**Pract 12th :**

**Programming Security and permissions**

**Main Activity.xml**

<?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:background="@color/black"

android:gravity="center"

tools:context=".MainActivity">

<TextView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="permissions"

android:textSize="30dp"

android:textColor="@color/white" />

<Button

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:id="@+id/Contacts"

android:text="Access Contacts"

android:layout\_marginTop="20dp"/>

<Button

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:id="@+id/Calendar"

android:text="Access Calendar"

android:layout\_marginTop="20dp"/>

<Button

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:id="@+id/Camera"

android:text="Access Camera"

android:layout\_marginTop="20dp"/>

<Button

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:id="@+id/Gallery"

android:text="Access Gallery"

android:layout\_marginTop="20dp"/>

</LinearLayout>

**Main Activity.kt**

package com.example.prac12

import android.content.pm.PackageManager

import androidx.appcompat.app.AppCompatActivity

import android.os.Bundle

import android.widget.Button

import android.widget.Toast

import androidx.core.app.ActivityCompat

import androidx.core.content.ContextCompat

class MainActivity : AppCompatActivity() {

private val CONTACTS\_REQUEST\_CODE = 1

private val CALENDAR\_REQUEST\_CODE = 2

private val CAMERA\_REQUEST\_CODE = 3

private val MEDIA\_REQUEST\_CODE = 4

override fun onCreate(savedInstanceState: Bundle?) {

super.onCreate(savedInstanceState)

setContentView(R.layout.activity\_main)

val btn\_contact=findViewById<Button>(R.id.Contacts)

val btn\_calender=findViewById<Button>(R.id.Calendar)

val btn\_camera=findViewById<Button>(R.id.Camera)

val btn\_gallery=findViewById<Button>(R.id.Gallery)

btn\_contact.setOnClickListener {

requestedPermissions(android.Manifest.permission.READ\_CONTACTS,CONTACTS\_REQUEST\_CODE)

}

btn\_calender.setOnClickListener {

requestedPermissions(android.Manifest.permission.READ\_CALENDAR,CALENDAR\_REQUEST\_CODE)

}

btn\_camera.setOnClickListener {

requestedPermissions(android.Manifest.permission.CAMERA,CAMERA\_REQUEST\_CODE)

}

btn\_gallery.setOnClickListener {

requestedPermissions(android.Manifest.permission.ACCESS\_MEDIA\_LOCATION,MEDIA\_REQUEST\_CODE)

}

}

private fun requestedPermissions(permission: String,requestCode: Int){

if (ContextCompat.checkSelfPermission(this,permission)!=PackageManager.PERMISSION\_GRANTED){

ActivityCompat.requestPermissions(this, arrayOf(permission),requestCode)

}else{

Toast.makeText(this,"Permission granted",Toast.LENGTH\_SHORT).show()

}

}

}

**Manifest.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"/>

<uses-permission android:name="android.permission.READ\_CALENDAR"/>

<uses-permission android:name="android.permission.CAMERA"/>

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

<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:supportsRtl="true"

android:theme="@style/Theme.Prac12"

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>