

```
1  /*-----*/
2  * Author:      Dan Cassidy
3  * Date:        2015-07-25
4  * Assignment:  HW6-2
5  * Source File: MainActivity.java
6  * Language:    Java
7  * Course:      CSCI-C 490, Android Programming, MoWe 08:00
8  -----*/
9  package dancassidy.targetheartratecalculator;
10
11  import android.app.Activity;
12  import android.os.Bundle;
13  import android.text.Editable;
14  import android.text.TextWatcher;
15  import android.widget.EditText;
16  import android.widget.TextView;
17
18  /**
19   * Main activity class for Target Heart Rate Calculator program.
20   *
21   * @author Dan Cassidy
22   */
23  public class MainActivity extends Activity {
24      private TextView targetHeartRateRangeTextView;
25
26      /**
27       * Main method that runs on application start.
28       *
29       * @param savedInstanceState The saved instance state.
30       */
31      @Override protected void onCreate(Bundle savedInstanceState) {
32          super.onCreate(savedInstanceState);
33          setContentView(R.layout.activity_main);
34
35          EditText ageEditText = (EditText) findViewById(R.id.ageEditText);
36          ageEditText.addTextChangedListener(ageEditTextWatcher);
37
38          targetHeartRateRangeTextView =
39              (TextView) findViewById(R.id.targetHeartRateRangeResultTextView);
40      }
41
42      /**
43       * Listener for the age field to detect and handle changes.
44       */
45      private TextWatcher ageEditTextWatcher = new TextWatcher() {
46          @Override public void onTextChanged(CharSequence s, int start, int before, int count) {
47              final int MAX_HEART_RATE = 220;
48              final float LOWER_THR_MULT = 0.5f;
49              final float UPPER_THR_MULT = 0.85f;
50
51              try {
52                  int age = Integer.parseInt(s.toString());
53                  if (age > 220)
54                      age = 220;
55
56                  int lowerTHR = Math.round((MAX_HEART_RATE - age) * LOWER_THR_MULT);
57                  int upperTHR = Math.round((MAX_HEART_RATE - age) * UPPER_THR_MULT);
58                  targetHeartRateRangeTextView.setText(Integer.toString(lowerTHR) + " to " +
59                      Integer.toString(upperTHR));
60              }
61          }
62      }
63  }
```

```
61         catch (NumberFormatException e) {
62             targetHeartRateRangeTextView.setText("");
63         }
64     }
65
66     @Override public void beforeTextChanged(CharSequence s, int start, int count, int after) { }
67     @Override public void afterTextChanged(Editable s) { }
68 };
69 }
70
```