Assignment 5

Q. Dialer

Xml file :

*<?*xml version="1.0" encoding="utf-8"*?>*<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 tools:context=".MainActivity">  
  
 <EditText  
 android:id="@+id/editTextPhoneNumber"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Enter phone number"  
 android:inputType="phone" />  
  
 <Button  
 android:id="@+id/buttonDial"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/editTextPhoneNumber"  
 android:layout\_marginTop="16dp"  
 android:text="Dial" />  
</RelativeLayout>

Java file :

package com.example.dialer;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.content.Intent;  
import android.net.Uri;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
import android.widget.EditText;  
  
public class MainActivity extends AppCompatActivity {  
 private EditText editTextPhoneNumber;  
 private Button buttonDial;  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 editTextPhoneNumber = findViewById(R.id.*editTextPhoneNumber*);  
 buttonDial = findViewById(R.id.*buttonDial*);  
  
 buttonDial.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View view) {  
 dialPhoneNumber();  
 }  
 });  
 }  
 private void dialPhoneNumber() {  
 String phoneNumber = editTextPhoneNumber.getText().toString();  
 if (!phoneNumber.isEmpty()) {  
 Uri dialUri = Uri.*parse*("tel:" + phoneNumber);  
 Intent dialIntent = new Intent(Intent.*ACTION\_DIAL*, dialUri);  
 startActivity(dialIntent);  
 }  
 }  
}

Q. Email

Xml file :

*<?*xml version="1.0" encoding="utf-8"*?>*<LinearLayout 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"  
 android:orientation="vertical"  
 android:padding="16dp"  
 tools:context=".MainActivity">  
  
<TextView  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="To"  
 android:textAppearance="@style/TextAppearance.AppCompat.Large"  
 />  
  
 <EditText  
 android:id="@+id/edit\_text\_to"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:inputType="textEmailAddress"  
 />  
 <TextView  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Subject"  
 android:textAppearance="@style/TextAppearance.AppCompat.Large"  
 />  
  
 <EditText  
 android:id="@+id/edit\_text\_subject"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:inputType="textEmailSubject"  
 />  
 <TextView  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Message"  
 android:textAppearance="@style/TextAppearance.AppCompat.Large"  
 />  
  
 <EditText  
 android:id="@+id/edit\_text\_message"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:lines="10"  
 android:gravity="start|top"  
 />  
 <Button  
 android:id="@+id/button\_send"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Send"  
 />  
  
  
</LinearLayout>

Java file :

package com.example.simple\_email;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.content.Intent;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
import android.widget.EditText;  
import android.widget.TextView;  
  
public class MainActivity extends AppCompatActivity {  
 private EditText edit\_text\_to,edit\_text\_subject,edit\_text\_message;  
 private Button button\_send;  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 edit\_text\_to = findViewById(R.id.*edit\_text\_to*);  
 edit\_text\_subject=findViewById(R.id.*edit\_text\_subject*);  
 edit\_text\_message = findViewById(R.id.*edit\_text\_message*);  
 button\_send = findViewById(R.id.*button\_send*);  
  
 button\_send.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View view) {  
 sendMail();  
 }  
 });  
 }  
 private void sendMail(){  
 String recipientlist = edit\_text\_to.getText().toString();  
 String[] recipients = recipientlist.split(",");  
  
 String subject = edit\_text\_subject.getText().toString();  
 String message = edit\_text\_message.getText().toString();  
  
 Intent intent = new Intent(Intent.*ACTION\_SEND*);  
 intent.putExtra(Intent.*EXTRA\_EMAIL*,recipients);  
 intent.putExtra(Intent.*EXTRA\_SUBJECT*,subject);  
 intent.putExtra(Intent.*EXTRA\_TEXT*,message);  
  
 intent.setType("message/rfc822");  
 *//message/rfc822 used to create structure of email.* startActivity(Intent.*createChooser*(intent,"choose an email client"));  
 }  
}

Q. Email with an Attachment

Xml file :

*<!-- res/layout/activity\_main.xml -->*<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:paddingLeft="16dp"  
 android:paddingTop="16dp"  
 android:paddingRight="16dp"  
 android:paddingBottom="16dp"  
 tools:context=".MainActivity">  
  
 <EditText  
 android:id="@+id/editTextTo"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="To"/>  
  
 <EditText  
 android:id="@+id/editTextSubject"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/editTextTo"  
 android:layout\_marginTop="8dp"  
 android:hint="Subject"/>  
  
 <EditText  
 android:id="@+id/editTextMessage"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/editTextSubject"  
 android:layout\_marginTop="8dp"  
 android:hint="Message"/>  
  
 <Button  
 android:id="@+id/buttonAttach"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/editTextMessage"  
 android:layout\_marginTop="16dp"  
 android:text="Attach File"/>  
  
 <Button  
 android:id="@+id/buttonSend"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_below="@id/buttonAttach"  
 android:layout\_marginTop="16dp"  
 android:text="Send Email"/>  
</RelativeLayout>

Java file :

package com.example.demo2;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.content.Intent;  
import android.net.Uri;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
import android.widget.EditText;  
  
public class MainActivity extends AppCompatActivity {  
  
 private static final int *REQUEST\_CODE* = 1;  
 private EditText editTextTo, editTextSubject, editTextMessage;  
 private Button buttonAttach, buttonSend;  
 private Uri attachmentUri;  
 *//URI(Uniform Resource Identifiers)* @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 editTextTo = findViewById(R.id.*editTextTo*);  
 editTextSubject = findViewById(R.id.*editTextSubject*);  
 editTextMessage = findViewById(R.id.*editTextMessage*);  
 buttonAttach = findViewById(R.id.*buttonAttach*);  
 buttonSend = findViewById(R.id.*buttonSend*);  
  
 buttonAttach.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View view) {  
 openFilePicker();  
 }  
 });  
 buttonSend.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View view) {  
 sendEmail();  
 }  
 });  
 }  
  
 private void openFilePicker() {  
 Intent intent = new Intent(Intent.*ACTION\_GET\_CONTENT*);  
 intent.setType("\*/\*");  
 startActivityForResult(intent, *REQUEST\_CODE*);  
 }  
  
 protected void onActivityResult(int requestCode, int resultCode, Intent data) {  
 super.onActivityResult(requestCode, resultCode, data);  
  
 if (requestCode == *REQUEST\_CODE* && resultCode == *RESULT\_OK*) {  
 attachmentUri = data.getData();  
 }  
 }  
  
 private void sendEmail() {  
 String to = editTextTo.getText().toString();  
 String subject = editTextSubject.getText().toString();  
 String message = editTextMessage.getText().toString();  
  
 Intent emailIntent = new Intent(Intent.*ACTION\_SEND*);  
 emailIntent.setType("text/plain");  
 emailIntent.putExtra(Intent.*EXTRA\_EMAIL*, new String[]{to});  
 emailIntent.putExtra(Intent.*EXTRA\_SUBJECT*, subject);  
 emailIntent.putExtra(Intent.*EXTRA\_TEXT*, message);  
  
 if (attachmentUri != null) {  
 emailIntent.putExtra(Intent.*EXTRA\_STREAM*, attachmentUri);  
 }  
  
 try {  
 startActivity(Intent.*createChooser*(emailIntent, "Send mail..."));  
 } catch (android.content.ActivityNotFoundException ex) {  
 *// Handle exception* }  
 }  
}

Q. Google Map

Select Map Activity Instead Empty Activity and make changes in **AndroidManifest.xml** file:

*<?*xml version="1.0" encoding="utf-8"*?>*<manifest xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools"  
 package="com.example.mapsactivity">  
  
 <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.MapsActivity"  
 tools:targetApi="31">  
  
 *<!--  
 TODO: Before you run your application, you need a Google Maps API key.  
  
 To get one, follow the directions here:  
  
 https://developers.google.com/maps/documentation/android-sdk/get-api-key  
  
 Once you have your API key (it starts with "AIza"), define a new property in your  
 project's local.properties file (e.g. MAPS\_API\_KEY=Aiza...), and replace the  
 "YOUR\_API\_KEY" string in this file with "${MAPS\_API\_KEY}".  
 -->* <meta-data  
 android:name="com.google.android.geo.API\_KEY"  
 android:value="YOUR\_API\_KEY" />  
  
 <activity  
 android:name=".MapsActivity"  
 android:exported="true"  
 android:label="@string/title\_activity\_maps">  
 <intent-filter>  
 <action android:name="android.intent.action.MAIN" />  
  
 <category android:name="android.intent.category.LAUNCHER" />  
 </intent-filter>  
 </activity>  
 </application>  
  
</manifest>

Xml file :

*<?*xml version="1.0" encoding="utf-8"*?>*<fragment xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:map="http://schemas.android.com/apk/res-auto"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:id="@+id/map"  
 android:name="com.google.android.gms.maps.SupportMapFragment"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 tools:context=".MapsActivity" />

Java file :

package com.example.mapsactivity;  
  
import androidx.fragment.app.FragmentActivity;  
  
import android.os.Bundle;  
  
import com.google.android.gms.maps.CameraUpdateFactory;  
import com.google.android.gms.maps.GoogleMap;  
import com.google.android.gms.maps.OnMapReadyCallback;  
import com.google.android.gms.maps.SupportMapFragment;  
import com.google.android.gms.maps.model.LatLng;  
import com.google.android.gms.maps.model.MarkerOptions;  
import com.example.mapsactivity.databinding.ActivityMapsBinding;  
  
public class MapsActivity extends FragmentActivity implements OnMapReadyCallback {  
  
 private GoogleMap mMap;  
 private ActivityMapsBinding binding;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
  
 binding = ActivityMapsBinding.*inflate*(getLayoutInflater());  
 setContentView(binding.getRoot());  
  
 SupportMapFragment mapFragment = (SupportMapFragment) getSupportFragmentManager()  
 .findFragmentById(R.id.*map*);  
 mapFragment.getMapAsync(this);  
 }  
  
@Override  
 public void onMapReady(GoogleMap googleMap) {  
 mMap = googleMap;  
  
 LatLng sydney = new LatLng(-34, 151);  
 mMap.addMarker(new MarkerOptions().position(sydney).title("Marker in Sydney"));  
 mMap.moveCamera(CameraUpdateFactory.*newLatLng*(sydney));  
 }  
}