**Ex.No. : 07 Date:27.02.2025**

**RegisterNo.:221701004 Name:Adhithya A**

Telephonyservices

# Aim

ImplementanapplicationtogetTelephonyservices.

## Procedure:

**Step1:**File->NewProject

ProvidetheapplicationnameandClick“Next”

**Step2:**Selectthetargetandroiddevices

SelecttheminimumSDKtoruntheapplication.Click“Next”.

**Step3:**Choosetheactivityfortheapplication(Bydefaultchoose“BlankActivity).

Click “Next”.

**Step4:**Enteractivitynameandclick&quot;Finish&quot;.

**Step5:**Edittheprogram.

**Step 6:** Runtheapplication,2-waystorunthe application.

1. Runningthroughemulator
2. Runningthroughmobiledevice

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## AndroidManifest.xml

<manifest xmlns:android=["http://schemas.android.com/apk/res/android](http://schemas.android.com/apk/res/android)"package="com.example.ex8">

<uses-permissionandroid:name="android.permission.ACCESS\_FINE\_LOCATION"/>

<uses-permissionandroid:name="android.permission.READ\_PHONE\_STATE"/>

<uses-permissionandroid:name="android.permission.ACCESS\_COARSE\_LOCATION"/>

<applicationandroid:allowBackup="true"android:label="Telephony Info"android:theme="@style/Theme.EX8">

<activity android:name=".MainActivity" android:exported="true">

<intent-filter>

<actionandroid:name="android.intent.action.MAIN"/>

<categoryandroid:name="android.intent.category.LAUNCHER"/>

</intent-filter>

</activity>

</application>

</manifest>

## Activity\_main.xml

<?xmlversion="1.0"encoding="utf-8"?>

<ScrollView xmlns:android=["http://sche](http://sche/) mas.android.com/apk/res/a ndroid"

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android:layout\_width="match\_parent"

android:layout\_height="match\_parent">

<LinearLayout

android:orientation="vertical"

android:padding="16dp"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content">

<TextView

android:id="@+id/tvTeleph onyInfo"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

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android:text="Telephony Info"

android:textStyle="bold"

android:textSize="16sp"/>

<TextView

android:id="@+id/tvLocatio n"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:text="Location"

android:textStyle="bold"

android:layout\_marginTop

="20dp"

android:textSize="16sp"/>

<TextView

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android:id="@+id/tvAddres s"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:text="Address"

android:textStyle="bold"

android:layout\_marginTop

="20dp"

android:textSize="16sp"/>

<Button

android:id="@+id/btnFetch"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:text="Fetch

Info"

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android:layout\_marginTop

="30dp"/>

</LinearLayout>

</ScrollView>

## MainActivity.kt

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packagecom.example.ex7

importandroid.Manifest

import android.content.pm.PackageManager import android.location.Geocoder

importandroid.location.Location

importandroid.location.LocationManager import android.os.Bundle

importandroid.telephony.TelephonyManager import android.widget.Button

importandroid.widget.TextView

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

importjava.util.\*

classMainActivity:AppCompatActivity(){

privatelateinitvartvTelephonyInfo:TextView private lateinit var tvLocation: TextView private lateinit var tvAddress: TextView private lateinit var btnFetch: Button

privatevalLOCATION\_PERMISSION=101

privatelateinitvarlocationManager:LocationManager

overridefunonCreate(savedInstanceState:Bundle?){ super.onCreate(savedInstanceState) setContentView(R.layout.activity\_main)

tvTelephonyInfo = findViewById(R.id.tvTelephonyInfo) tvLocation = findViewById(R.id.tvLocation)

tvAddress= findViewById(R.id.tvAddress) btnFetch = findViewById(R.id.btnFetch)

btnFetch.setOnClickListener {if (checkPermissions()) {

displayTelephonyInfo() fetchLocation()

}else{

requestPermissions()

*}*

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*}*

*}*

privatefuncheckPermissions():Boolean{

return ActivityCompat.checkSelfPermission(this, Manifest.permission.ACCESS\_FINE\_LOCATION)== PackageManager.PERMISSION\_GRANTED &&

ActivityCompat.checkSelfPermission(this, Manifest.permission.READ\_PHONE\_STATE) == PackageManager.PERMISSION\_GRANTED

*}*

private fun requestPermissions() { ActivityCompat.requestPermissions(this,

arrayOf(Manifest.permission.ACCESS\_FINE\_LOCATION,Manifest.permission.READ\_PHONE\_STATE),

LOCATION\_PERMISSION)

*}*

override fun onRequestPermissionsResult(requestCode: Int, permissions: Array<out String>, grantResults: IntArray) {

if (requestCode == LOCATION\_PERMISSION && grantResults.isNotEmpty() && grantResults[0] == PackageManager.PERMISSION\_GRANTED) {

displayTelephonyInfo() fetchLocation()

}else{

tvTelephonyInfo.text="PermissionDenied" tvLocation.text = "Permission Denied"

*}*

*}*

privatefundisplayTelephonyInfo(){

valtelephonyManager=getSystemService(TELEPHONY\_SERVICE)as TelephonyManager

valinfo="""

NetworkOperator:${telephonyManager.networkOperatorName}SIM Country: ${telephonyManager.simCountryIso}

SIMOperator:${telephonyManager.simOperatorName} Phone Type: ${when (telephonyManager.phoneType) {

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TelephonyManager.PHONE\_TYPE\_GSM ->"GSM" TelephonyManager.PHONE\_TYPE\_CDMA ->"CDMA" else ->"Unknown"

*}}*

""".trimIndent()

tvTelephonyInfo.text=info

*}*

privatefunfetchLocation(){

locationManager=getSystemService(LOCATION\_SERVICE)as LocationManager

if(ActivityCompat.checkSelfPermission(this, Manifest.permission.ACCESS\_FINE\_LOCATION)!=

PackageManager.PERMISSION\_GRANTED)return

val location: Location? = locationManager.getLastKnownLocation(LocationManager.GPS\_PROVIDER)

*?:*

locationManager.getLastKnownLocation(LocationManager.NETWORK\_PROVIDER

*)*

if(location!=null){

val lat = location.latitude vallon=location.longitude

tvLocation.text = "Latitude: $lat\nLongitude: $lon" getAddress(lat, lon)

}else{

tvLocation.text="Unabletogetlocation."

*}*

*}*

privatefungetAddress(lat:Double,lon:Double){ val geocoder = Geocoder(this, Locale.getDefault()) try {

valaddressList=geocoder.getFromLocation(lat,lon,1) if (!addressList.isNullOrEmpty()) {

valaddress=addressList[0]

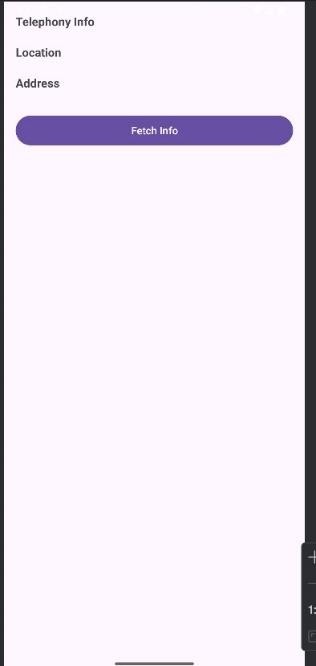
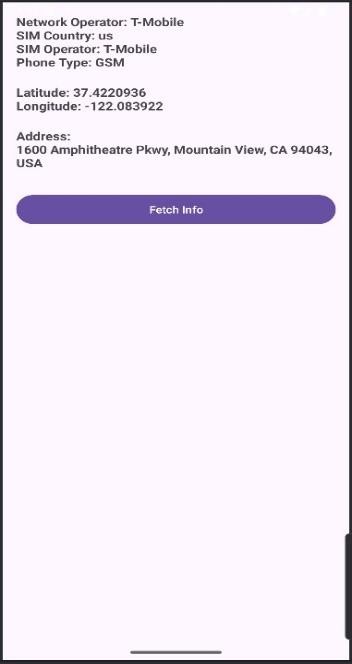
valfullAddress= address.getAddressLine(0)

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tvAddress.text="Address:\n$fullAddress"



}else{

tvAddress.text= "Unabletoget address."

*}*

}catch(e:Exception){ e.printStackTrace()

tvAddress.text="Geocodererror:${e.localizedMessage}"

*}*

*}*

*}*

***Output****:*

# Result:

TheApplicationwasdevelopedusingKotlininAndroidStudio.

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