```java
1    //TODO create file comment
2    package com.chaoticcognitions.aenigma.models.plugboards;
3
4    import android.util.Log;
5
6    /**
7     * Created by Dan on 2015-07-28.
8     */
9    public class Plugboard {
10       private static final char NULLCHAR = '\0';
11       private int numPairs = 0;
12       private char[] plugSettings = new char[26];
13
14       public void addPlugSettings(char char1, char char2) {
15           if (char1 < 'A' || char1 > 'Z' || char2 < 'A' || char2 > 'Z' || char1 == char2)
16               throw new IllegalArgumentException("Invalid characters for plugboard pair.");
17           else if (plugSettings[char1 - 'A'] != NULLCHAR || plugSettings[char2 - 'A'] != NULLCHAR)
18               // At least one of the two characters are paired already.
19               return;
20
21           plugSettings[char1 - 'A'] = char2;
22           plugSettings[char2 - 'A'] = char1;
23           numPairs++;
24       }
25
26       //TODO create method comment
27       public char encode(char inputChar) {
28           Log.i("Plugboard", "Plugboard encoding '" + inputChar + "' to '" + (plugSettings[inputChar
               - 'A'] == NULLCHAR ? inputChar : plugSettings[inputChar - 'A']) + "'");
29           return (plugSettings[inputChar - 'A'] == NULLCHAR ? inputChar :
30                   plugSettings[inputChar - 'A']);
31       }
32   }
33
```