

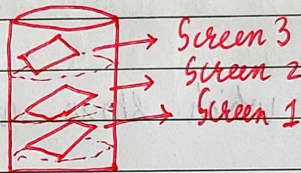
Chapter 4 - MultiScreen Apps

An Activity = Screen

One activity in an app is specified as the "main" activity which is shown to the user when the app is launched.

Intent

Whenever a new activity starts, previous activity is stopped but the system preserves the activity in a stack. This way when a new activity starts, that new activity is pushed onto the back stack and takes user focus.



Backstack

⇒ LIFO logic
last in first out

An activity is started with an Intent. An intent is a message from one activity to another activity. We can pass information from one activity to another using intents.

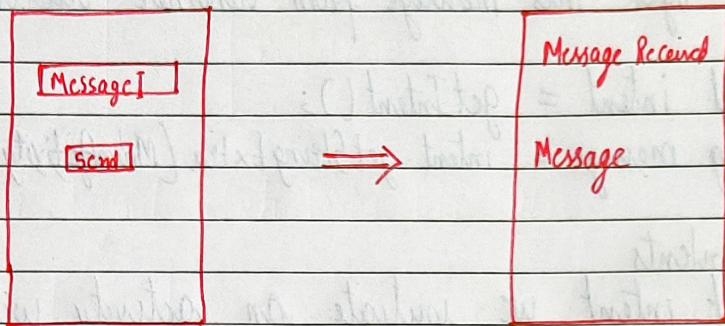
Types of Intents

An Intent can be of two types:

- 1> Implicit Intent : → Target component not known.
→ We have a general action to perform
- 2> Explicit Intent : → Target of the intent is known
→ Fully classified classname of a specific activity known.

Our First MultiScreen App

We will now create an app which has an EditText on the first activity. User enters a message and clicks a button to send this message to second activity.



We will now create this App using the following steps:

- 1> Create a new app
- 2> Design the layout for the first app
- 3> Create button click listeners
- 4> Create the second activity
- 5> Add proper links & metadata in Manifest.xml
- 6> Add an Intent using the following code:

```
Intent intent = new Intent(this, SecondActivity.class);  
startActivity(intent);
```

⇒ This is an explicit Intent

Sending data cross activities

We can send data cross activities using intent extras.

Intent extras are key/value pairs in a Bundle.

A Bundle is a collection of data stored as key/value pairs.

Syntax for Intent.putExtra looks like this:

```
intent.putExtra("key", "value");
```

We can get this message from another activity using:

```
Intent intent = getIntent();
```

```
String message = intent.getStringExtra("key");
```

Implicit Intents

In implicit intent, we initiate an activity without knowing which app or activity will handle the task.

Ex: Take a photo, open this URL etc.

Activities with matching intent filters opt in to perform the action.

Creating an App with Implicit Intent

Following code starts an activity to open a URL

```
String url = "Some-URL" eg. https://codewithharry.com
```

```
Intent intent = new Intent(Intent.ACTION_VIEW, webpage);
```

```
if (intent.resolveActivity(getPackageManager()) != null) {  
    startActivity(intent);  
}
```

```
else {  
    // cannot handle intent  
}
```

```
}
```


Similarly we can handle intents with other actions.
For eg: open a location, share text etc.
See android docs for more.