PRACTICAL - 9

Working With Phone Call and SMS

Q-1. Android Phone Calls.

AndroidManifest.xml

```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-feature
        android:name="android.hardware.telephony"
        android:required="false" />
    <uses-permission android:name="android.permission.CALL_PHONE" />

    <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.Lab9_1"
        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>
        </activity>
    </application>

</manifest>
```

Activity_main.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    android:orientation="vertical"
android:layout_width="match_parent"
    android:layout_height="match_parent">
    <TextView
        android:id="@+id/fstTxt"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginLeft="100dp"
        android:layout_marginTop="150dp"
        android:text="Mobile No"
```

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```xml
        />
    <EditText
        android:id="@+id/mblTxt"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginLeft="100dp"
        android:ems="10">
    </EditText>
    <Button
        android:id="@+id/btnCall"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginLeft="100dp"
        android:text="Call" />
</LinearLayout>
```

Mainactivity.java

```java
package com.example.lab9_1;

import androidx.appcompat.app.AppCompatActivity;
import androidx.core.app.ActivityCompat;

import android.Manifest;
import android.content.Intent;
import android.content.pm.PackageManager;
import android.net.Uri;
import android.os.Build;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.os.Bundle;

public class MainActivity extends AppCompatActivity {
    private EditText txtPhone;
    private Button btn;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        txtPhone = (EditText)findViewById(R.id.mblTxt);
        btn = (Button)findViewById(R.id.btnCall);
        btn.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                callPhoneNumber();
            }
        });
    }
    @Override
    public void onRequestPermissionsResult(int requestCode, String[]
permissions, int[] grantResults) {
```

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```java
        super.onRequestPermissionsResult(requestCode, permissions,
grantResults);
        if (requestCode == 101) {
            if (grantResults[0] ==
PackageManager.PERMISSION_GRANTED) {
                callPhoneNumber();
            }
        }
    }
    public void callPhoneNumber()
    {
        try
        {
            if(Build.VERSION.SDK_INT > 22)
            {
                if (ActivityCompat.checkSelfPermission(this,
Manifest.permission.CALL_PHONE) !=
                        PackageManager.PERMISSION_GRANTED) {

ActivityCompat.requestPermissions(MainActivity.this, new String[]
                        {Manifest.permission.CALL_PHONE}, 101);
                    return;
                }
                Intent callIntent = new Intent(Intent.ACTION_CALL);
                callIntent.setData(Uri.parse("tel:" +
txtPhone.getText().toString()));
                startActivity(callIntent);
            }
        }
        catch (Exception ex)
        {
            ex.printStackTrace();
        }
    }
}
```
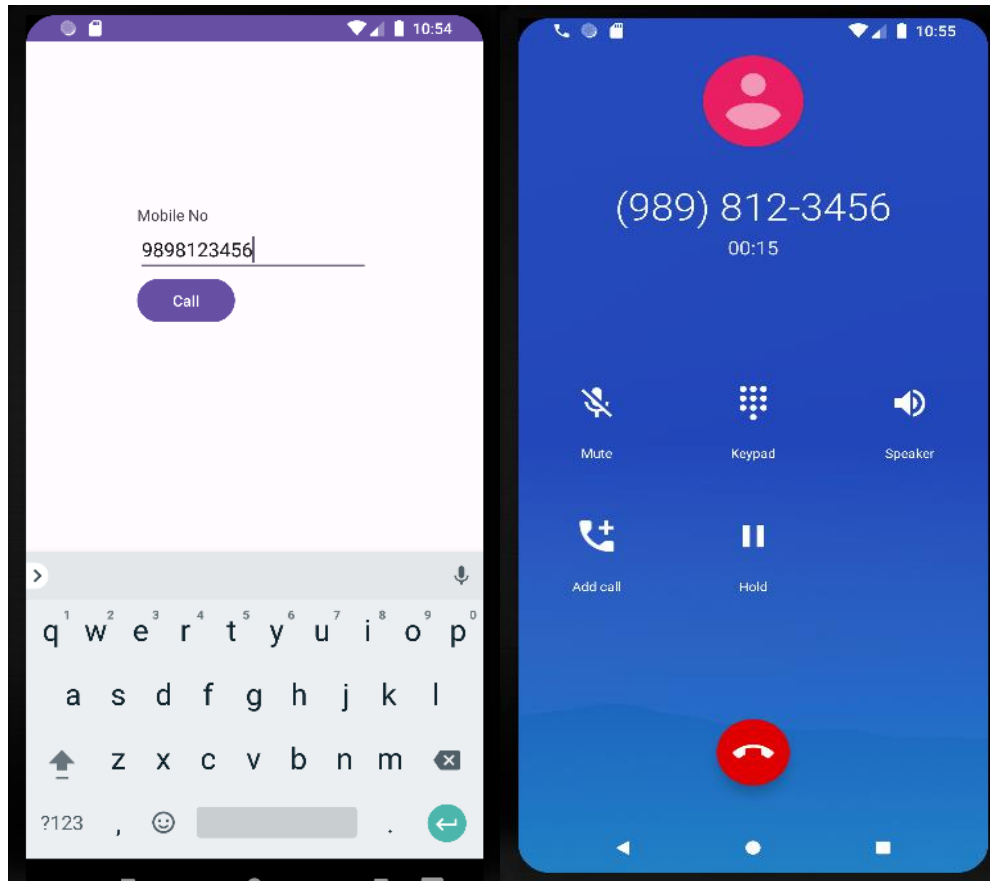
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Output :-

Q-2. Android Send SMS

AndroidManifest.xml

```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-feature
        android:name="android.hardware.telephony"
        android:required="false" />
    <uses-permission android:name="android.permission.SEND_SMS"/>
    <application
        android:allowBackup="true"
        android:dataExtractionRules="@xml/data_extraction_rules"
        android:fullBackupContent="@xml/backup_rules"
        android:icon="@mipmap/ic_launcher"
```

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```xml
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/Theme.Lab9_2"
        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>
        </activity>
    </application>

</manifest>
```

Activity_main.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    android:orientation="vertical"
android:layout_width="match_parent"
    android:layout_height="match_parent">
    <TextView
        android:id="@+id/fstTxt"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginLeft="100dp"
        android:layout_marginTop="150dp"
        android:text="Mobile No" />
    <EditText
        android:id="@+id/mblTxt"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginLeft="100dp"
        android:ems="10"/>
    <TextView
        android:id="@+id/secTxt"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Message"
        android:layout_marginLeft="100dp" />
    <EditText
        android:id="@+id/msgTxt"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginLeft="100dp"
        android:ems="10" />
```

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```xml
<Button
    android:id="@+id/btnSend"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginLeft="100dp"
    android:text="Send SMS" />
</LinearLayout>
```

Mainactivity.java

```java
package com.example.lab9_2;

import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.net.Uri;
import android.provider.Telephony;
import android.telephony.SmsManager;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;
import android.os.Bundle;

public class MainActivity extends AppCompatActivity {
    private EditText txtMobile;
    private EditText txtMessage;
    private Button btnSms;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        txtMobile = (EditText)findViewById(R.id.mblTxt);
        txtMessage = (EditText)findViewById(R.id.msgTxt);
        btnSms = (Button)findViewById(R.id.btnSend);

        btnSms.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                try{
                    Intent i = new Intent(Intent.ACTION_VIEW);
                    i.setData(Uri.parse("smsto:"));
                    i.setType("vnd.android-dir/mms-sms");
                    i.putExtra("address", new
String(txtMobile.getText().toString()));

i.putExtra("sms_body",txtMessage.getText().toString());
                    startActivity(Intent.createChooser(i, "Send sms
via:"));
                }
                catch(Exception e){
                    Toast.makeText(MainActivity.this, "SMS Failed to
```
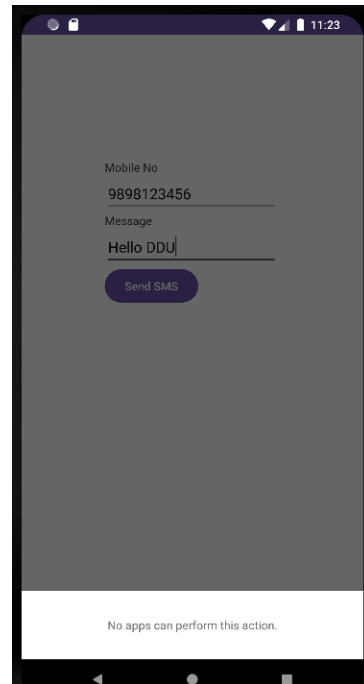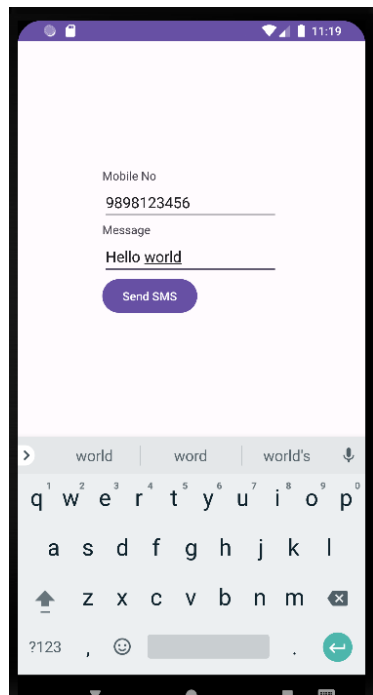
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```
Send, Please try again", Toast.LENGTH_SHORT).show();
                }
            }
        });
    }
}
```

Output :-

Q-3. Android Email

AndroidManifest.xml

```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">

    <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.Lab9_3"
        tools:targetApi="31">
        <activity
```

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```xml
            android:name=".MainActivity"
            android:exported="true">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

                <action android:name="android.intent.action.SEND"/>
                <category
android:name="android.intent.category.DEFAULT"/>
                <data android:mimeType="message/rfc822"/>
                <category
android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
    </application>

</manifest>
```

Activity_main.xml

```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:paddingLeft="20dp"
    android:paddingRight="20dp"
    android:orientation="vertical" >
    <EditText
        android:id="@+id/txtTo"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="To"/>
    <EditText
        android:id="@+id/txtSub"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Subject"/>
    <EditText
        android:id="@+id/txtMsg"
        android:layout_width="match_parent"
        android:layout_height="0dp"
        android:layout_weight="1"
        android:gravity="top"
        android:hint="Message"/>
    <Button
        android:layout_width="100dp"
        android:layout_height="wrap_content"
        android:layout_gravity="right"
        android:text="Send"
        android:id="@+id/btnSend"/>
</LinearLayout>
```

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Mainactivity.java

```java
package com.example.lab9_3;

import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;

import android.os.Bundle;

public class MainActivity extends AppCompatActivity {
    private EditText eTo;
    private EditText eSubject;
    private EditText eMsg;
    private Button btn;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        eTo = (EditText)findViewById(R.id.txtTo);
        eSubject = (EditText)findViewById(R.id.txtSub);
        eMsg = (EditText)findViewById(R.id.txtMsg);
        btn = (Button)findViewById(R.id.btnSend);
        btn.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent it = new Intent(Intent.ACTION_SEND);
                it.putExtra(Intent.EXTRA_EMAIL, new
String[]{eTo.getText().toString()});

it.putExtra(Intent.EXTRA_SUBJECT,eSubject.getText().toString());
                it.putExtra(Intent.EXTRA_TEXT,eMsg.getText());
                it.setType("message/rfc822");
                startActivity(Intent.createChooser(it,"Choose Mail
App"));
            }
        });
    }
}
```

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Output :-