

Team Name: Team-ChaoYue

Team Members:

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(i) Design Pattern

1. Adapter Pattern

Code location:

Team-

ChaoYue/ContactManager_v1.0/app/src/main/java/cn/projects/team/demo/adapter/GroupAdapter.java

Team-

ChaoYue/ContactManager_v1.0/app/src/main/java/cn/projects/team/demo/adapter/SortAdapter.java

2. Singleton

Code location:

Contact_layout/app/src/main/java/com/example/contact/AppDatabase.java

```
/**
 * Basic database class for the application
 * The only class that should use this is AppProvider
 */

class AppDatabase extends SQLiteOpenHelper {
    private static final String TAG = "AppDatabase";

    public static final String DATABASE_NAME = "Contacts.db";
    public static final String DATABASE_TABLE = "Contacts";
    public static final int DATABASE_VERSION = 2;

    //Implement AppDatabase as a Singleton
    private static AppDatabase instance = null;

    // set up the constructor to private
    // design pattern: singleton -> a singleton class ensure that there's only one instance of the class
    private AppDatabase(Context context){
        super(context, DATABASE_NAME, factory: null, DATABASE_VERSION);
        Log.d(TAG, msg: "AppDatabase: constructor");
    }
}
```

This design pattern was used when we tried to set up the database using SQLite, but we used greenDAO to help us set up the database ultimately since it's more efficient.

(ii) Test Class

Code location (2 locations):

1.Team-ChaoYue/Test Class

2.ContactManager_v1.0/app/src/androidTest/java/cn/projects/team/demo/ui/AddContactsActivityTest.java

(iii) User Instructions

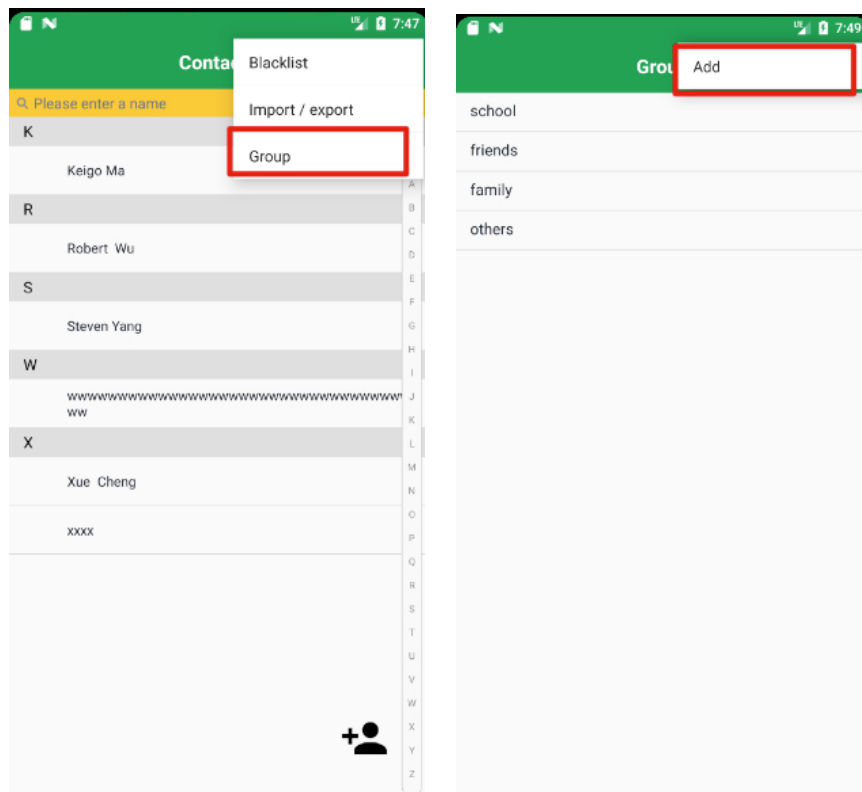
1. Instructions to build the software

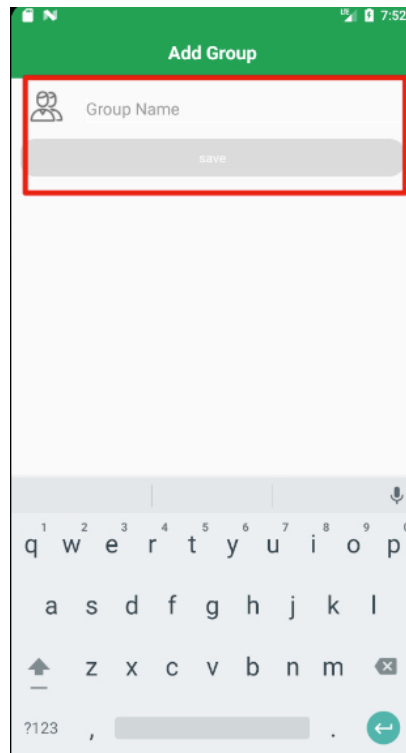
- 1) Clone or download repository Team-ChaoYue to your local PC
- 2) Use Android Studio to open the project named ContactManager_v1.0
- 3) Set up the Virtual Devices with API 24
- 4) Run the emulator

2. Instructions to use the software

2.1 Add a group

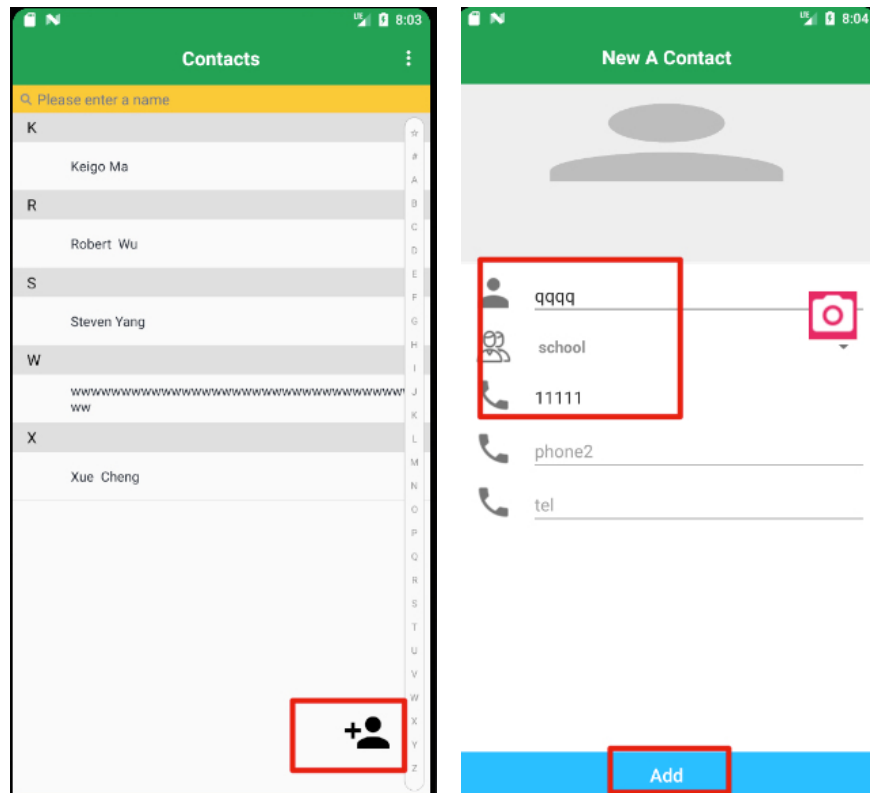
- 1) Add a group first since you must choose a group when adding a contact.
- 2) Click the menu on the top, and click the “Group” button, then you can see all the groups you have already created.
- 3) Click the menu on the top again, and click the “Add” button, and you will go into the “Add Group” page.
- 4) Enter a “Group Name”, and click the “save” button, and you can add a group successfully.





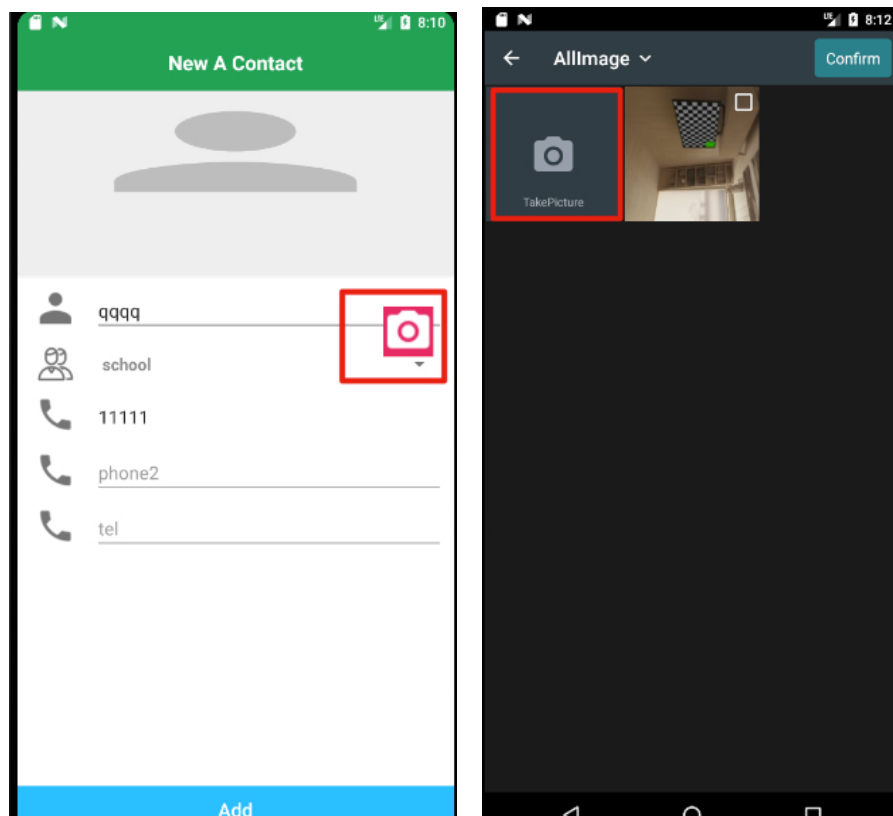
2.2 Add a contact

- 1) Click an icon at the right corner, and you will enter the “add a contact” page.
- 2) Enter a name (required), choose a group (required), enter at least one phone number, and click the “Add” button, and you can add a contact successfully.



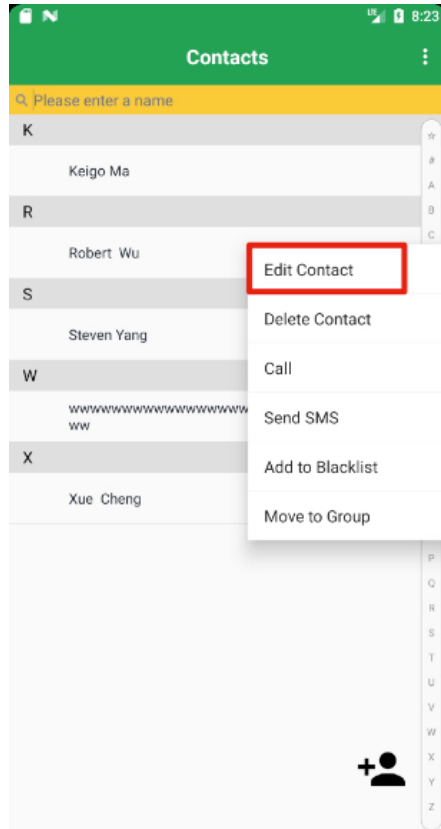
2.3 Add a photo for a contact

- 1) Click the “Camera” icon, and you will see the photo library page. (It will ask for permission for the first time.)
- 2) Click the “Camera” button to take a picture.



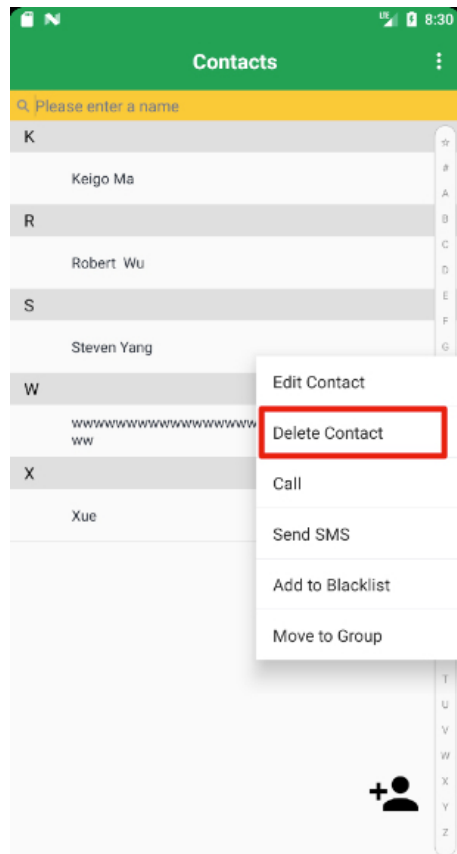
2.4 Edit a contact

- 1) Long press a blank of contact, and you will see a pull-down menu.
- 2) Click the “Edit Contact” button, and you can enter an edit page.



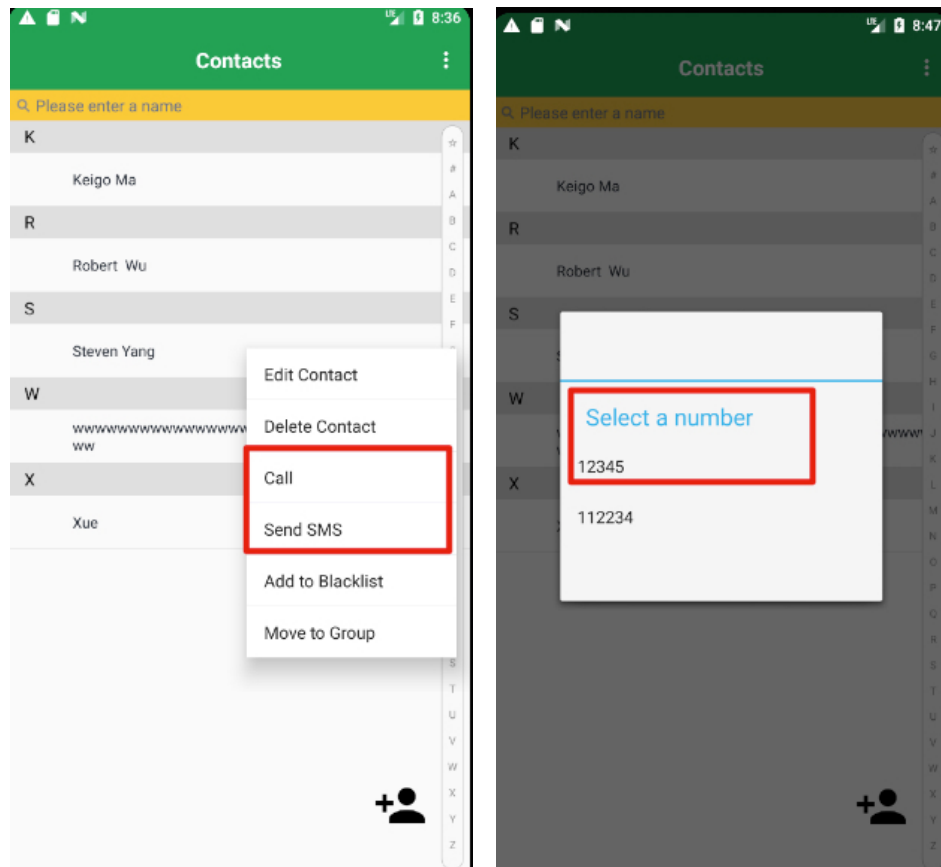
2.5 Delete a contact

- 1) Long press a blank of contact, and you can see a pull-down menu.
- 2) Click the “Delete Contact” button, and you will delete a contact successfully.



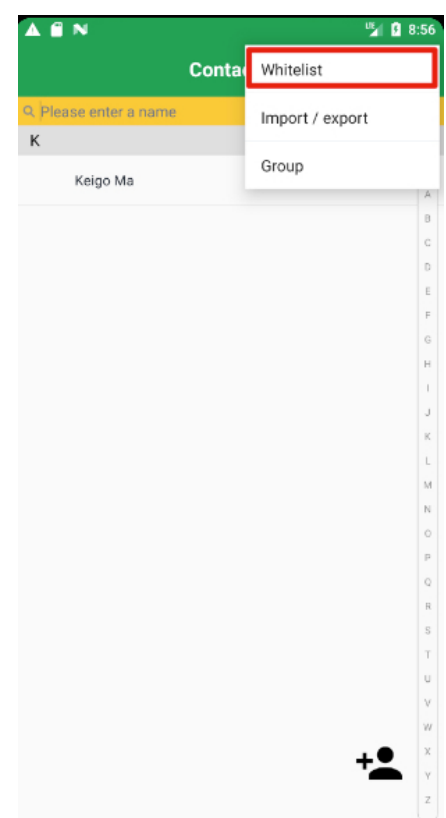
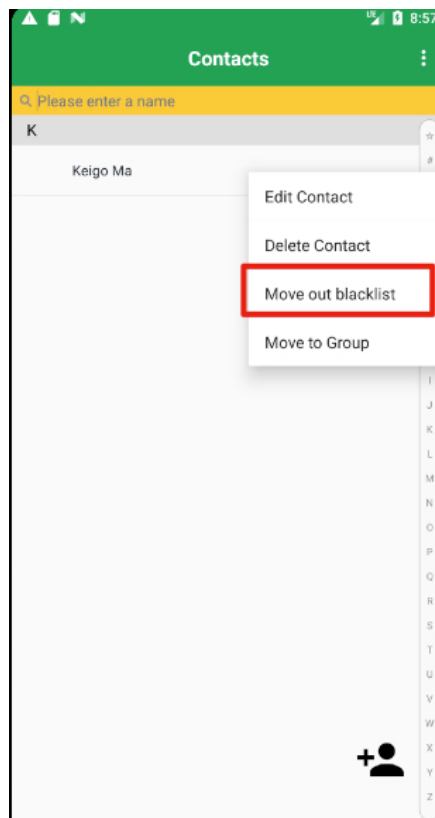
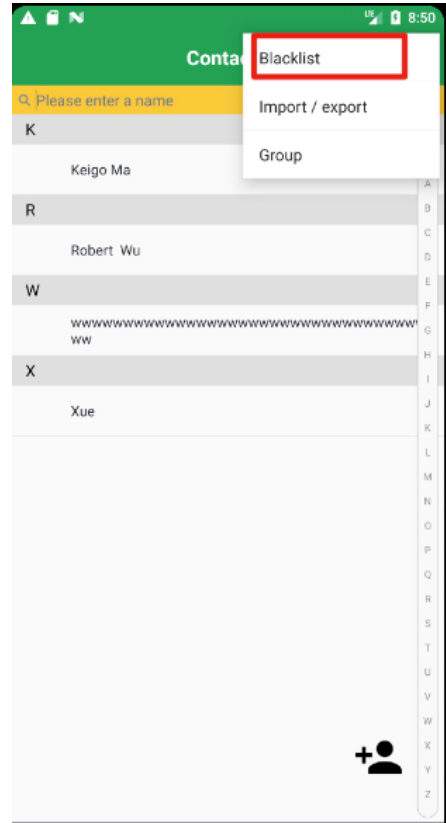
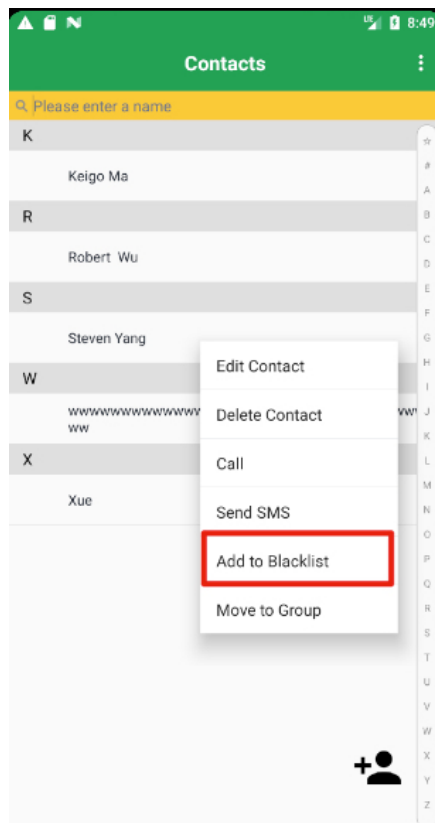
2.6 Call and send SMS

- 1) Long press a blank of contact, and you can see a pull-down menu.
- 2) Click the “Call” button, select a phone number, and you will see the phone call page.
- 3) Click the “Send SMS” button, select a phone number, and you can send an SMS.



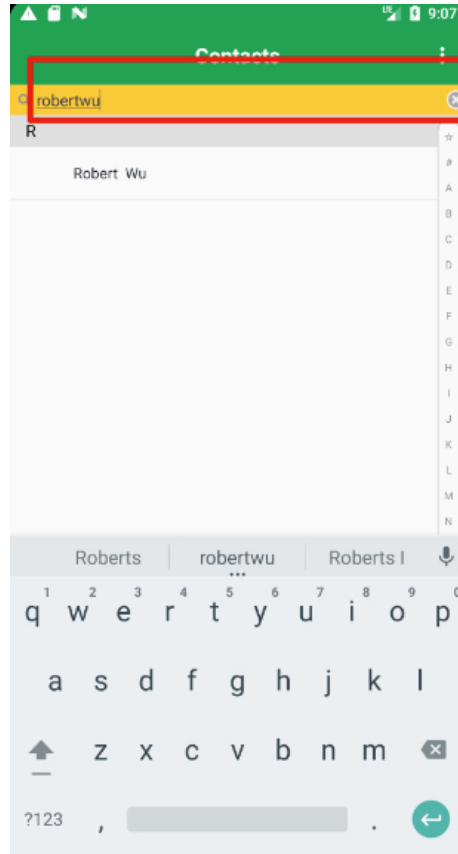
2.7 Blacklist

- 1) Long press a blank of contact, and you can see a pull-down menu.
- 2) Click the “Add to Blacklist” button, and you can add a contact to a blacklist.
- 3) Click the menu on the top, and click the “Blacklist” button, then you can see all contacts in the blacklist.
- 4) Long press a blank of contact, and you can see a pull-down menu.
- 5) Click “Move out Blacklist” button, and you can remove a contact from a blacklist.
- 6) Click the menu on the top, and click the “Whitelist” button, then you can see the contacts in the whitelist.



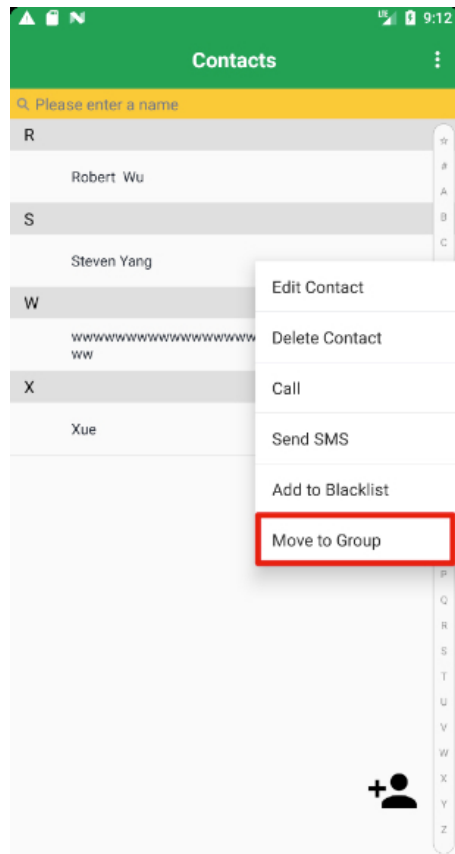
2.8 Search a contact

- 1) Enter the name that you want to search in the searching box.
Search rules: it matches the character that you entered with the contact's name and ignores the upper/lower case as well as space.



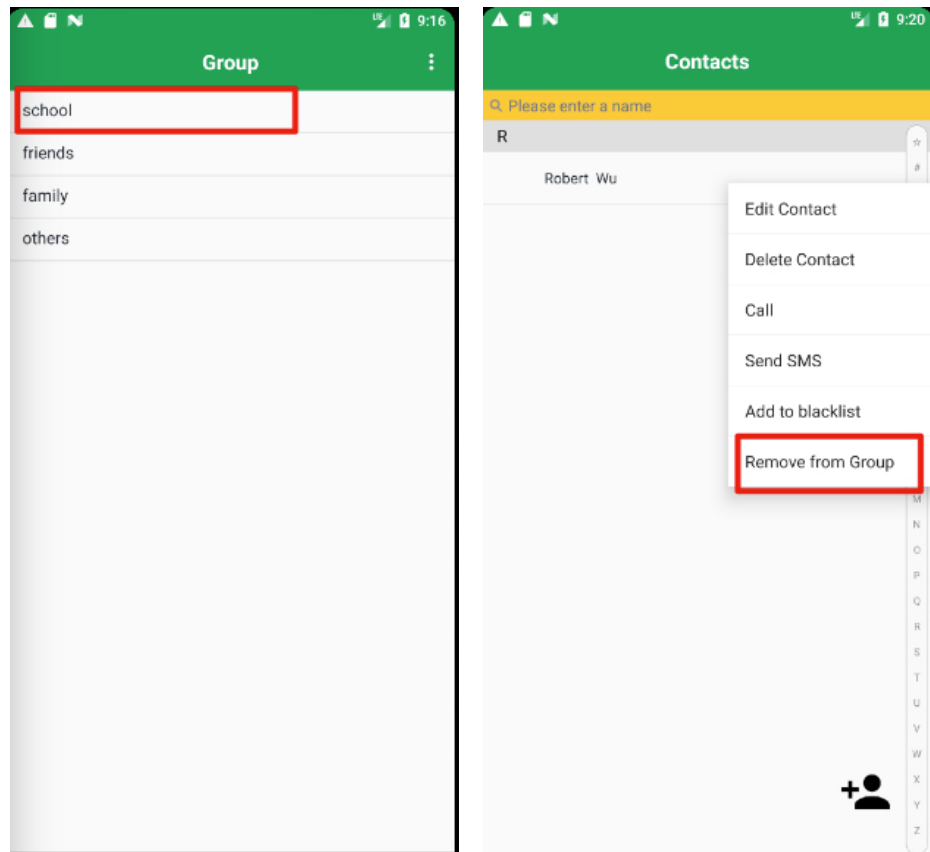
2.9 Move a contact to a group

- 1) Long press a blank of contact, and you can see a pull-down menu.
- 2) Click the “Move to Group” button, and you can move a contact to a specific group you have already created.



2.10 Remove a contact from a group

- 1) Click a specific group name in the group list, and you will see contacts in this group.
- 2) Long press a blank of contact, and you can see a pull-down menu.
- 3) Click the "Remove from Group" button, and you can move a contact from this group.



2.11 Edit/Delete a group

- 1) Long press a blank of a group name, and you can see a pull-down menu.
- 2) Click the “Edit Group” button to enter a page to edit a group name.
- 2) Click the “Delete Group” button to delete a group.

