



Experiment No. - 6

Student Name: Vivek Kumar

Branch: BE-CSE(LEET)

Semester: 6th

Subject Name: Mobile Application Development Lab

UID: 21BCS8129

Section/Group: 20BCS-ST-801/B

Date of Performance: 12/04/2023

Subject Code: 20CSP-356

1. Aim:

Create an Android-based application and use intent to send SMS.

2. Objective:

Understanding and analyse the specific requirement, possibilities and challenges when developing for a mobile application context.

3. System Requirements:

- Microsoft Windows 7/8/10 (32-bit or 64-bit)
- 4 GB RAM minimum, 8 GB RAM recommended (plus 1 GB for the Android Emulator)
- 2 GB of available disk space minimum, 4 GB recommended (500 MB for IDE plus 1.5 GB for Android SDK and emulator system image)
- 1280 x 800 minimum screen resolution
- Java JDK5 or later version
- Java Runtime Environment (JRE) 6 or higher.

4. Steps/Program:

- You will use Android Studio IDE to create an Android application and name it as tutorials point under a package in.innovateria.ws6application
- Modify src/MainActivity.java file and add required code to take care of sending sms.
- Modify layout XML file res/layout/activity_main.xml add any GUI component if required. I'm adding a simple GUI to take mobile number and SMS text to be sent and a simple button to send SMS.
- No need to define default string constants at res/values/strings.xml. Android studio takes care of default constants.
- Modify AndroidManifest.xml and Add the Permission "<uses-permission android:name="android.permission.SEND_SMS"/>"
- Run the application to launch Android emulator and verify the result of the changes done in the application.

5. Code:

activity_main.xml

```
<?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"
    android:paddingLeft="20dp"
    android:paddingTop="20dp"
    android:paddingRight="20dp"
    android:paddingBottom="20dp">
```

```
android:background="@color/white"
tools:context="MainActivity">>

<TextView
    android:id="@+id/textView1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentTop="true"
    android:layout_centerHorizontal="true"
    android:text="Experiment 6"
    android:textColor="@color/black"
    android:textSize="32sp" />

<TextView
    android:id="@+id/textView2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@+id/textView1"
    android:layout_centerHorizontal="true"
    android:text="By Vivek Kumar"
    android:textColor="#272726"
    android:layout_marginBottom="40dp"
    android:textSize="30sp" />

<EditText
    android:id="@+id/editText"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_below="@+id/textView2"
    android:layout_centerHorizontal="true"
    android:hint="Enter the Mobile Number"
    android:padding="8dp"
    android:textSize="28sp"
    android:background="@drawable/edittext_border"
    android:layout_marginBottom="8dp"
    android:textColorHint="#353434" />

<EditText
    android:id="@+id/editText2"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_below="@+id/editText"
    android:layout_alignStart="@+id/editText"
    android:layout_alignEnd="@+id/editText"
    android:hint="Enter Your Message"
    android:padding="8dp"
    android:textSize="28sp"
    android:background="@drawable/edittext_border"
    android:textColorHint="#353434" />
```

```
<Button
    android:id="@+id	btnSendSMS"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_below="@+id/editText2"
    android:layout_centerHorizontal="true"
    android:layout_marginTop="48dp"
    android:textSize="32sp"
    android:textAllCaps="false"
    android:background="@drawable/edittext_border"
    android:text="Send Sms" />
</RelativeLayout>
```

MainActivity.java

```
package in.innovateria.ws6application;

import androidx.appcompat.app.AppCompatActivity;
import androidx.core.app.ActivityCompat;
import androidx.core.content.ContextCompat;
import android.Manifest;
import android.content.pm.PackageManager;
import android.os.Bundle;
import android.telephony.SmsManager;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {
    private static final int MY_PERMISSIONS_REQUEST_SEND_SMS = 0;
    Button sendBtn;
    EditText txtphoneNo;
    EditText txtMessage;
    String phoneNo;
    String message;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        sendBtn = (Button) findViewById(R.id.btnSendSMS);
        txtphoneNo = (EditText) findViewById(R.id.editText);
        txtMessage = (EditText) findViewById(R.id.editText2);
        sendBtn.setOnClickListener(view -> sendSMSMessage());
    }
    protected void sendSMSMessage() {
        phoneNo = txtphoneNo.getText().toString();
        message = txtMessage.getText().toString();
```

```
if (ContextCompat.checkSelfPermission(this,  
        Manifest.permission.SEND_SMS)  
        != PackageManager.PERMISSION_GRANTED) {  
    if (ActivityCompat.shouldShowRequestPermissionRationale(this, Manifest.permission.SEND_SMS)) {  
        } else {  
            ActivityCompat.requestPermissions(this,  
                    new String[]{Manifest.permission.SEND_SMS},  
                    MY_PERMISSIONS_REQUEST_SEND_SMS);  
        }  
        Toast.makeText(this,"msg sent",Toast.LENGTH_LONG).show();  
    }  
}  
@Override  
public void onRequestPermissionsResult(int requestCode, String[] permissions, int[]  
        grantResults) {  
    super.onRequestPermissionsResult(requestCode, permissions, grantResults);  
    if (requestCode == MY_PERMISSIONS_REQUEST_SEND_SMS) {  
        if (grantResults.length > 0  
                && grantResults[0] == PackageManager.PERMISSION_GRANTED) {  
            SmsManager smsManager = SmsManager.getDefault();  
            smsManager.sendTextMessage(phoneNo, null, message, null, null);  
            Toast.makeText(getApplicationContext(), "SMS sent.",  
                    Toast.LENGTH_LONG).show();  
        } else {  
            Toast.makeText(getApplicationContext(),  
                    "SMS failed, please try again.", Toast.LENGTH_LONG).show();  
        }  
    }  
}
```

6. Result/Output:



File Edit View Navigate Code Refactor Build Run Tools VCS Window Help W56Application [E] W56Application - activity_main.xml [W56Application.app.main]

Project

app

- manifests
 - AndroidManifest.xml
- java
 - in.innovatoria.wsapplication
 - MainActivity
- res
 - drawable
 - edited_border.xml
 - ic_launcher_background.xml
 - ic_launcher_foreground.xml (v24)
 - layout
 - activity_main.xml
 - mipmap
 - values
 - xml
- res (generated)
- Gradle Scripts

activity_main.xml

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        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:text="Experiment 6"
        android:textColor="@color/black"
        android:textSize="32sp" />
```

RelativeLayout

activity_main.xml

MainActivity.java

AndroidManifest.xml

moto g(4) fusion(mot...)

Experiment 6
By Vivek Kumar
7986635348
Hi , This is Vivek Kumar and This is the Test Message for EXP-6 in MAD Lab.
Send Sms

Phone Mirror

Run: app

W/System: A resource failed to call close.

D/CompatibilityChangeReporter: Compat change id reported: 163400105; UID 10393; state: ENABLED

D/InputMethodManager: showSoftInput view=android.appcompat.widget.AppCompatEditText@fd5b193 VFED, CL, F.P.ID 43,277-1037,380 #7f0800ab app:id/editText aid=1073741824 flags=0 reason=SHOW_SOFT_INPUT

I/AssistStructure: Flattened final assist data: 1936 bytes, containing 1 windows, 11 views

I/OpenGLOpenGLRenderer: Davey! duration=9222540210729ms, Flags=0, FrameTimelineVsyncId=76762281, IntendedVsync=831826152450752, Vsync=831826150450751, InputEventId=517034458, HandleInputStart=83182615102367

D/InsetsController: showime(), fromime=true)

D/InsetsController: showime(), fromime=true)

W/InputConnectionWrapper: getSurroundingText on inactive InputConnection

I/OpenGLOpenGLRenderer: Davey! duration=9222540210729ms, Flags=0, FrameTimelineVsyncId=76765705, IntendedVsync=831861514981949, Vsync=831861639981944, InputEventId=0, HandleInputStart=831861641359084, Animat

D/InsetsController: showime(), fromime=true)

D/InputMethodManager: showSoftInput() view=androidx.appcompat.widget.AppCompatEditText@e306f1 VFED, CL, F.P.ID 43,397-1037,500 #7f0800ac app:id/editText aid=1073741825 flags=0 reason=SHOW_SOFT_INPUT

D/InsetsController: showime(), fromime=true)

Launch succeeded

Version Control Run Profiler Logcat App Quality Insights Build TODO Problems Terminal Services App Inspection Layout Inspector

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        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:text="Experiment 6"
        android:textColor="@color/black"
        android:textSize="32sp" />
```

RelativeLayout

activity_main.xml

MainActivity.java

AndroidManifest.xml

moto g(4) fusion(mot...)

Experiment 6
By Vivek Kumar
Monday, 5 Dec 6:24 am
Dear Customer, You have a missed call from 831861639981944. The last missed call was at 05:29 AM on 05-Dec-2022. Thane, Maharashtra, India.
Phone Mirror
Hi , This is Vivek Kumar and This is the Test Message for EXP-6 in MAD Lab.
Okay

Version Control Run Profiler Logcat App Quality Insights Build TODO Problems Terminal Services App Inspection Layout Inspector

Learning outcomes (What I have learnt):

- To design an android application which uses SEND_SMS permission in android studio.
- Learnt about running application on android studio.
- Creating Application by Implementing Message Sending App.