**Date :- / /**

**Practical No :- 09**

**Practical Name :- Create the android application that will read phonebook contact using content providers and display in list on selecting specific contact makes a call to selected contact.**

**Roll No :- 24**

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* **CODE :-**

**Acitivity\_main.xml :-**

*<?*xml version="1.0" encoding="utf-8"*?>*<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:orientation="vertical">  
  
 <Button  
 android:id="@+id/contact\_pick"  
 android:layout\_width="192dp"  
 android:layout\_height="wrap\_content"  
 android:text="@string/contact\_pick\_text" />  
 <Button  
 android:id="@+id/contact\_name"  
 android:layout\_width="205dp"  
 android:layout\_height="wrap\_content"  
 android:text="@string/contact\_name\_text" />  
 </LinearLayout>

**AndroidManifest.xml :-**

*<?*xml version="1.0" encoding="utf-8"*?>*<manifest xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools">  
 <uses-permission android:name = "android.permission.READ\_CONTACTS" />  
 <application  
 android:allowBackup="true"  
 android:dataExtractionRules="@xml/data\_extraction\_rules"  
 android:fullBackupContent="@xml/backup\_rules"  
 android:icon="@mipmap/ic\_launcher"  
 android:label="@string/app\_name"  
 android:roundIcon="@mipmap/ic\_launcher\_round"  
 android:supportsRtl="true"  
 android:theme="@style/Theme.Phonecall"  
 tools:targetApi="31">  
 <activity  
 android:name=".MainActivity"  
 android:exported="true">  
 <intent-filter>  
 <action android:name="android.intent.action.MAIN" />  
  
 <category android:name="android.intent.category.LAUNCHER" />  
 </intent-filter>  
  
 <meta-data  
 android:name="android.app.lib\_name"  
 android:value="" />  
 </activity>  
 </application>  
  
</manifest>

**MainAcitivity.java :-**

package com.example.phonecall;

import androidx.appcompat.app.AppCompatActivity;  
import android.Manifest;  
import android.app.Activity;  
import android.content.Intent;  
import android.content.pm.PackageManager;  
import android.database.Cursor;  
import android.net.Uri;  
import android.os.Bundle;  
import android.provider.ContactsContract;  
import android.view.View;  
import android.widget.Button;  
  
import androidx.annotation.NonNull;  
import androidx.appcompat.app.AppCompatActivity;  
import androidx.core.app.ActivityCompat;  
import androidx.core.content.ContextCompat;  
  
public class MainActivity extends AppCompatActivity  
{  
 private static final int *REQUEST\_READ\_CONTACTS\_PERMISSION* = 0;  
 private static final int *REQUEST\_CONTACT* = 1;  
 private Button mContactPick;  
 private Button mContactName;  
  
 @Override  
 public void onRequestPermissionsResult(int requestCode, @NonNull String[] permissions,  
 @NonNull int[] grantResults)  
 {  
 super.onRequestPermissionsResult(requestCode, permissions, grantResults);  
  
 if (requestCode == *REQUEST\_READ\_CONTACTS\_PERMISSION* && grantResults.length > 0)  
 {  
 updateButton(grantResults[0] == PackageManager.*PERMISSION\_GRANTED*);  
 }  
 }  
  
 @Override  
 public void onActivityResult(int requestCode, int resultCode, Intent data)  
 {  
 super.onActivityResult(requestCode, resultCode, data);  
 if (resultCode != Activity.*RESULT\_OK*) return;  
 if (requestCode == *REQUEST\_CONTACT* && data != null)  
 {  
 Uri contactUri = data.getData(); String[] queryFields = new String[]{ContactsContract.Contacts.*DISPLAY\_NAME*};Cursor cursor = this.getContentResolver()  
 .query(contactUri, queryFields, null, null, null);  
 try  
 {if (cursor.getCount() == 0) return;cursor.moveToFirst();  
  
 String name = cursor.getString(0);  
 mContactName.setText(name);  
  
 }  
 finally  
 {  
 cursor.close();  
 }  
 }  
 }  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState)  
 {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*aa* );

final Intent pickContact = new Intent(Intent.*ACTION\_PICK*, ContactsContract.Contacts.*CONTENT\_URI*);  
  
 mContactPick = findViewById(R.id.*contact\_pick*);  
 mContactName = findViewById(R.id.*contact\_name*);  
 mContactPick.setOnClickListener(new View.OnClickListener()  
 {  
 @Override  
 public void onClick(View view)  
 {  
 startActivityForResult(pickContact, *REQUEST\_CONTACT*);  
 }  
 });  
  
 requestContactsPermission();  
 updateButton(hasContactsPermission());  
 }  
  
 public void updateButton(boolean enable)  
 {  
 mContactPick.setEnabled(enable);  
 mContactName.setEnabled(enable);  
 }  
  
 private boolean hasContactsPermission()  
 {  
 return ContextCompat.*checkSelfPermission*(this, Manifest.permission.*READ\_CONTACTS*) ==  
 PackageManager.*PERMISSION\_GRANTED*;  
 }private void requestContactsPermission()  
 {  
 if (!hasContactsPermission())  
 {  
 ActivityCompat.*requestPermissions*(this,  
 new String[]{Manifest.permission.*READ\_CONTACTS*}, *REQUEST\_READ\_CONTACTS\_PERMISSION*);  
 }  
 }  
}

**ExampleUnitTest.java :-**

package com.example.phonecall;  
  
import org.junit.Test;  
  
import static org.junit.Assert.\*;  
public class ExampleUnitTest {  
 @Test  
 public void addition\_isCorrect() {  
 *assertEquals*(4, 2 + 2);  
 }  
}

**ExampleInstrumentedTest.java :-**

package com.example.phonecall;  
  
import android.content.Context;  
import androidx.test.platform.app.InstrumentationRegistry;  
import androidx.test.ext.junit.runners.AndroidJUnit4;  
import org.junit.Test;  
import org.junit.runner.RunWith;  
import static org.junit.Assert.\*;  
@RunWith(AndroidJUnit4.class)  
public class ExampleInstrumentedTest {  
 @Test  
 public void useAppContext() {  
 Context appContext = InstrumentationRegistry.*getInstrumentation*().getTargetContext();  
 *assertEquals*("com.example.phonecall", appContext.getPackageName());  
 }  
}

**BuildConfig.java :-**

package com.example.phonecall;  
  
public final class BuildConfig {  
 public static final boolean *DEBUG* = Boolean.*parseBoolean*("true");  
 public static final String *APPLICATION\_ID* = "com.example.phonecall";  
 public static final String *BUILD\_TYPE* = "debug";  
 public static final int *VERSION\_CODE* = 1;  
 public static final String *VERSION\_NAME* = "1.0";  
}

* **OUTPUT :-**



 