

Practical 7- create contact list using content provider

```
/......MainActivity.java...../
public class MainActivity extends AppCompatActivity {

    public static final int REQUEST_READ_CONTACTS = 79;

    ListView list;
    ArrayList mobileArray;

    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        if (ActivityCompat.checkSelfPermission(this,
        android.Manifest.permission.READ_CONTACTS)
            == PackageManager.PERMISSION_GRANTED) {
            mobileArray = getAllContacts();
        } else {
            requestPermission();
        }
        list = findViewById(R.id.listview);
        ArrayAdapter adapter = new ArrayAdapter<String>(this,
            android.R.layout.simple_list_item_1, android.R.id.text1, mobileArray);
        list.setAdapter(adapter);
    }
    private void requestPermission() {
        if (ActivityCompat.shouldShowRequestPermissionRationale(this,
        android.Manifest.permission.READ_CONTACTS)) {
            // show UI part if you want here to show some rationale !!!
        } else {
            ActivityCompat.requestPermissions(this, new
            String[]{android.Manifest.permission.READ_CONTACTS},
                REQUEST_READ_CONTACTS);
        }
        if (ActivityCompat.shouldShowRequestPermissionRationale(this,
        android.Manifest.permission.READ_CONTACTS)) {
        } else {
            ActivityCompat.requestPermissions(this, new
            String[]{android.Manifest.permission.READ_CONTACTS},
                REQUEST_READ_CONTACTS);
        }
    }
    @Override
    public void onRequestPermissionsResult(int requestCode,
        String permissions[], int[] grantResults) {
```

```

        switch (requestCode) {
            case REQUEST_READ_CONTACTS: {
                if (grantResults.length > 0 && grantResults[0] ==
PackageManager.PERMISSION_GRANTED) {
                    mobileArray = getAllContacts();
                } else {
                    // permission denied,Disable the
                    // functionality that depends on this permission.
                }
                return;
            }
        }
    }

    private ArrayList getAllContacts() {
        ArrayList<String> nameList = new ArrayList<>();
        ContentResolver cr = getContentResolver();
        Cursor cur = cr.query(ContactsContract.Contacts.CONTENT_URI,
            null, null, null, null);
        if ((cur != null ? cur.getCount() : 0) > 0) {
            while (cur != null && cur.moveToNext()) {
                String id = cur.getString(
                    cur.getColumnIndex(ContactsContract.Contacts._ID));
                String name = cur.getString(cur.getColumnIndex(
                    ContactsContract.Contacts.DISPLAY_NAME));
                nameList.add(name);
                if (cur.getInt(cur.getColumnIndex(
ContactsContract.Contacts.HAS_PHONE_NUMBER)) > 0) {
                    Cursor pCur = cr.query(
                        ContactsContract.CommonDataKinds.Phone.CONTENT_URI,
                        null,
                        ContactsContract.CommonDataKinds.Phone.CONTACT_ID + " = ?",
                        new String[]{id}, null);
                    while (pCur.moveToNext()) {
                        String phoneNo = pCur.getString(pCur.getColumnIndex(
                            ContactsContract.CommonDataKinds.Phone.NUMBER));
                    }
                    pCur.close();
                }
            }
        }
    }

    if (cur != null) {
        cur.close();
    }
    return nameList;
}
}

```

```
/.....activity_main.xml...../  
<?xml version="1.0" encoding="utf-8"?>  
<androidx.constraintlayout.widget.ConstraintLayout  
xmlns:android="http://schemas.android.com/apk/res/android"  
xmlns:app="http://schemas.android.com/apk/res-auto"  
xmlns:tools="http://schemas.android.com/tools"  
android:layout_width="match_parent"  
android:layout_height="match_parent"  
tools:context=".MainActivity">
```

```
<ListView  
    android:id="@+id/listview"  
    android:layout_width="match_parent"  
    android:layout_height="match_parent"  
    app:layout_constraintBottom_toBottomOf="parent"  
    app:layout_constraintEnd_toEndOf="parent"  
    app:layout_constraintStart_toStartOf="parent"  
    app:layout_constraintTop_toTopOf="parent" />  
</androidx.constraintlayout.widget.ConstraintLayout>
```

Outputs-





