MULTIPLE ACTIVITIES AND INTENTS

TOPICS

- Multiple Activities
- Intents Explicit
- Intents Implicit
- Pass data between Activities
- Starting an Activity for result

- An Intent is a messaging object you can use to request an action from another app component(Activity).
- The fundamental use-cases for Intent are:

1. **To start an activity:**
2. **To start a service:** component that performs operations in the background without a user interface
3. **To deliver a broadcast:** system boots up or the device starts charging.

TYPE OF INTENTS

- Intents are objects of the android.content.Intent
- We can add data to the intent (using Bundle).
- android provide two type of Intents
- **Explicit intents :** specify the component to start by name
- **Implicit intents** : do not name a specific component, but instead declare a general action to perform

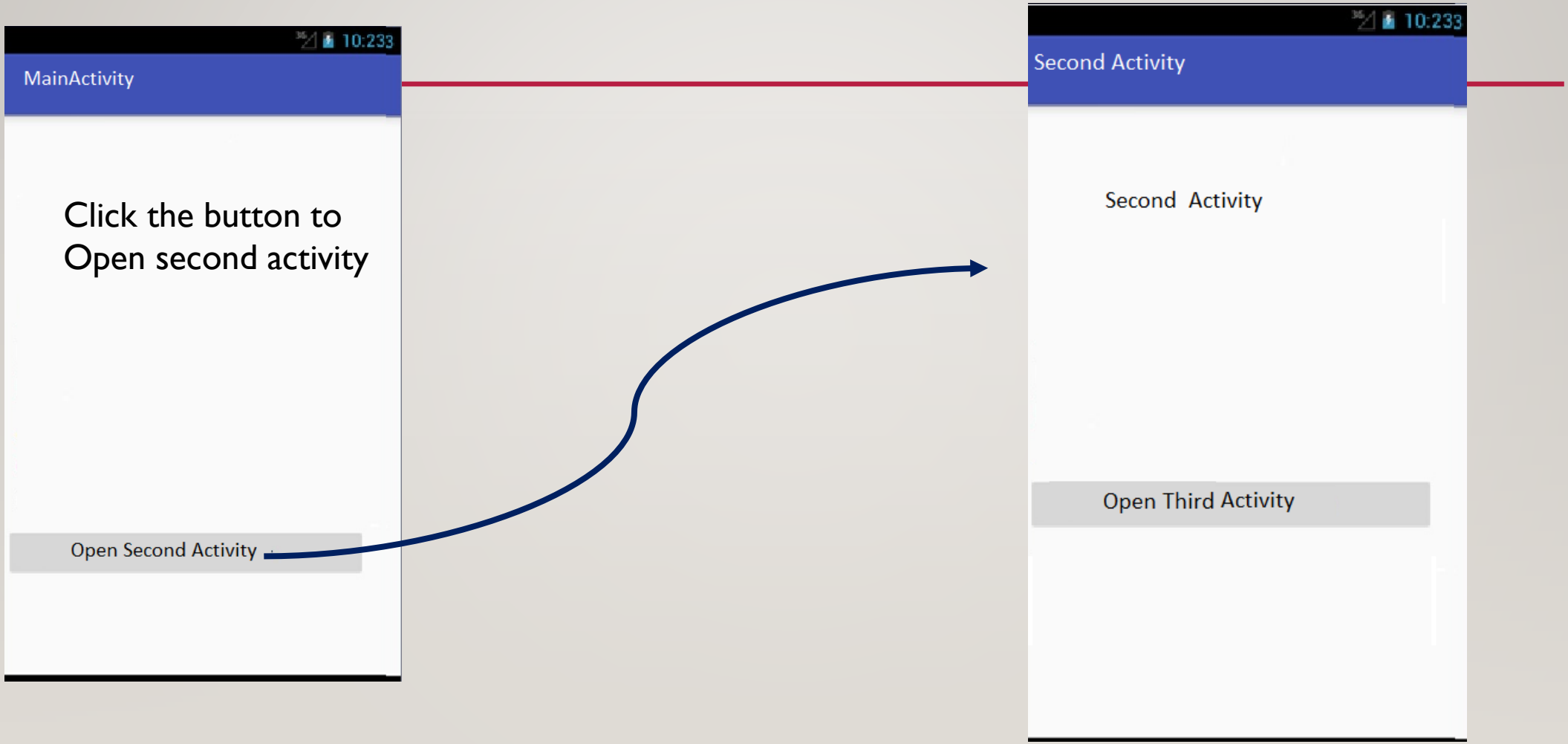
EXPLICIT INTENTS

to Start activity or service

To start an activity or Service use the methods

- startActivity/startActivityForResult – to launch an Activity
- startService* – to start a background service

EXAMPLE

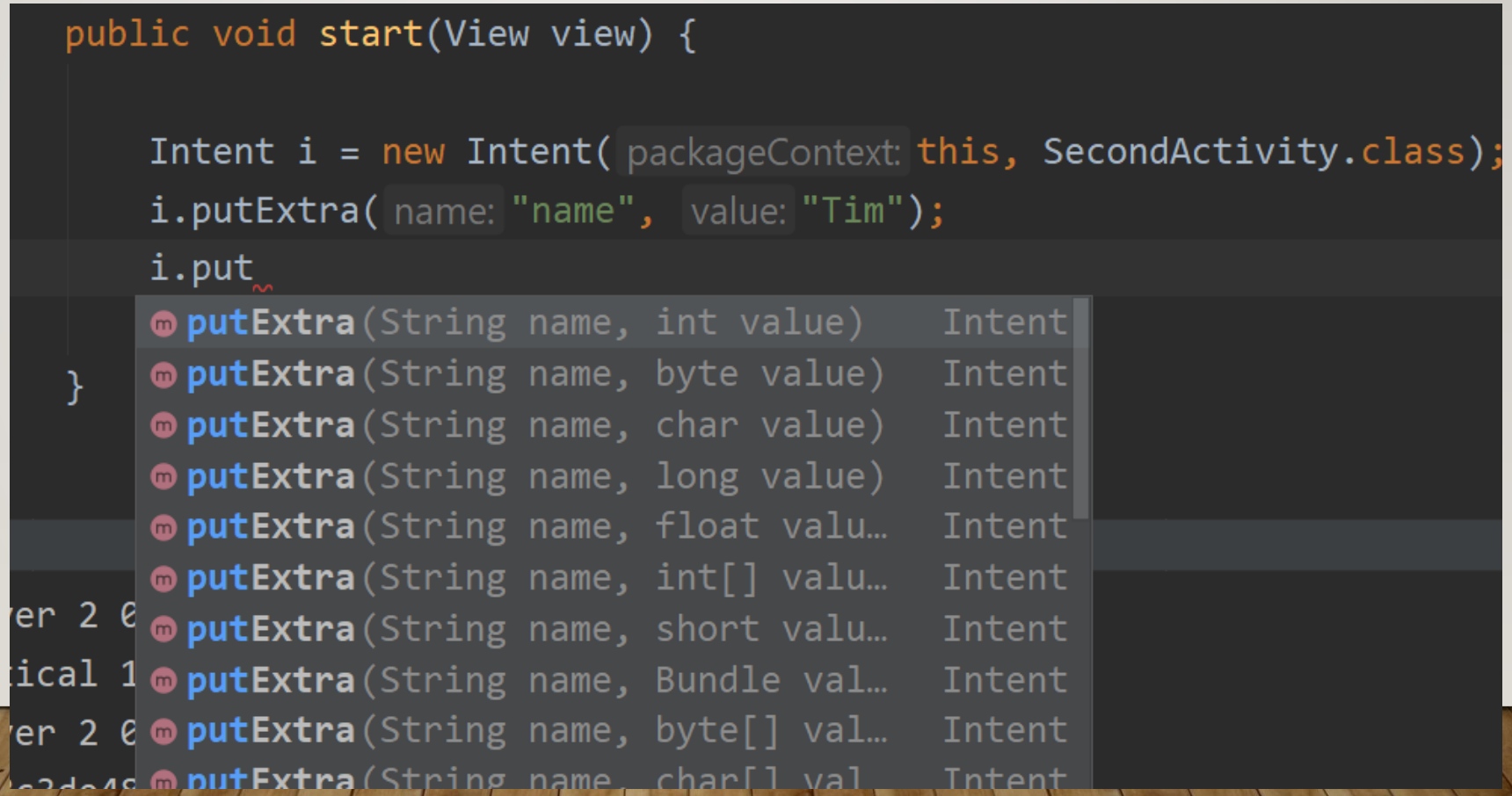

10:233
MainActivity
Click the button to
Open second activity
Open Second Activity
10:233
Second Activity
Second Activity
Open Third Activity

EXAMPLE EXPLICIT INTENTS

```
public void goToActivity2(View view){ //
Intent intent = new Intent(this,SecondActivity.class);
startActivity (intent);
}
```

PASSING DATA BETWEEN ACTIVITIES

Embedding data with an intent using putExtra method as shown below



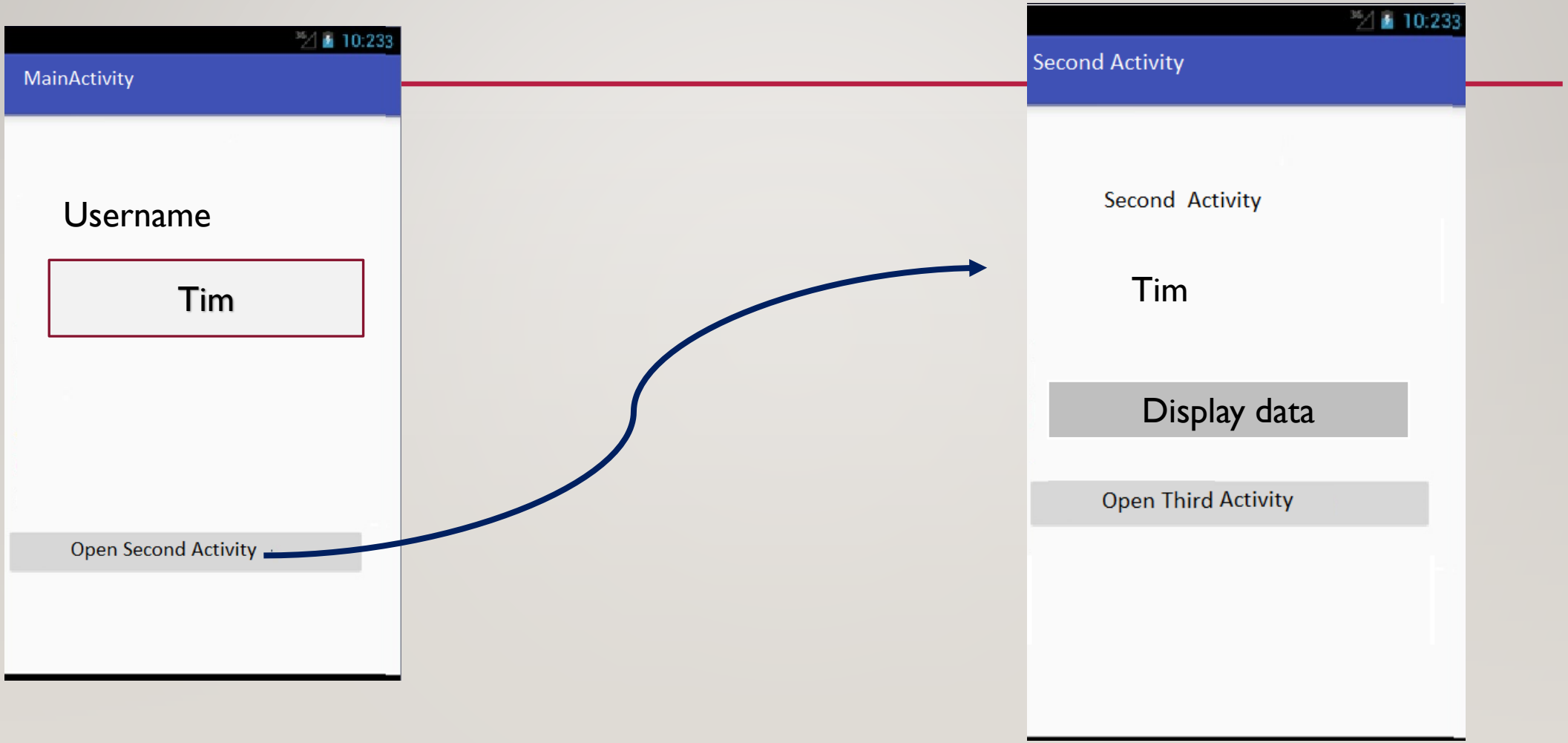
EXTRACTING DATA FROM THE LAUNCHING INTENT

- If we can extract data from the want the intent that was used to launch our activity by

```
// 1- get the reference to the intent (that was used in StartActivity...)
// e.g. this can be done in on Create method
Intent intent = getIntent();

// 2- get the data from intent
if (intent != null) {
    // will be null if name not set in intent
    String name  = intent.getStringExtra("name");
}
```

EXAMPLE PASSING DATA BETWEEN ACTIVITIES

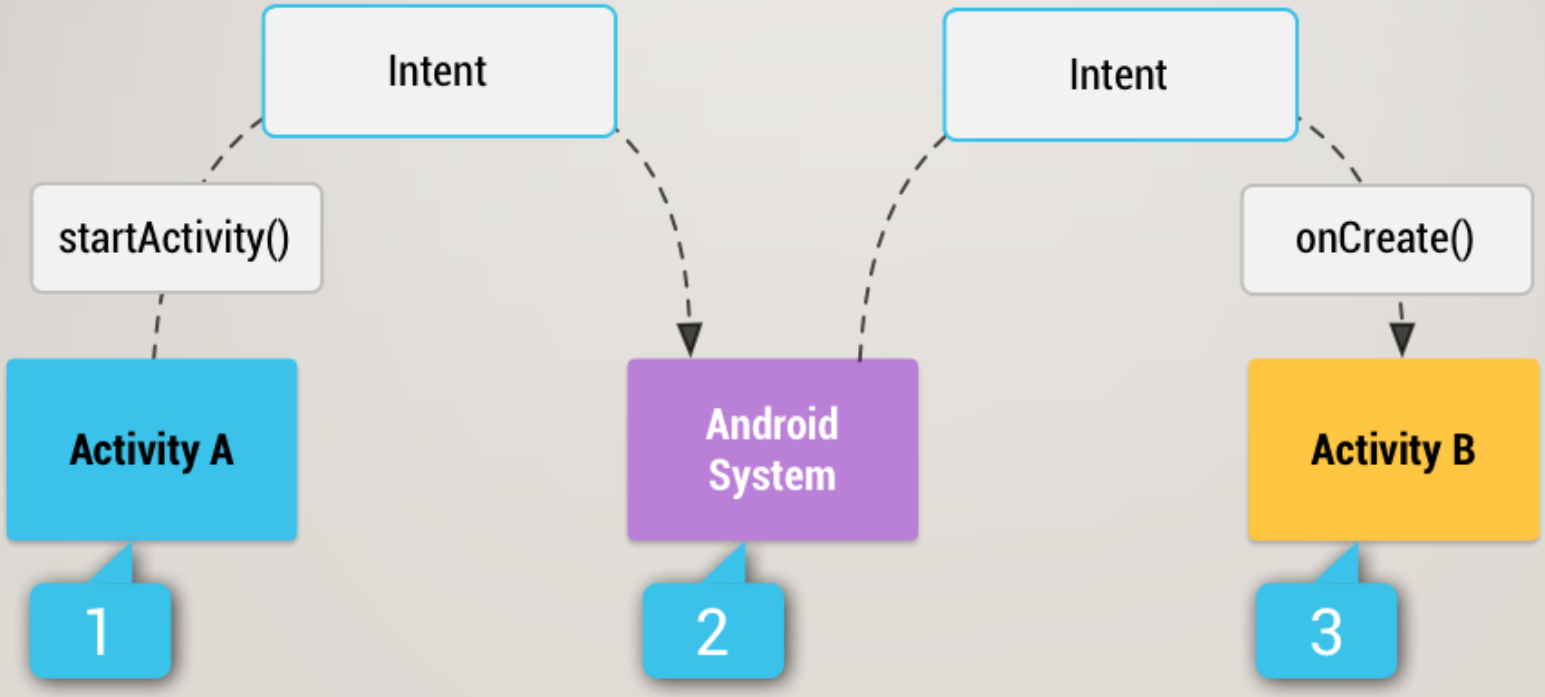


STARTACTIVITYFORRESULT

- Launch an activity for which you would like a result when it finished
- When this activity exits, your onActivityResult() method will be called with the given requestCode.
- Using a negative requestCode is the same as calling startActivity(Intent) (the activity is not launched as a sub-activity).

IMPLICIT INTENT

- the Android system finds the appropriate component to start by comparing the contents of the intent to the *intent filters* declared in the **manifest file**
- **String url = "http://www.google.com";**
- **Intent i = new Intent(Intent.ACTION_VIEW);**
- **i.setData(Uri.parse(url));**
- **startActivity(i);**


Intent
Intent
startActivity()
onCreate()
Activity A
Android System
Activity B
1
2
3

Intent primary information

- **Component name** The name of the component to start
- **Action** A string that specifies the generic action to perform

  ACTION_VIEW

  ACTION_SEND

- Data

  The URI (a Uri object) that references the data to be acted

- **category** Gives additional information about the action to execute. For example, CATEGORY_LAUNCHER
- **type --** Specifies an explicit type (a MIME type)
- **extras --** This is a Bundle of any additional information.

EXAMPLE 1

- **String url = "http://www.google.com";**
- **Intent i = new Intent(Intent.ACTION_VIEW);**
- **i.setData(Uri.parse(url));**
- **startActivity(i);**

EXAMPLE 2

```
// Create the text message with a string
Intent sendIntent = new Intent();
sendIntent.setAction(Intent.ACTION_SEND);
sendIntent.putExtra(Intent.EXTRA_TEXT, textMessage);
sendIntent.setType("text/plain");

// Verify that the intent will resolve to an activity
if (sendIntent.resolveActivity(getPackageManager()) != null) {
    startActivity(sendIntent);
```

REFERENCES

- https://developer.android.com/reference/android/content/Intent
- https://developer.android.com/guide/components/intents-filters