```
    1: package com.delta.controlflow;
    2:
    3: import android.util.Log;
    4:
    5: /**
    6:  * Created by learnovate on 2/27/14.
    7:  */
    8: public class ControlFlow {
    9:
   10:     char[] alphabet = {'a','b','c','d','e','f','g','h','i','j','k','l','m','n','o','p','q','r','s','t','u','v','w','x','y',
'z'};
   11:
   12:     //English-language pangram tester
   13:
   14:     //"Pack my box with five dozen liquor jugs."
   15:     //"Mr. Jock, TV quiz PhD, bags few lynx."
   16:     //"The quick red fox jumps over the lazy brown dog""
   17:
   18:     public void start(){
   19:
   20:         char[] sentenceToTest = toCharacterArray("The quick red fox jumps over the lazy brown dog");
   21:         char[] missingLetters = new char[26];
   22:
   23:         //start here!
   24:
   25:
   26:
   27:
   28:
   29:
   30:
   31:         // Find out if the 'sentenceToTest' is in fact a pangram.
   32:         // then make a "writeSuccess" method call with the following pieces of data:
   33:         // 1. number of missing letters (if any)
   34:         // 2. which letters (if any)
   35:         // 3. the original sentence
   36:         //writeSuccess(int aNumMisssing, char[] aMissingLetters, char[] aSentence )
   37:
   38:
   39:
   40:
   41:     }
   42:
   43:
   44:
   45:
   46:     //
   47:     // This code is just to help us write easier to read code
```

```
48:     // it turns "sentence" into a char array of {'s','e','n','t','e','n','c','e'}
49:     //
50:
51:     public char[] toCharacterArray(String s) {
52:         if (s == null) {
53:             return null;
54:         }
55:         char[] array = new char[s.length()];
56:         for (int i = 0; i < s.length(); i++) {
57:             array[i] = s.charAt(i);
58:         }
59:         return array;
60:     }
61:
62:     public void writeToLog(int output){
63:         Log.e("OPERATOR",String.valueOf(output));
64:     }
65:     public void writeToLog(String output){
66:         Log.e("OPERATOR",String.valueOf(output));
67:     }
68:
69:     public void writeSuccess(int aNumMisssing, char[] aMissingLetters, char[] aSentence ){
70:
71:         Log.e("OPERATOR","testing sentence:" + String.valueOf(aSentence));
72:         String message = String.valueOf(aNumMisssing) + " missing:" + String.valueOf(aMissingLetters);
73:         Log.e("OPERATOR",message);
74:     }
75:
76:
77:
78:
79: }
```

```java
package com.delta.controlflow;

import android.app.Activity;
import android.os.Bundle;
import android.view.Menu;
import android.view.MenuItem;

public class ControlFlowActivity extends Activity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_control_flow);
        ControlFlow cf = new ControlFlow();
        cf.start();
    }


    @Override
    public boolean onCreateOptionsMenu(Menu menu) {

        // Inflate the menu; this adds items to the action bar if it is present.
        getMenuInflater().inflate(R.menu.control_flow, menu);
        return true;
    }

    @Override
    public boolean onOptionsItemSelected(MenuItem item) {
        // Handle action bar item clicks here. The action bar will
        // automatically handle clicks on the Home/Up button, so long
        // as you specify a parent activity in AndroidManifest.xml.
        int id = item.getItemId();
        if (id == R.id.action_settings) {
            return true;
        }
        return super.onOptionsItemSelected(item);
    }

}
```