

Practice 4.2

Solutions

3)

Soln:

```
import java.util.regex.*;
import java.io.*;

public class AnswerKeyProblem {

    public static void main(String args[]) throws IOException {

        // Read in the file provided by your teacher

        BufferedReader codedAnswers = new BufferedReader(new FileReader("CodedAnswerKey"));

        // Initialize String to store the answer key

        String answers = "";

        // Regular expression to match valid answer characters

        Pattern pattern = Pattern.compile("[aAbBcCdDeEfF]");

        // Read each line of the file

        String line = codedAnswers.readLine();

        // Keep reading each line and adding valid answers to the string answers

        while (line != null) {

            // Check if the line matches the valid characters pattern

            if (pattern.matcher(line).matches()) {

                answers += line;

            }

            // Read the next line

            line = codedAnswers.readLine();

        }

        // Close the file reader

        codedAnswers.close();

        // Print out the answers

        System.out.println("Deciphered Answer Key: " + answers);

    }

}
```

4)

Soln:

```
public class AnswerProcessor {

    public static String finalAnswers(String answers) {
        // Replace according to the given rules
        String result = answers.replace('e', 'b')
                                .replace('E', 'A')
                                .replace('f', 'c')
                                .replace('F', 'D');

        // Convert the result to lowercase
        return result.toLowerCase();
    }

    public static void main(String[] args) {
        // Example usage
        String exampleAnswers = "EeFf";
        String processedAnswers = finalAnswers(exampleAnswers);
        System.out.println(processedAnswers); // Output: "abcc"
    }
}
```