```java
package passwordEvaluationTestbed;


public class PasswordEvaluator {

    public static String passwordErrorMessage = "";
    public static String passwordInput = "";
    public static int passwordIndexofError = -1;
    public static boolean foundUpperCase = false;
    public static boolean foundLowerCase = false;
    public static boolean foundNumericDigit = false;
    public static boolean foundSpecialChar = false;
    public static boolean foundLongEnough = false;
    private static String inputLine = "";
    private static char currentChar;
    private static int currentCharNdx;
    private static boolean running;

    private static void displayInputState() {
        System.out.println(inputLine);
        System.out.println(inputLine.substring(0, currentCharNdx) + "?");
        System.out.println("The password size: " + inputLine.length() + "  |  The currentCharNdx: " +
                currentCharNdx + "  |  The currentChar: \"" + currentChar + "\"");
    }

    public static String evaluatePassword(String input) {
        passwordErrorMessage = "";
        passwordIndexofError = 0;
        inputLine = input;
        currentCharNdx = 0;

        if (input.length() <= 0) return "*** Error *** The password is empty!";

        currentChar = input.charAt(0);      // The current character from the above indexed position

        passwordInput = input;
        foundUpperCase = false;
        foundLowerCase = false;
        foundNumericDigit = false;
        foundSpecialChar = false;
        foundNumericDigit = false;
        foundLongEnough = false;
        running = true;

        while (running) {
            displayInputState();
```

```
47              if (currentChar >= 'A' && currentChar <= 'Z') {
48                  System.out.println("Upper case letter found");
49                  foundUpperCase = true;
50              } else if (currentChar >= 'a' && currentChar <= 'z') {
51                  System.out.println("Lower case letter found");
52                  foundLowerCase = true;
53              } else if (currentChar >= '0' && currentChar <= '9') {
54                  System.out.println("Digit found");
55                  foundNumericDigit = true;
56              } else if ("~`!@#$%^&*()_-+={}[]|\\:;\"'<>,.?/".indexOf(currentChar) >= 0) {
57                  System.out.println("Special character found");
58                  foundSpecialChar = true;
59              } else {
60                  passwordIndexofError = currentCharNdx;
61                  return "*** Error *** An invalid character has been found!";
62              }
63              if (currentCharNdx >= 7) {
64                  System.out.println("At least 8 characters found");
65                  foundLongEnough = true;
66              }
67              currentCharNdx++;
68              if (currentCharNdx >= inputLine.length())
69                  running = false;
70              else
71                  currentChar = input.charAt(currentCharNdx);
72
73              System.out.println();
74          }
75
76          String errMessage = "";
77          if (!foundUpperCase)
78              errMessage += "Upper case; ";
79
80          if (!foundLowerCase)
81              errMessage += "Lower case; ";
82
83          if (!foundNumericDigit)
84              errMessage += "Numeric digits; ";
85
86          if (!foundSpecialChar)
87              errMessage += "Special character; ";
88
89          if (!foundLongEnough)
90              errMessage += "Long Enough; ";
91
92          if (errMessage == "")
```

```
 93             return "";
 94
 95         passwordIndexofError = currentCharNdx;
 96         return errMessage + "conditions were not satisfied";
 97
 98     }
 99 }
100
```