Tutorial 5 – Gestures

1. Create a new project and name it “Gestures.” Finish creating the project without making any other adjustments.
2. Delete “Hello World!” then drag a Large Text to the middle of the Android Design Screen. Give the Large Text an id of “message”.
3. To import packages that we require, we will need to add a dependency. To do so, we will Right-click on the App folder > Open Module Settings > Dependencies Tab. Click the green plus button near the top right of the window. Look for “support-v4 (com.android.support:supportv4.22.2.0)” and select it, then click the OK button. Click OK on the next window as well.
4. Head over to the MainActivity.Java file so we can start coding.
5. Once you have the file open, lets import the following:

*// Import Libraries***import** android.widget.TextView;  
**import** android.view.MotionEvent;  
**import** android.support.v4.view.GestureDetectorCompat;

1. Now we need to “implement” a few classes, GestureDetector.OnGestureListener and GestureDetector.OnDoubleTapListener. Our class declaration will look like this:

**public class** MainActivity **extends** Activity **implements** GestureDetector.OnGestureListener,  
GestureDetector.OnDoubleTapListener{

//Other methods

}

1. This line of code will remain underlined red for a little while, this is because when we implement other classes, we are making a promise to use the methods, so we are required to call on them. We will do this soon.
2. Create a few objects within the class MainActivity:

*// Create Objects***private** TextView **message**;  
**private** GestureDetectorCompat **myGesture**;

1. Now, we must reference our TextView “message” as well as set our GestureDetectorCompat, which handles the main gestures, then set our OnDoubleTapListner, which handles double taps and a few other gestures. This will be done in the onCreate Method. See Below:

*// Reference to object***message** = (TextView)findViewById(R.id.***message***);  
  
*// 1. context - the application's context  
// 2. listener - invoked for callbacks***this**.**myGesture** = **new** GestureDetectorCompat(**this**,**this**);  
  
*// 'this' is the listener***myGesture**.setOnDoubleTapListener(**this**);

1. Now it’s time to call the methods from the implemented classes. Outside, and underneath the onClick Method, create a blank line, then hold the ALT key, and press the Insert Key. Near the bottom of the list that’s brought up, select “Implement Methods.” This will paste in all the methods for us (VERY CONVENIENT!) Click OK. You will see all the methods populate in your code.
2. To test the occurrences of each method, we will send a message out to the TextView widget we created earlier. To do so, place the following code in each of the methods:

message.setText(“NAME\_OF\_THE\_METHOD”);

1. Next, we see that each of these methods return a Boolean value, initially set to false. Each time one of these events is handled, we need to report back that “this was handled,” so we need to change all of the “false” to “true.” Please do so.
2. Lastly, the generic gesture detector needs to be overridden so we don’t have any conflicts. Make another blank line (outside of all methods) and hold down ALT and press Insert. Select Override methods, and find “onTouchEvent.” Hit OK to insert the override. Comment out the current return statement, and put in the below code:

return this.myGesture.onTouchEvent(event);

1. With this, we should be all set to test our gestures!

Video Link: <https://www.youtube.com/watch?v=M60maHL-XTU&index=6&list=PLFVlCGwfyegYi8G0yxIVlGfjT3xGzCZOz>

Github Link: <https://github.com/amyork/Android_Studio_Tut_5_Gestures>