**PRACTICAL # 05**

**OBJECT:**

Passing Data Between Activities

**THEORY:**

Different activities allow passing data between them and returning results. You can pass data from one activity to another through intent extras. Extras are just arbitrary data that can be passed to an intent. An extra is a key / value pair that is passed to an intent. The started activity can read this extra data.

**Creating and Passing an Extra**

First, create the Intent.

Second, call putExtra().

First argument contains the key.

Second argument contains the value.

Example:

*myIntent.putExtra(“arg1”, “val1”);*

**Reading an Extra**

The getIntent() method returns an Intent object. It’s methods get values of a particular type:

getBooleanExtra(), getStringExtra(), getIntExtra(), etc…

**Opening Second Activity Passing Data**

Add a new user defined activity (empty activity) in Android studio. The callback method in Figure 1 starts a new activity and passes it data.

putExtra method of intent is used to pass the data to new starting activity.

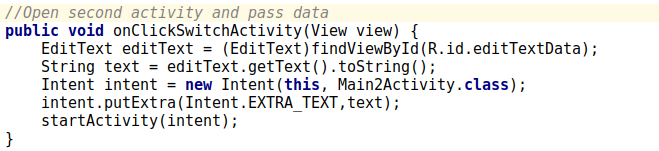


Figure 1: Switching to new activity and passing data to it.

**Reading Data in Second Activity**

On second activity, use the following code to get the data from first activity.

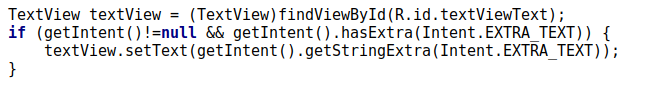


Figure 2: Reading data in the new activity.

Figure 2 shows how to read data from first activity and use it to set the text value of a textView on the UI of second activity.

**Returning an Activity Result**

Sometimes we need to return a result from an activity. We start an activity as before, but, pass a request code when starting the activity.

- The request code is an integer

- It is send to the new (started) activity

- The result is then returned to the parent

Call startActivityForResult() instead of startActivity().

The first argument contains the intent.

The second argument contains the integer result code.

The result is returned through overriding onActivityResult() in the parent activity.

To return the result, you call one of two forms of setResult()

The first returns a result code

Typically: Activity.RESULT\_CANCELED or Activity.RESULT\_OK

The second return the result code and intent data

Call finish() to return from the activity

Example 1: Passing data to new activity

Start the activity as before with startActivity except call startActivityForResult.

The first argument contains the activity intent as before.

The second argument contains an integer request code.

It also tells from which activity are we returning.

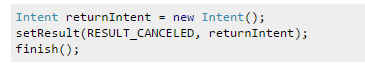


Example 2: Return a code but no data.

The intent is empty and has no extras.

RESULT\_CANCELED is an android constant.

Call finish() to return to the calling Activity.

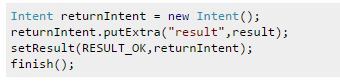


Example 3: Return a code and data.

The Intent has extra data.

We change the return code.

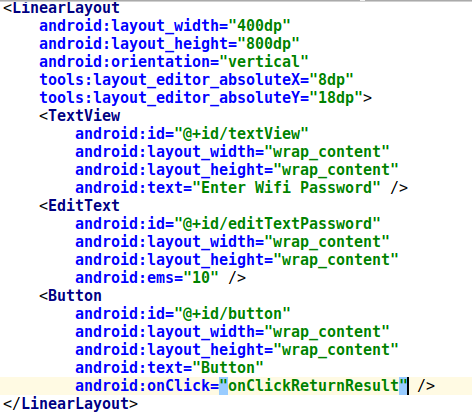
Finally, in the calling activity, handle the onActivityResult() event callback:



Example: Get Wifi Password

Add a new activity, name it for example ReturnResultActivity.

Add a layout resource file for the activity with a LinearLayout container, that contains a TextView, EditText and Button elements.



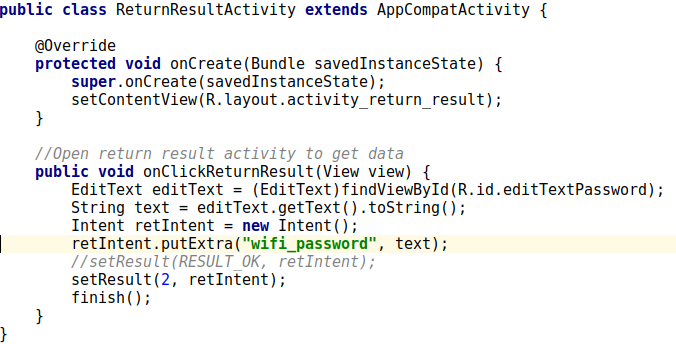
GetWifiPasswordActivity:

In the new activity, add an onClick callback handler for the button to return the result (password), in the source code file of the activity.

In onClick handler, the password value is read from the EditText element and is put in an Intent object.

Next, setResult function is called to set the result with this intent object. Finally, finish function is called to close this activity and return to caller activity.

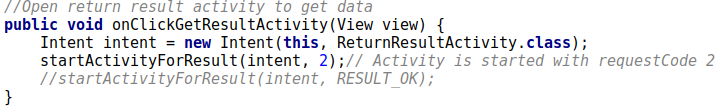
Code for ReturnResultActivity :



**Creating new activity for Result:**

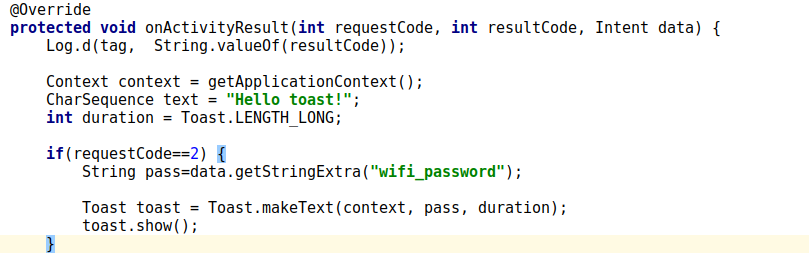
In the MainActivity class, add a button click callback handler to invoke new activity for getting password.

An intent is created for the new activity, but it is now passed to the method startActivityForResult() which takes two arguments; intent and the requestCode



**Getting Result from Activity:**

In the MainActivity class, override onActivityResult() to retrieve the result from the called activity.



**ACTIVITIES**

**Activity 1**

Create a login application. From login activity, pass username and password to second activity called home and check if the username and password are both “admin” and “admin”. If its correct, then start remain on the same activity. If its incorrect, then go back to login activity with passing message of incorrect login credentials.

**REVIEW QUESTIONS**

1. What is an intent?
2. How does intent passes data to other activities?
3. How is data retrieved from an intent?
4. How do we return results from intents?