

Safety Guardian APP

This mobile app aims at raising public awareness of the telephone deception. In order to avoid the public from being deceived, this smart phone application has four main functions. They are: 1. Pop-up graphical warning messages; 2. exporting phone books; 3. blacklist; 4. checking intercepted calls.

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Requirements

Safety Guardian APP project requires following to run:

- Android Studio 2.3.3
- Nexus 5X API 25 with resolution 480 x 800
- Android 7.1.1
- Minimum SDK: API 21
- **PLEASE NOTE:** To activate the “pop-up graphical warning messages” function, users need to install this application’s APK on the Android phone, and select Settings - notifications - manage notifications - select “Safety Guardian” app and turn on floating window.

Six pages and main functions

Safety Guardian APP contains five pages: welcome page, home page, contacts list page, blacklist page, intercepted list page and the pop-up graphical warning message page.

1. Welcome page contains the logo of “Safety Guardian” and one button “OPEN NOW”, see Figure 1. When users press “OPEN NOW” button, the home page will be loaded.

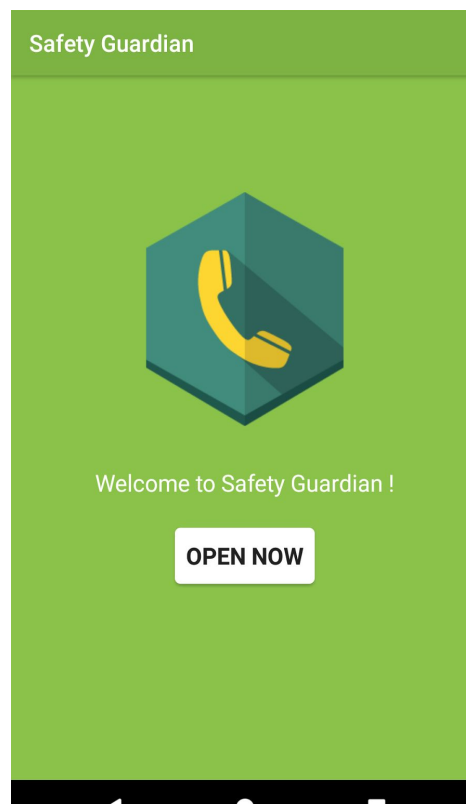


Figure 1 Screenshot of the “Welcome page”

2. As we can see from Figure 2, home page contains:
 - a. Logo of “Safety Guardian” app;
 - b. “EXPORT CONTACTS” button for getting into contact list page;
 - c. “BLACKLIST” button for getting into blacklist page;
 - d. “INTERCEPTED CALLS” button for getting into intercepted list page.

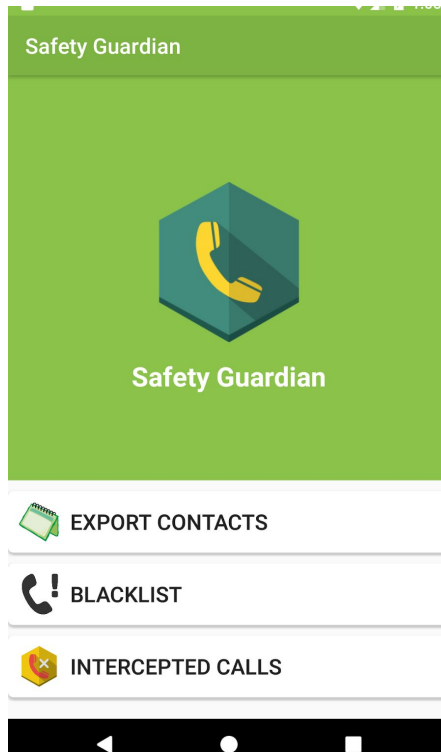


Figure 2 Screenshot of “Home page”

3. Contacts list page can exports the phone number from users’ phone books. As Figure 3 shows:



Figure 3 Screenshot of “Contact list page”

4. If the phone number of incoming call is included in the blacklist, the incoming call can be rejected automatically. And blacklist page contains:
 - a. “ADD PHONE NUMBER” button. When users click “ADD PHONE NUMBER” button, app will display a AlertDialog.
 - b. “Add Phone Number” AlertDialog. See Figure 4. If users enter a phone number and click “OK” button. The phone number will be added into blacklist and displayed on the blacklist page . Users can remove the phone number from blacklist by clicking the delete button. See Figure 5. If users click “OK” button without entering the phone number, a Toast will be displayed with message “Please enter a valid phone number”. See Figure 6.

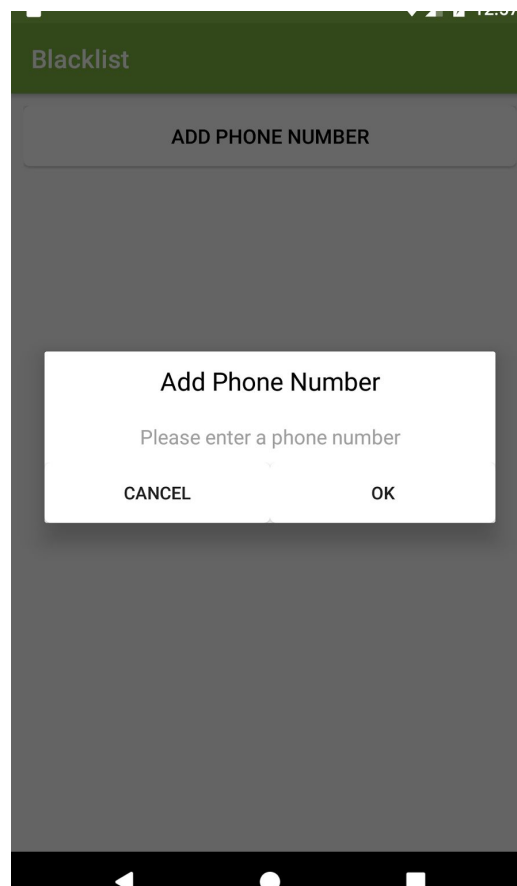


Figure 4 Screenshot of “Add Phone Number”

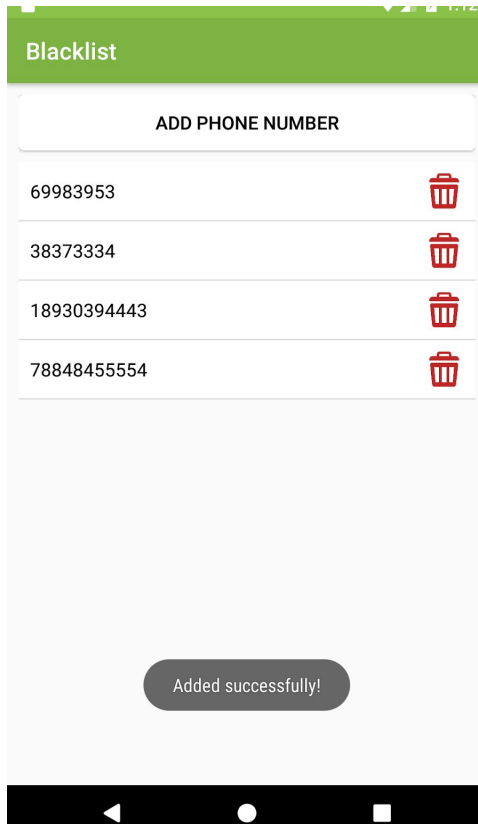


Figure 5 Screenshot of “Added successfully”

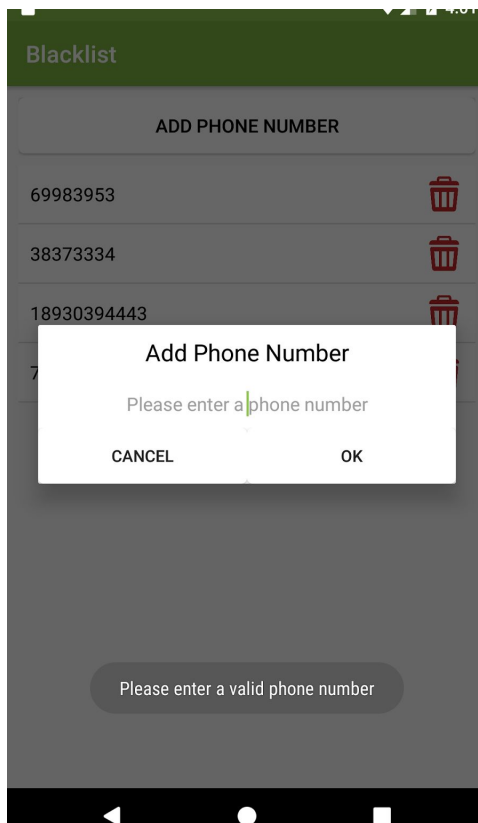


Figure 6 Screenshot of “Please enter a valid phone number”

5. If the phone number of incoming call is in the blacklist, this incoming call will be rejected automatically. See Figure 7. And the phone number will displayed on the intercepted list page. See Figure 8

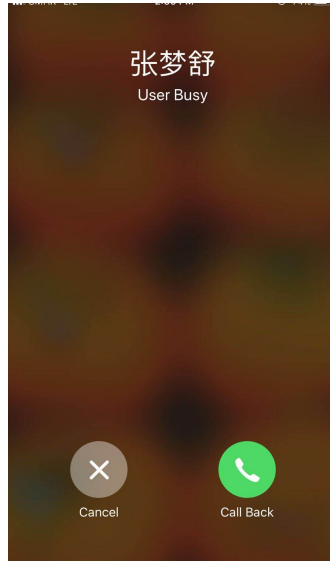


Figure 7 Screenshot of caller's phone

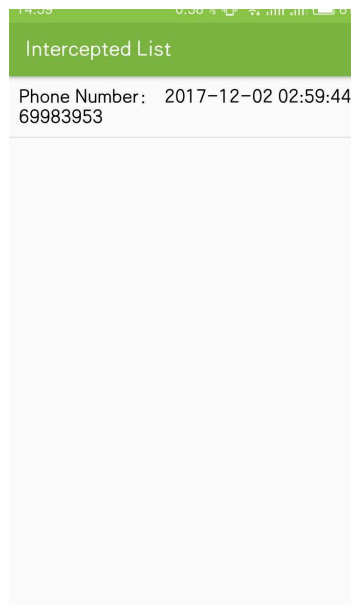


Figure 8 Screenshot of "Intercepted list page"

6. When the telephone numbers of the incoming calls are not included in their phone books, a pop-up graphical warning message will be shown to alert the user. See Figure 9, this message contains:

- A background graphic. This graphic can be updated regularly (say being downloaded from the network).
- Phone number of incoming call.
- “ADD INTO BLACKLIST” button. If users click this button, the phone number of this incoming call will be added into the blacklist and be rejected automatically.
- “OK” button. If users click this button, this graphic warning message will be closed.



Figure 9 Screenshot of pop-up graphical warning message

Limitation

- Layout of this app is only apply to screen orientation of portrait. If screen orientation is landscape, the layout will be chaos.
- Currently, this smart phone application is only applicable to devices with Android operation system. The version of iOS is not developed yet.