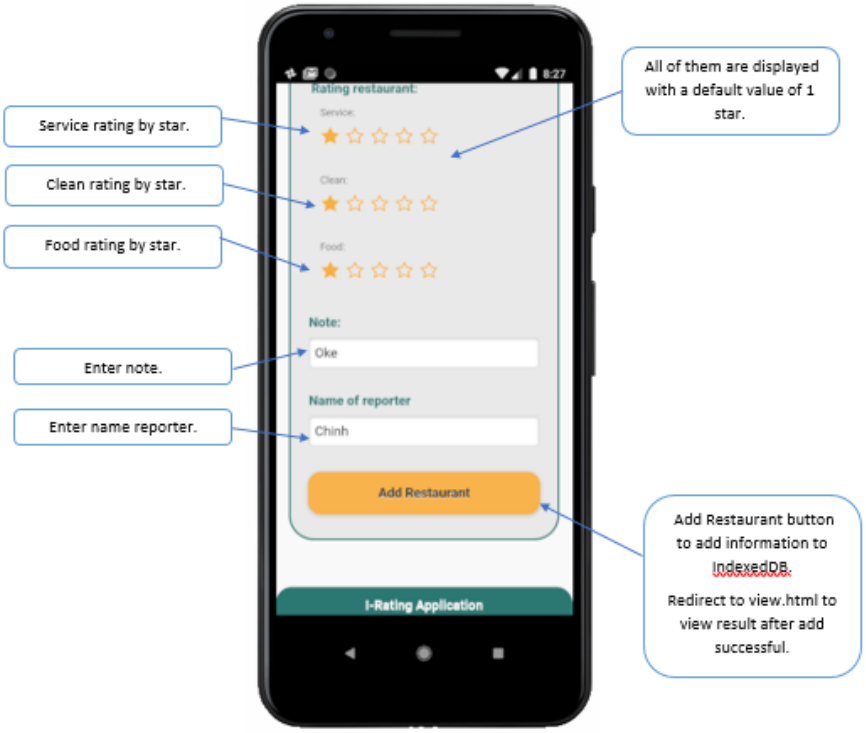


Figure 5 input bottom screen.

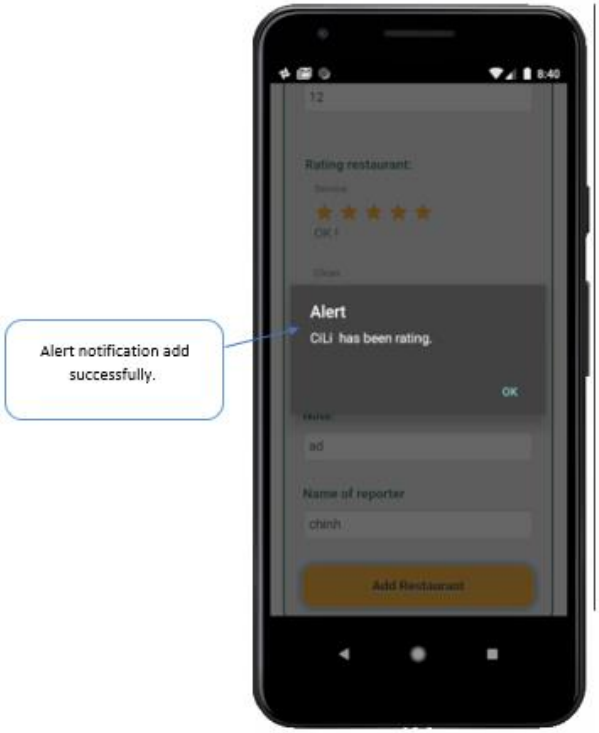


Figure 6 successful message input screen.

b) Design I-Rating screen and d) Design dispaly screen for database.

After successfully adding data, the I-Rating application will redirect to the view screen for users to see the restaurants they have added or user can redirect by using View All Rating button.

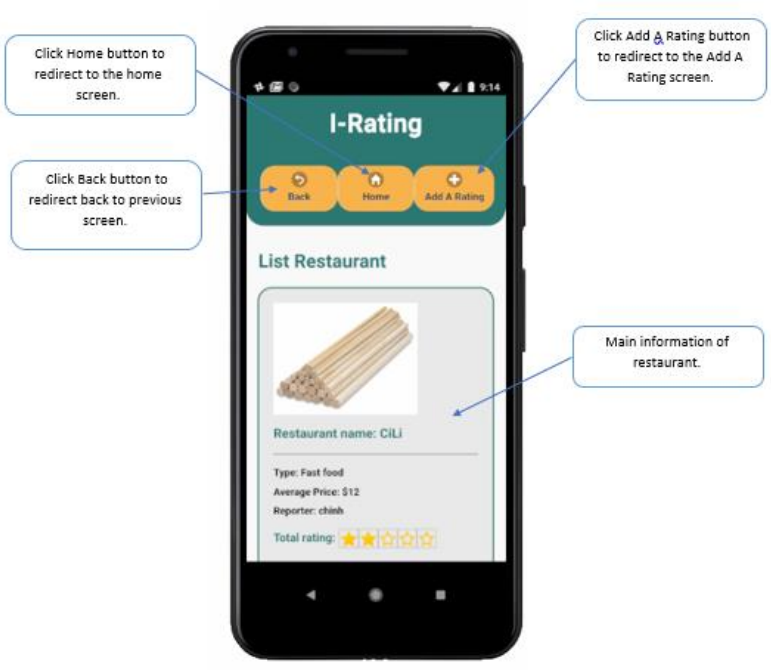


Figure 7 top screen of list restaurant view.

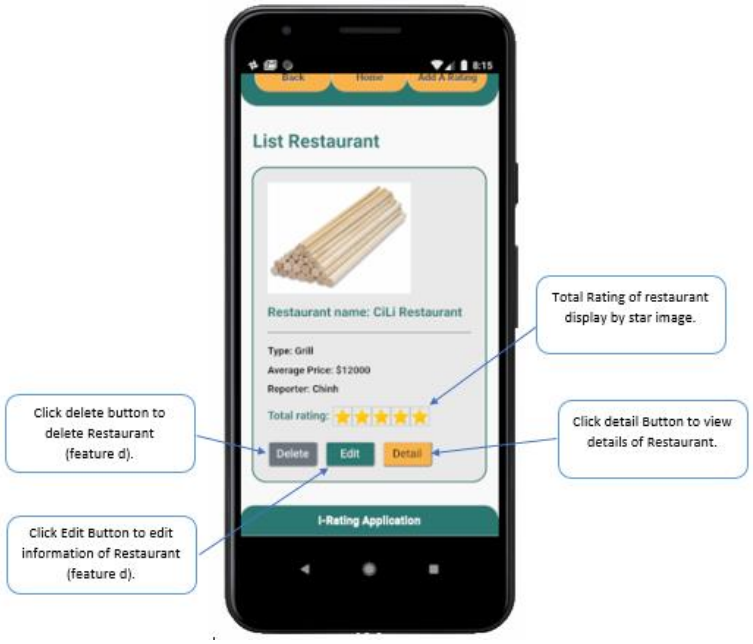


Figure 8 bottom screen of list view restaurants.

When the user click the Detail button, the I-Rating application will redirect to the restaurant details screen. The figure bellow is restaurant details screen.

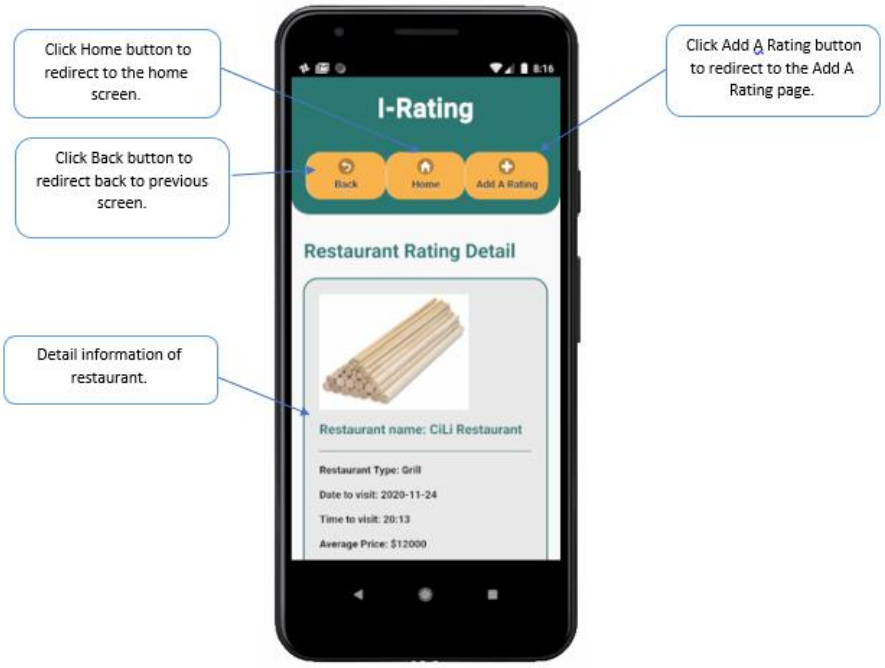


Figure 9 Top screen of restaurant detail screen.

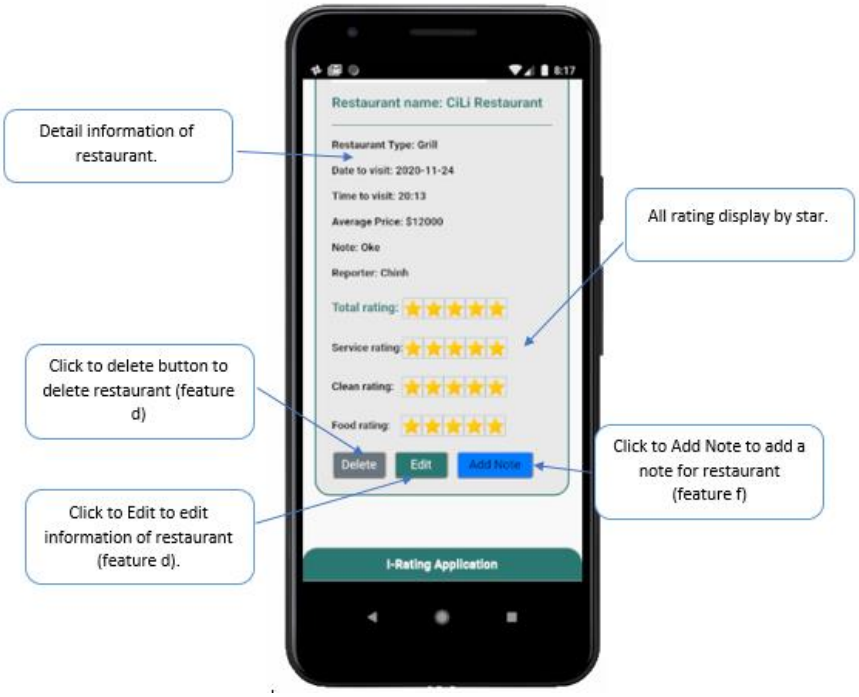


Figure 10 bottom screen of restaurant detail screen.

When the user click the Edit button, the I-Rating application will redirect to the restaurant edit restaurant screen with value of restaurant selected for edit. The figure bellow is edit restaurant screen.

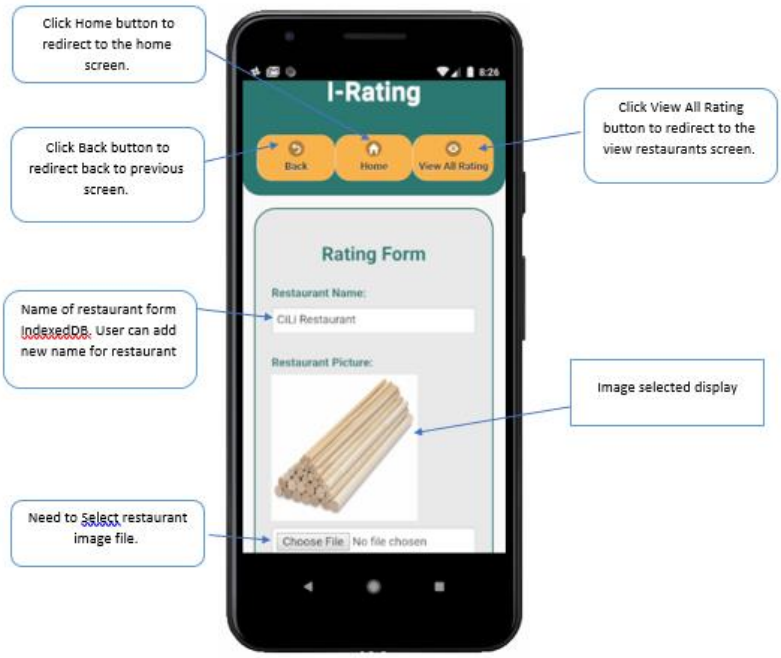


Figure 11 top screen of edit with data.

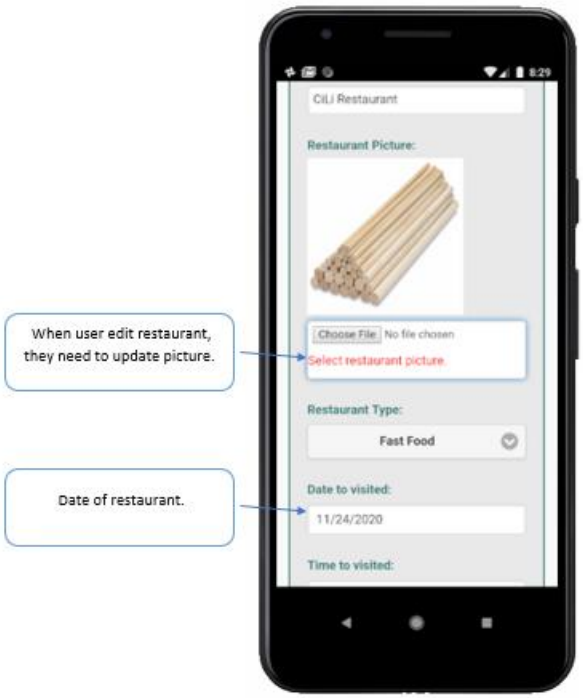


Figure 12 middle screen of edit with data.

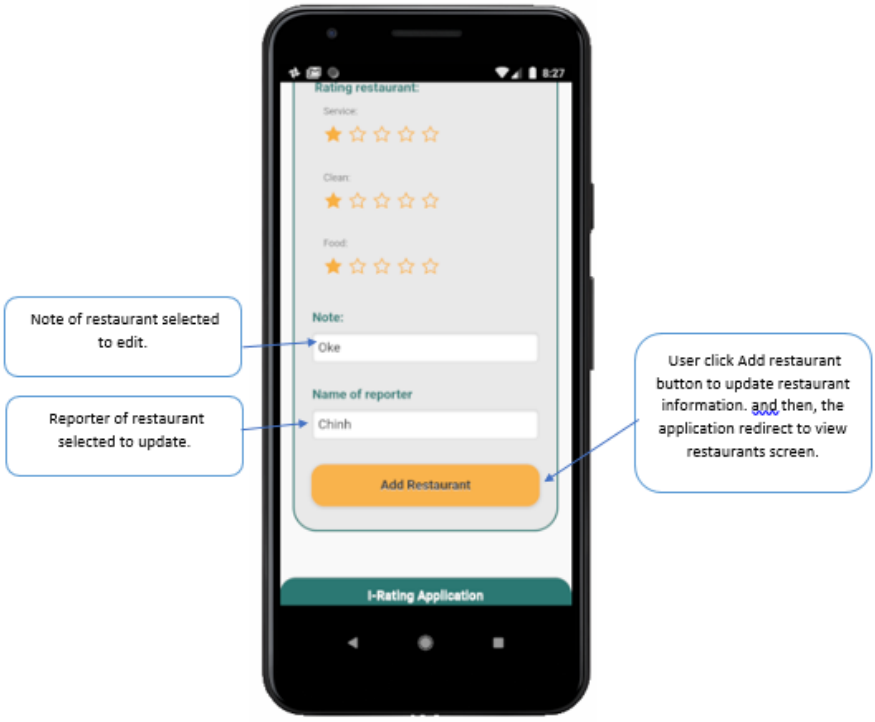


Figure 13 bottom screen of edit with data.

c) Validation input screen.

When users enter information in the fields they need to enter correctly according to the displayed request. When the user clicks the Add Restaurant button without entering enough validation information, it will display and guide the user to enter the information.

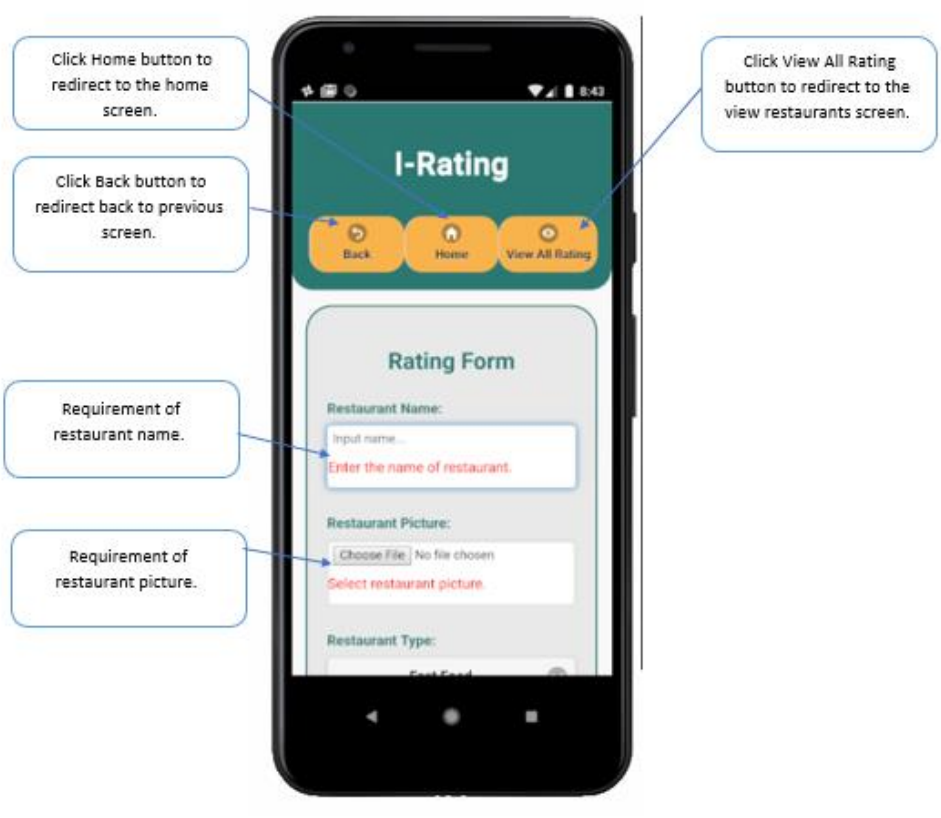


Figure 14 top screen of validation.

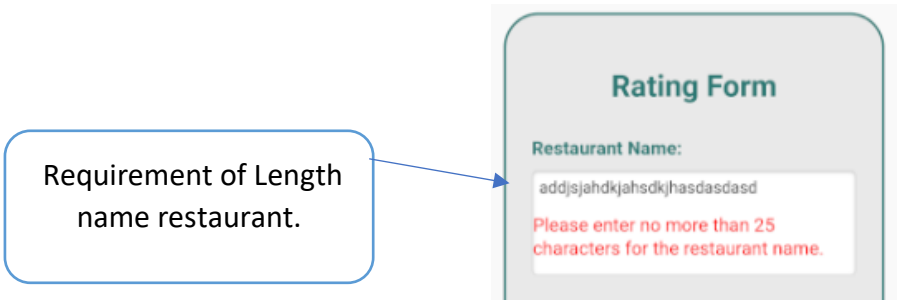


Figure 15 validation message for restaurant name field.

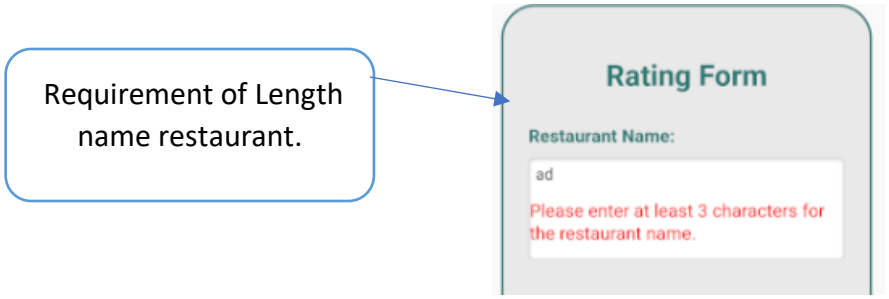


Figure 16 validation message for restaurant name field.

Figure 17 middle screen of validation.

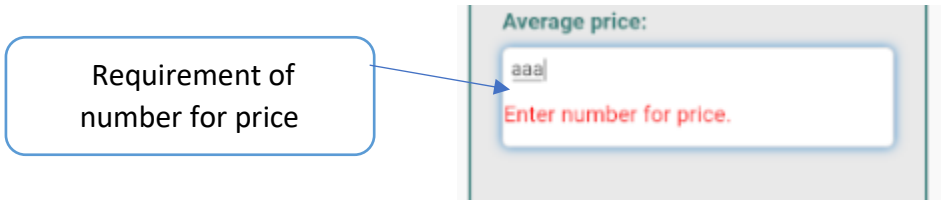


Figure 18 validate message of average price field.

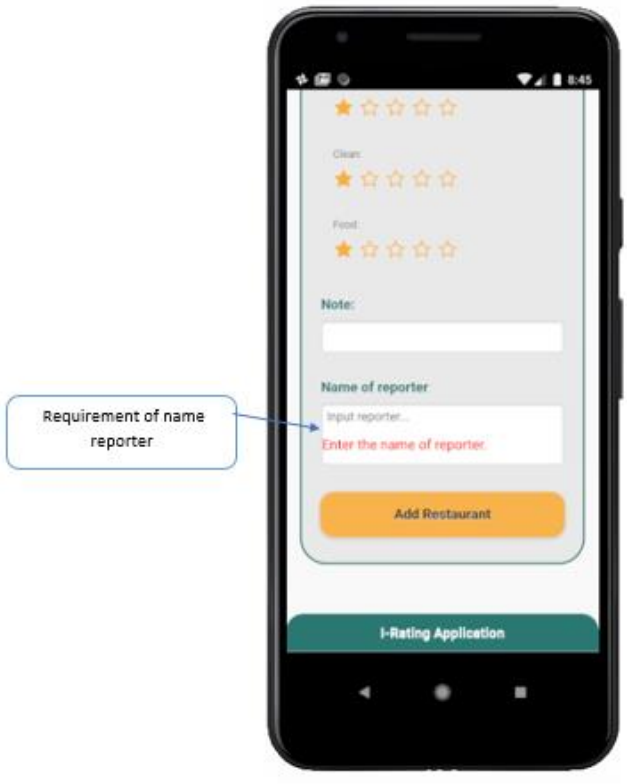


Figure 19 bottom screen of validate.

When user rate 5 star. It will display message("Ok !")

Figure 20 validation star screen.

e) Search function

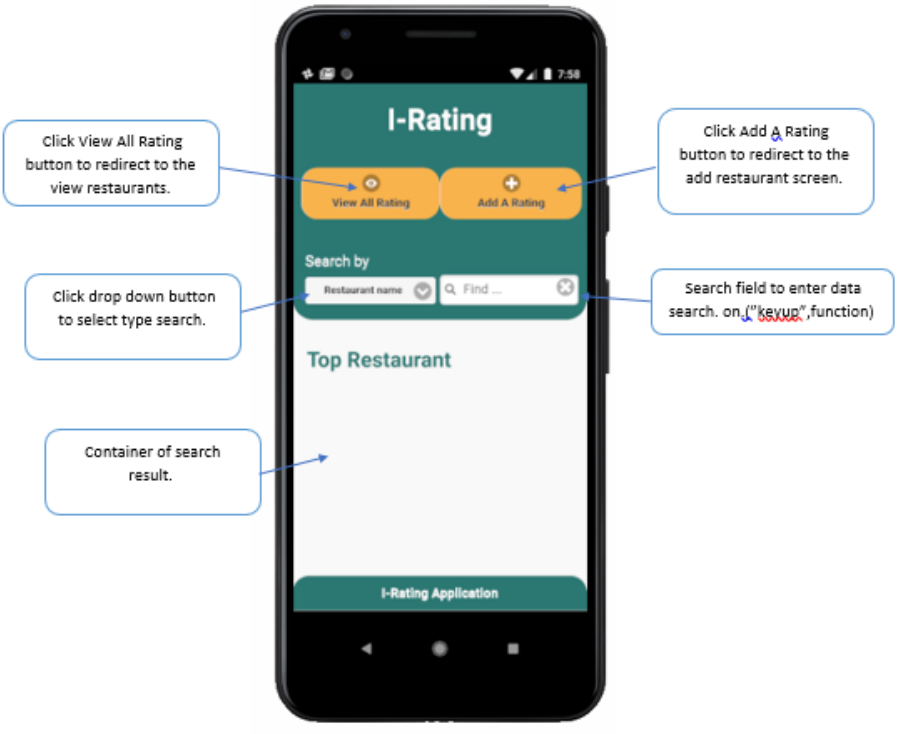


Figure 21 top screen of search.

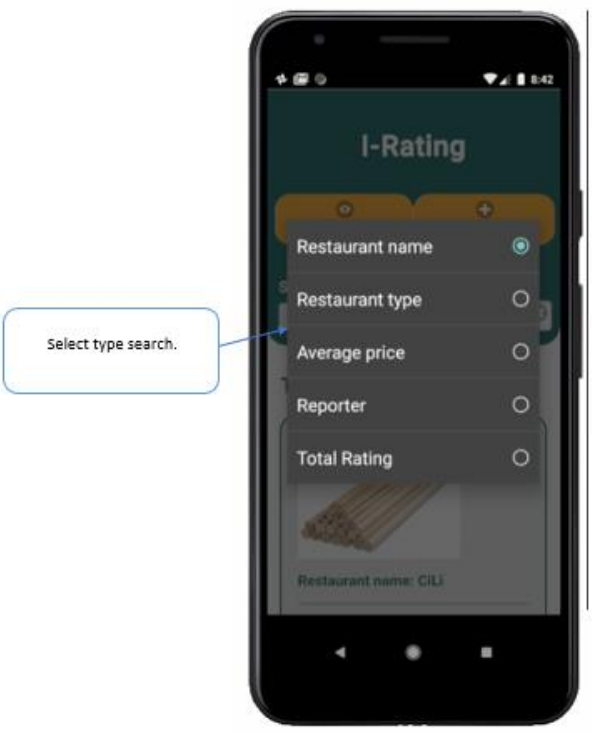


Figure 22 select type search.

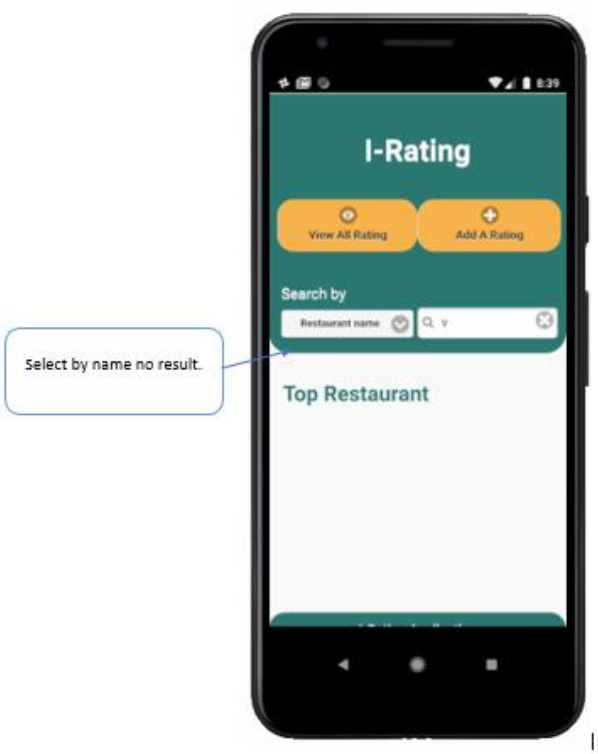


Figure 23 search by name lose.

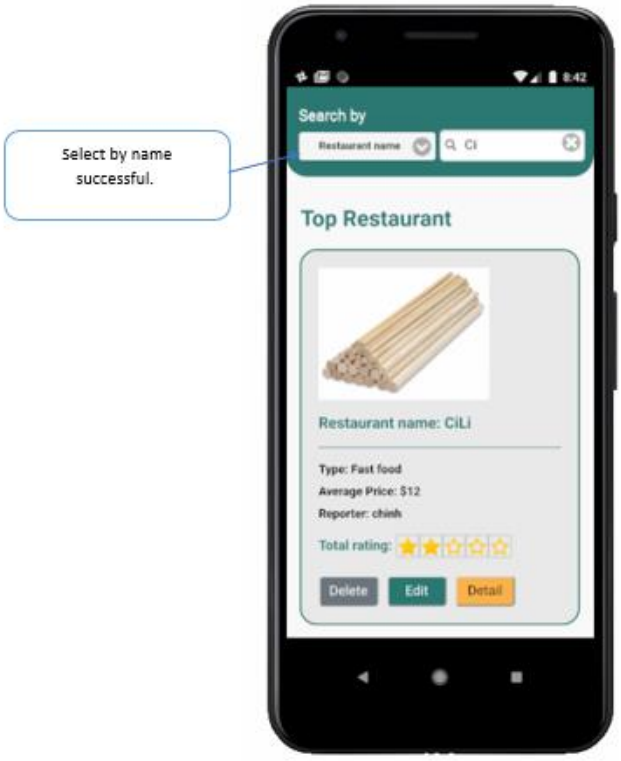


Figure 24 search by name screen.

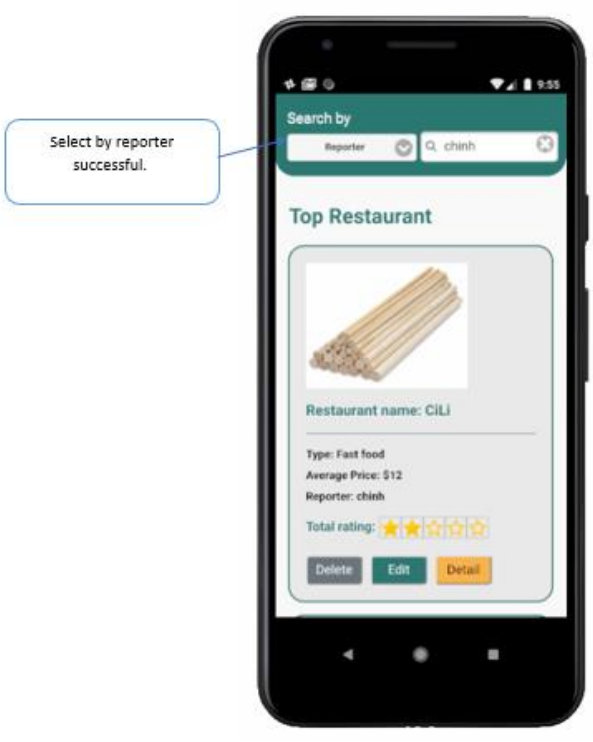


Figure 25 search by reporter screen

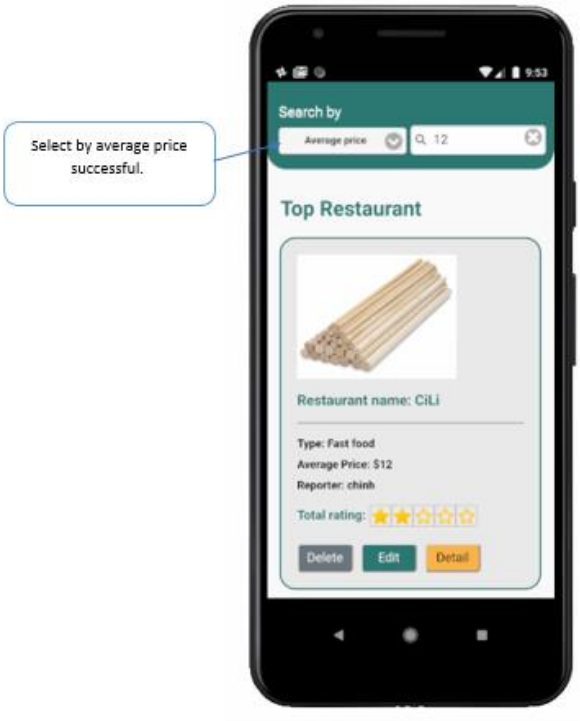


Figure 26 Search screen.

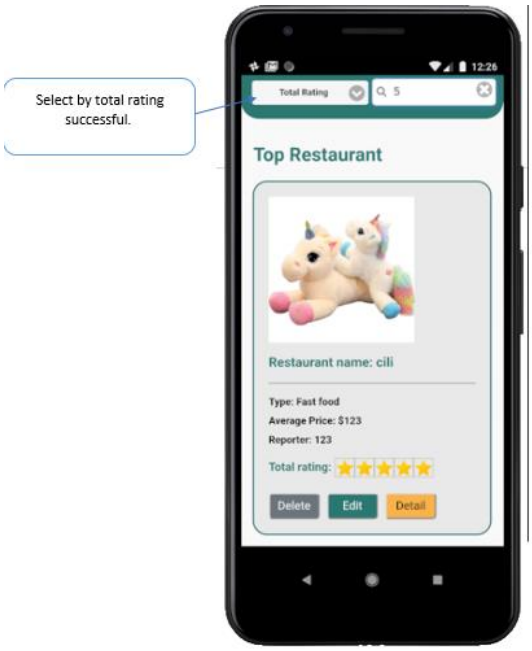


Figure 27 Search screen.

f) Add note for restaurant.

When the user click the Add Note button, the I-Rating application will redirect to the add note screen. The figure bellow is add note screen

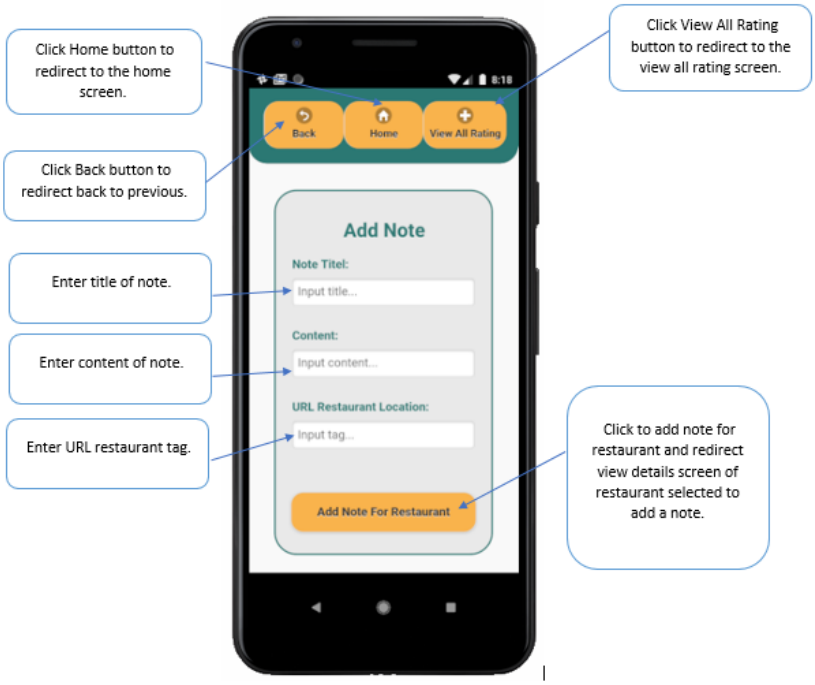


Figure 28 Add note screen.

After successfully adding data by click Add Note For Restaurant Button, the I-Rating application will redirect to the view details restaurant screen for users to see the restaurants they have added or user can redirect by using View All Rating button.

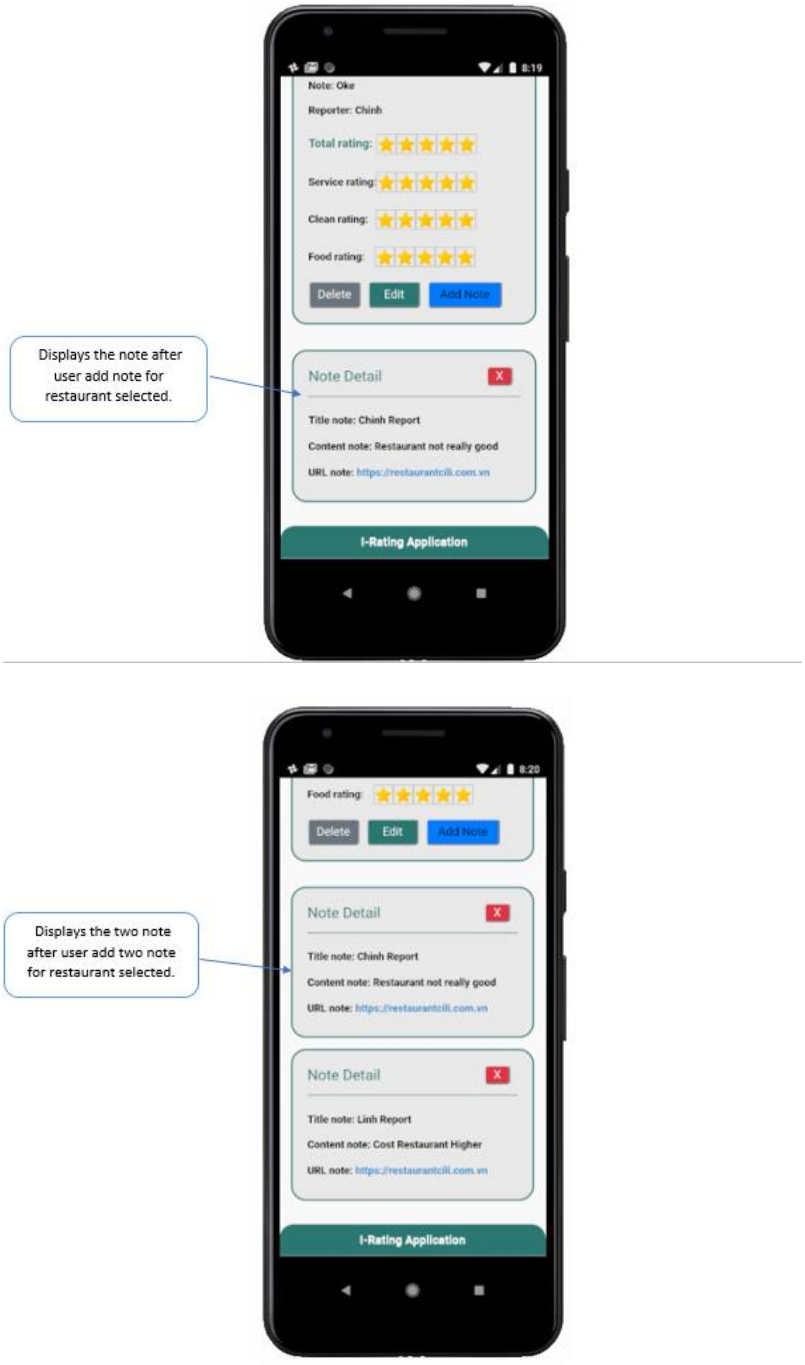


Figure 29 view detail screen after adding note.

g) Android app.

- Figure bellow is Android input details screen app.

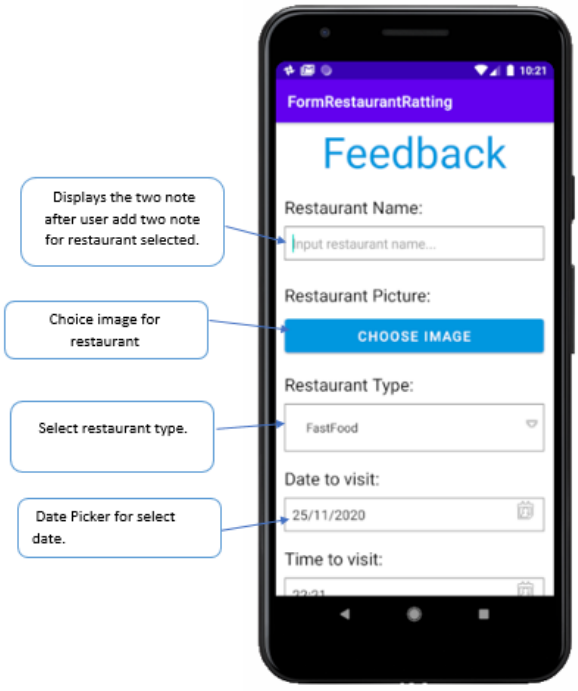


Figure 30 top screen of input android app.

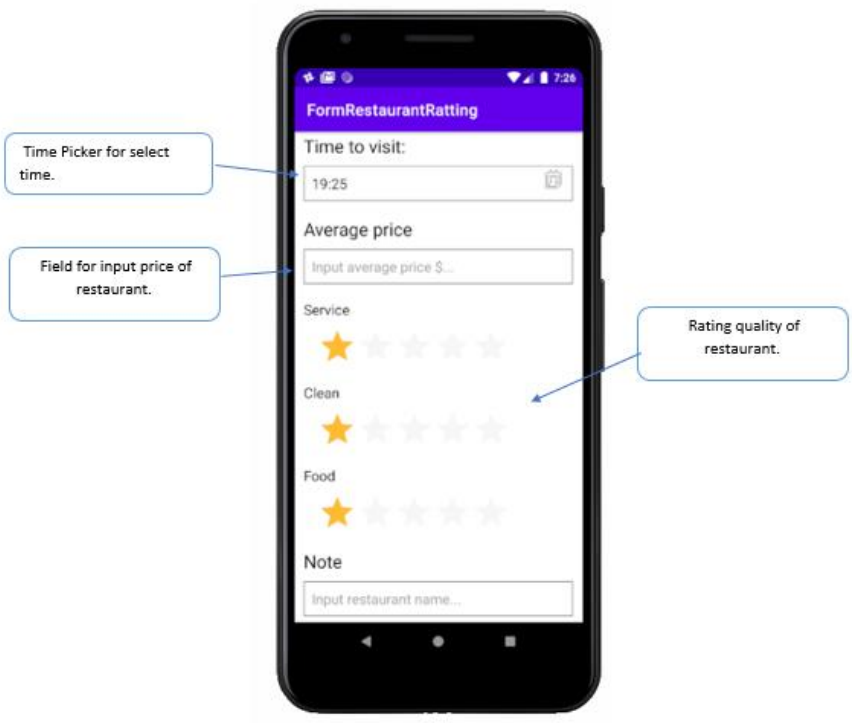


Figure 31 middle screen of input android app.

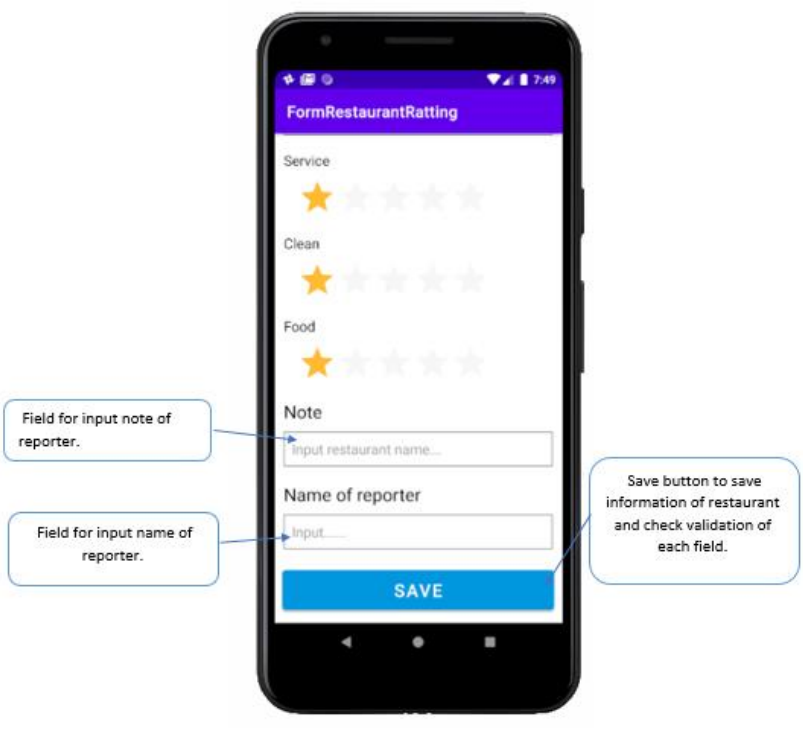


Figure 32 bottom screen of input android app.

- Validation of android application.

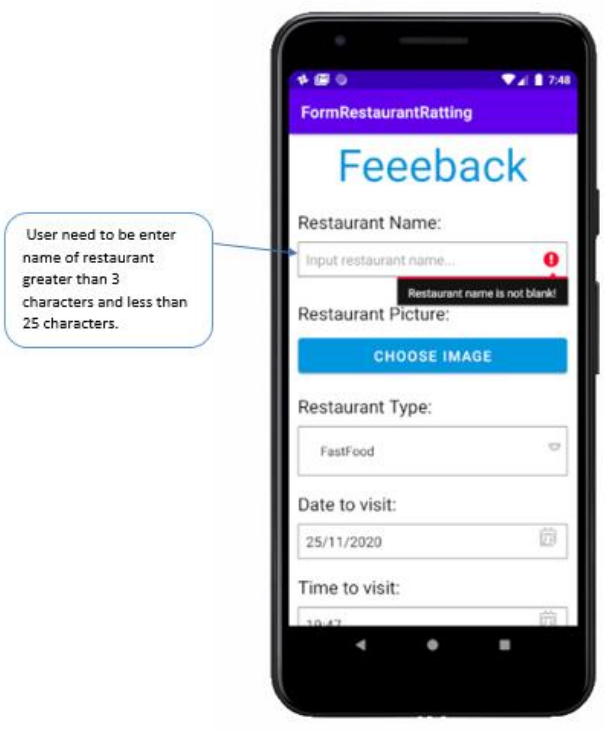


Figure 33 top screen of validation android app.

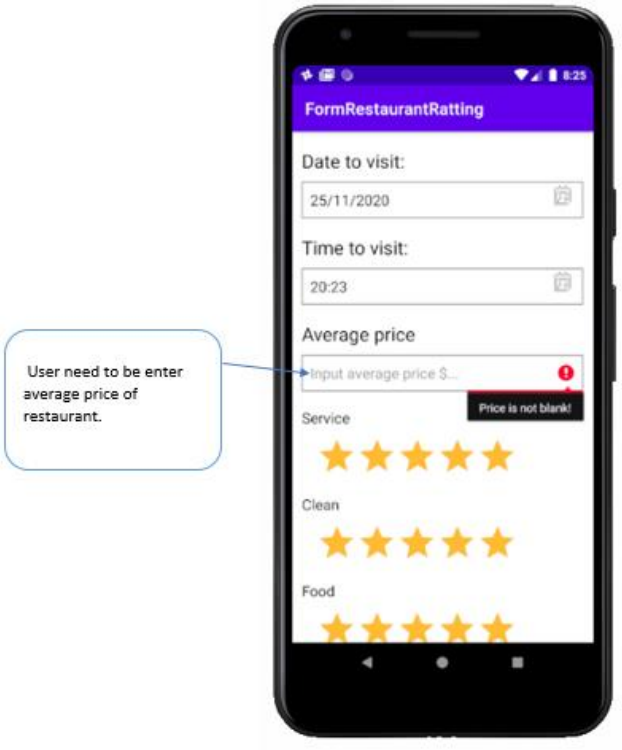


Figure 34 middle screen of validation android app.

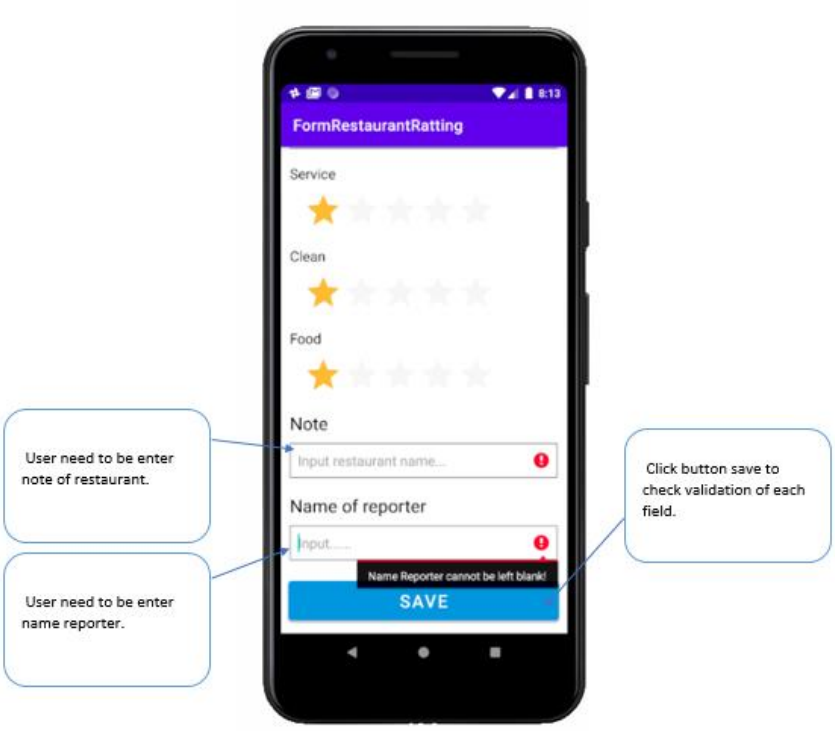


Figure 35 bottom screen of validation android app.

- Enter information of restaurant.

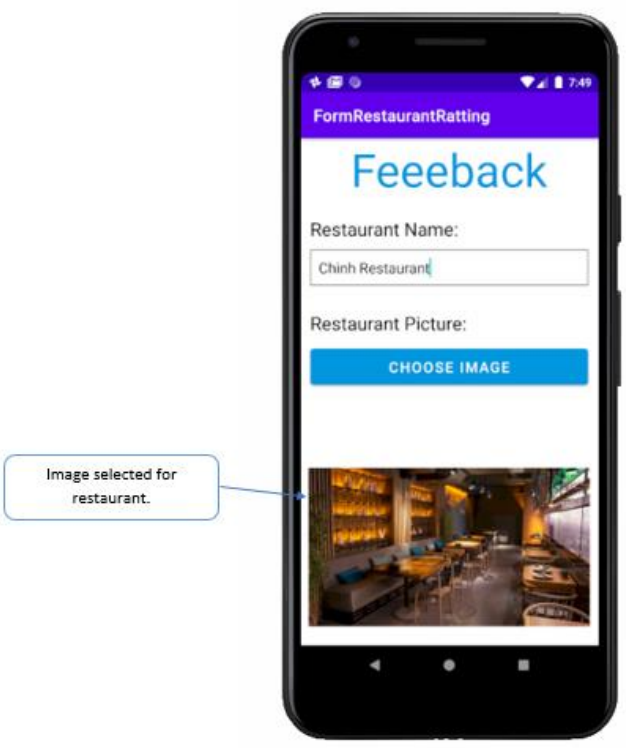


Figure 36 top screen of input android app with value.

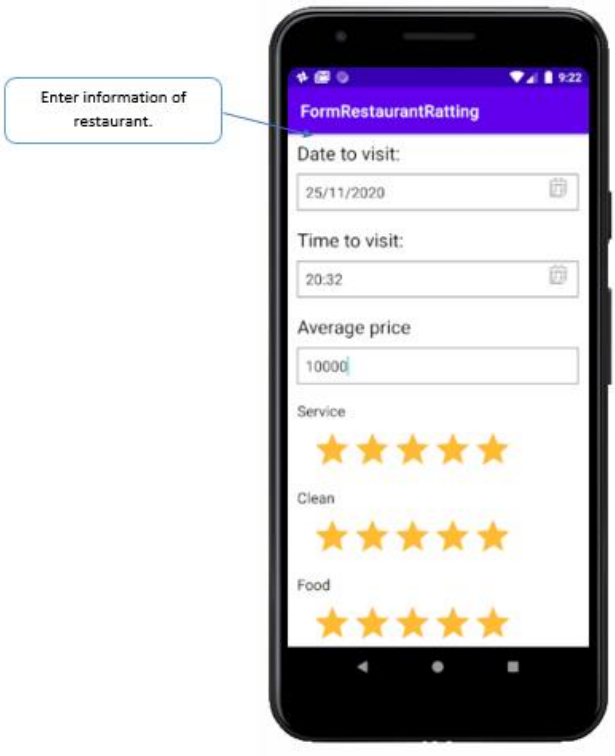


Figure 37 middle screen of input android app with value

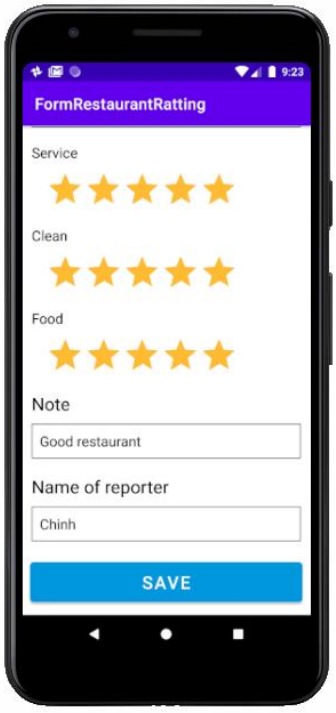


Figure 38 bottom screen of input android app with value

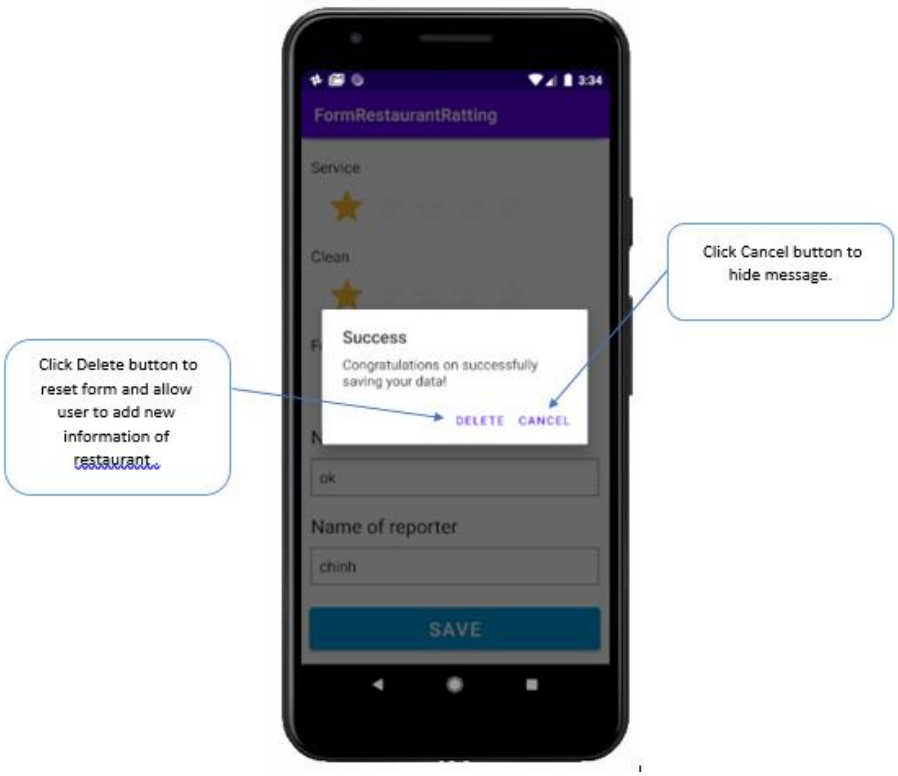


Figure 39 Message

5. Evaluating of restaurant application.

5.1 Evaluate interaction design

- Heuristic evaluation

According to (Foundation, 2002) Heuristic evaluation is a process professional's use to measure usability of the user interface. Based on those criteria, below is an evaluation of the usability of the I-Rating app applications interface.

- Consistency, flexibility, efficiency of use and aesthetics.

The application is designed consistently, with main colors highlighting important display information. Besides, the application provides additional note-taking feature that allows users to add more reviews for the restaurant. This makes the app so professional that the user doesn't need to re-add the restaurant and reassess it.

- User control and freedom.

I-Rating application correctly responds to user actions. The application does not have spontaneous actions causing the error. And app provides back button so user can easily return to the previous screen. So I-Rating application is controlled by the user.

⇨ From the above evaluation criteria, it can be seen that the I-Rating application has been scientifically and extremely professionally designed.

5.2 Maintainability.

- **Coding convention for Phone Gap app and native android app.**

The bellow is a table coding convention of I-Rating application.

No.	Type	Name	Convention
1	Naming convention	Variable name	Set by Camel case.
		Class name	Set by Camel case.
		Method name	Set by Camel case.
2	File Organization	js folder	These are all .js files
		css folder	These are all .css files
		www folder	These are all .html files
		img folder	Store photos on the I-Rating restaurant application
3	White space	Blank line	Two blocks of code are separated by at least one blank line.
4	Indentation	Indentation	Using format code of visual studio code.
5	Declaration	Declaration variable	A line contains only one variable.
6	Statements	Length	Statements are written to exceed 80 words per line

Table 4 Coding convention I-Rating application.

- **Evaluation**

In general, using coding convention make code of I-Rating application become easier to read, understand, manage, and maintain.

- Using naming convention help I-Rating source code look clear, developers can more easily remember variable names they have set. The variable is easy for the developer to find.
- The directory structure is clearly designed. Files are structured separately (.html) is placed in the native folder of the application. This makes it easy for developers to add files and paths to .html files. So the file structure of the I-Rating application looks good for programming.
- White space helps blocks of code to be displayed clear and organized in a systematic way. This makes the I-Rating application programmer easy to absorb code reading.
- The code structure is organized in an indented order that is easy to observe and read.

⇨ From the above evaluation, it can be seen that the I-Rating application can be easily maintained.

5.3 Changes for the app to be deployed to live use.

In order for the application of the I-Rating to be good and to be deployed for direct use, the following points need to be completed. Firstly, the app's interface should be changed to look more professional by using prototype for user testing, for users will trust in using more. Then, the focus on the core feature of the app is Rating, So developer need to create new targets new features that allow users to rate restaurants in more detail, such as adding restaurant locations, and use paging to easily load data when it has multiple records, etc. Finally, give the application to users for testing to get evaluation results. From there the application of I-Rating will become well and deployed for live use.

Conclusion

The I-Rating application installed and executed successfully with no errors occurring. The application is designed with eye-catching design with excellent features to enhance user experience.

References

Foundation, I. D., 2002. *The Basics of User Experience Design.* New York.: Mads Soegaard.

Ssemugabi, S., 2010. *Effectiveness of heuristic evaluation in usability evaluation of elearning applications in higher education ,* South Africa: University of South Africa.