MOBILE APPLICATION DEVELOPMENT

LAB EXERCISE 5b- REGISTER RECEIVER AND SEND BROADCAST

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**Registering Receiver and Sending Broadcast**

Introduction:

Broadcast Receivers in Android are components that listen for system-wide or app-specific broadcast messages. These messages are sent using intents.

Types of Broadcast Receivers:

* Static Broadcast Receiver: Declared in the AndroidManifest.xml.
* Dynamic Broadcast Receiver: Registered in Java/Kotlin code during runtime**.**

1. **Creating a Activity for Receiver:**

**package** com.example.broadcast;  
  
  
**import** android.content.BroadcastReceiver;  
**import** android.content.Context;  
**import** android.content.Intent;  
**import** android.widget.Toast;  
  
**public class** MyReceiver **extends** BroadcastReceiver {  
 @Override  
 **public void** onReceive(Context context, Intent intent) {  
 String msg = intent.getStringExtra(**"message"**);  
 Toast.*makeText*(context, **"Broadcast Received: "** + msg, Toast.***LENGTH\_SHORT***).show();  
 }  
}

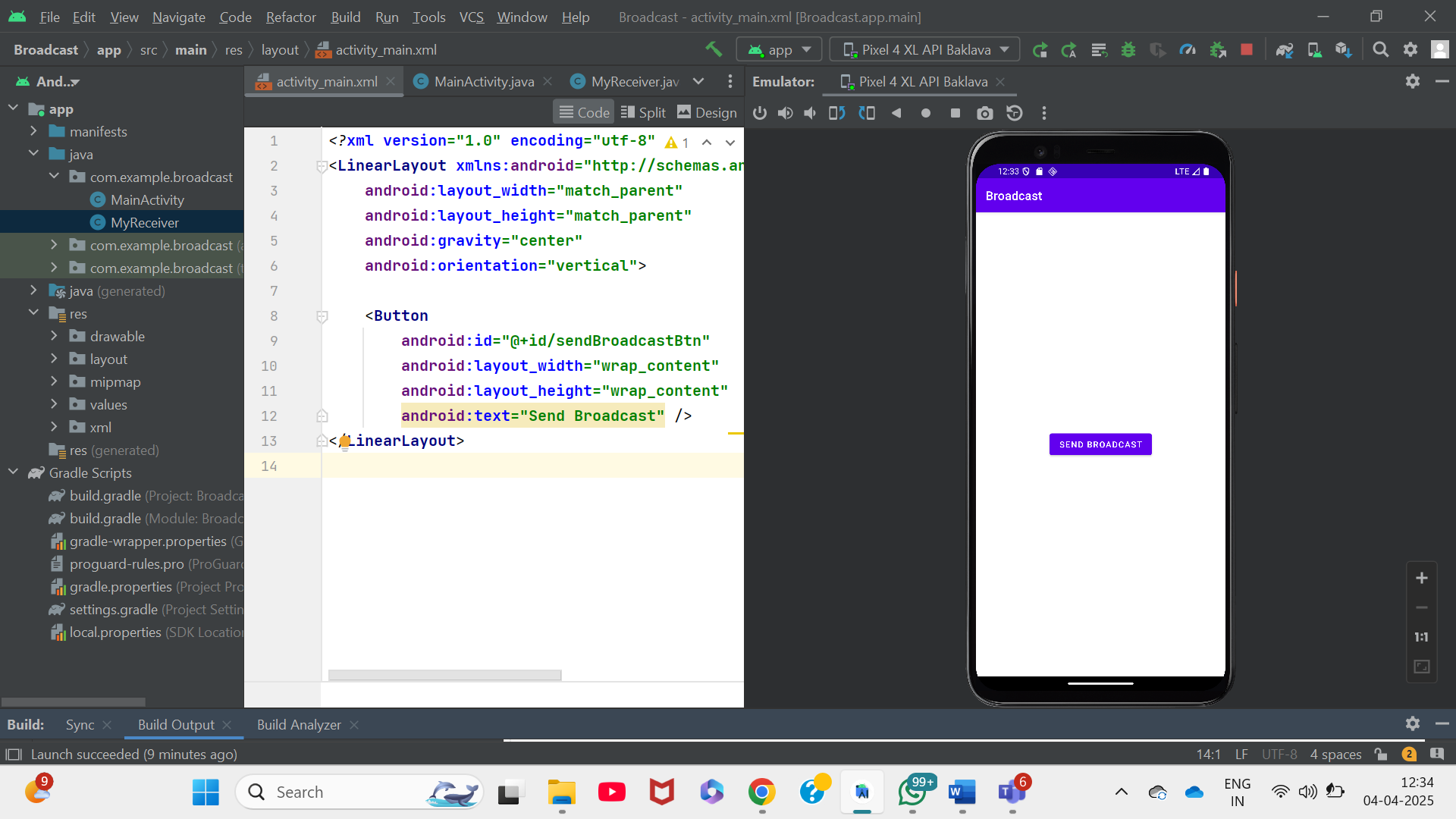
MainActivity.java:

**package** com.example.broadcast;  
  
  
**import** androidx.appcompat.app.AppCompatActivity;  
**import** android.content.Intent;  
**import** android.content.IntentFilter;  
**import** android.os.Bundle;  
**import** android.view.View;  
**import** android.widget.Button;  
  
**public class** MainActivity **extends** AppCompatActivity {  
  
 MyReceiver **receiver** = **new** MyReceiver(); *// Create receiver object* @Override  
 **protected void** onCreate(Bundle savedInstanceState) {  
 **super**.onCreate(savedInstanceState);  
 setContentView(R.layout.***activity\_main***);  
  
 *// Register the receiver (dynamically)* IntentFilter filter = **new** IntentFilter(**"com.example.broadcastdemo.CUSTOM\_BROADCAST"**);  
 registerReceiver(**receiver**, filter);  
  
 Button sendBtn = findViewById(R.id.***sendBroadcastBtn***);  
 sendBtn.setOnClickListener(**new** View.OnClickListener() {  
 @Override  
 **public void** onClick(View v) {  
 Intent intent = **new** Intent(**"com.example.broadcastdemo.CUSTOM\_BROADCAST"**);  
 intent.putExtra(**"message"**, **"Hello from MainActivity!"**);  
 sendBroadcast(intent);  
 }  
 });  
 }  
  
 @Override  
 **protected void** onDestroy() {  
 **super**.onDestroy();  
 unregisterReceiver(**receiver**); *// Unregister to avoid memory leaks* }  
}

**activity\_main.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:gravity="center"  
 android:orientation="vertical"**>  
  
 <**Button  
 android:id="@+id/sendBroadcastBtn"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Send Broadcast"** />  
</**LinearLayout**>

Output:



A screenshot of a computer

AI-generated content may be incorrect.