

 124 Removals 91 Additions

החברה

```

1 import java.util.*;
2 import java.io.*;
3
4 public class Decrypt {
5
6     public static void main (String args[]) throws
IOException
7     {
8         //final String key = args[0].toUpperCase;
9         //final File in = new File(args[1]);
10        //final String out = args[2];
11
12        final String key =
"ABCDEFGH"; // variable to st
ore encryption key
        final File in = new File("input.txt");
13 // variable to store input file
        final String outFile = "output.txt";
14 // name of output file
15
16        final int SQUARE = 8;
17
18        int hash = key.hashCode();
19 // hashed key
        Random random = new Random(hash);
20 // created random generator using hashed value as seed
        Scanner scanner = new Scanner(in);
21 // created a scanner from the input file
        String fileString = "";
22 // created a variable to hold the contents of the input file
        while(scanner.hasNext())
23 // appended every value from the scanner to the variable
24 {
25     fileString += scanner.nextLine();
26 }
27
28     fileString = fileString.toUpperCase();
29 // converted the input text to uppercase
30
31     String alphabet =
"ABCDEFGHIJKLMNOPQRSTUVWXYZ "; // created a variable
to store the proper alphabet
        String origAlphabet = alphabet;
32 // made another variable to store the alphabet for later
        alphabet = alphabetEncryptor(hash, alphabet);
33 // replaced the alphabet with an encrypted version
        //System.out.println(alphabet);
        int[] pattern = pattern(hash, SQUARE);
34 // generated the pattern used to read the array
        //System.out.println(fileString);
35

```

```

1 import java.util.*;
2 import java.io.*;
3
4 public class Decrypt {
5     public static void main(String args[]) throws
6     IOException {
7         final File in = new File("input.txt");
8
9         final String outFile = "output.txt";
10        final String key = "MYKEY";
11        final int SIZE = 8;
12        int hash = key.hashCode();
13        Scanner scanner = new Scanner(in);
14        String fileString = "";
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18        while (scanner.hasNext()) {
19            fileString += scanner.nextLine().toUpperCase();
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String decryptedString = "";
35 // location to store the decrypted string

String encryptedString = "";
36 // location to store the re-sorted string

37 while(fileString.length() > 0)
{
38     char[][] encryptedArray = encryptedArray(SQUARE,
39         fileString,
40         pattern); // temporary array of 64 encrypted characters
41     if(fileString.length() >= 64)
42         // removes the 64 characters from the string
43         {
44             fileString =
45             fileString.substring((SQUARE*SQUARE), fileString.length());
46         }
47     else
48         // if there is less than 64 characters left in the string
49         {
50             // clear the string
51             fileString = "";
52         }
53     for(int i = 0; i < SQUARE; i++)
54     { // for every row
55         for(int j = 0; j < SQUARE; j++)
56         { // for every column
57             encryptedString +=
58             encryptedArray[i][j]; // add all of the sorted characters to the string
59         }
60     }
61     while(encryptedString.length() > 0)
62     { // while there are values to decrypt
63         decryptedString +=
64         origAlphabet.charAt(alphabet.indexOf(encryptedString.charAt(0))); // match the letter to the original and add it to the new string
65         encryptedString = encryptedString.substring(1, encryptedString.length()); // remove the first character of the encrypted string
66     }
67     System.out.println(decryptedString);
68     PrintWriter out = new PrintWriter(outFile);
69     out.println(decryptedString);
70     out.close();
71 }

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```

while (fileString.length() != 0 || fileString.length() != -1)
{
26     char[][] encrypted = encryptedArray(SIZE,
27     fileString, pattern);
28     if (fileString.length() >= 64) {
29         fileString =
30         fileString.substring((SIZE * SIZE), fileString.length());
31     } else {
32         fileString = "";
33     }
34     for (int i = 0; i < SIZE; i++) {
35         for (int j = 0; j < SIZE; j++) {
36             encryptedString += encrypted[i][j];
37         }
38     }
39     String decryptedString = "";
40     while (encryptedString.length() > 0) {
41         decryptedString +=
42         origAlphabet.charAt(alphabet.indexOf(encryptedString.charAt(0)));
43         encryptedString = encryptedString.substring(1, encryptedString.length());
44     }
45     System.out.println(decryptedString);
46     PrintWriter out = new PrintWriter(outFile);
47     out.println(decryptedString);
48     out.close();
49 }

```

```

68
69 /**
70  * @param hash
71  * @param alphabet
72  * @return
73  */
74 public static String alphabetEncryptor(int hash, String
alphabet)
75 {
76     Random random = new Random(hash);
77     for(int i = 0; i < 100; i++)
78         // swap two random letters in the
alphabet 100 times
79     {
80         int indLetter1 = random.nextInt(27);
81         int indLetter2 = random.nextInt(27);
82         char letter1 = alphabet.charAt(indLetter1);
83         char letter2 = alphabet.charAt(indLetter2);
84         alphabet = alphabet.replace(letter1, '$');
85         alphabet = alphabet.replace(letter2, letter1);
86         alphabet = alphabet.replace('$', letter2);
87     }
88     return alphabet;
89 }
90 /**
91  * @param hash
92  * @param size
93  * @return
94  */
95 public static int[] pattern(int hash, int size)
96 {
97     int[] pattern = new int[size];
98     for(int i = 0; i < size; i++)
99     {
100         pattern[i] = i;
101     }
102     Random random = new Random(hash);
103     // set the random generator
104     for(int i = 0; i < 100; i++)
105         // swap two random numbers in the order 100 times
106     {
107         int indPattern1 = random.nextInt(8);
108         int indPattern2 = random.nextInt(8);
109         int tempPattern = pattern[indPattern1];
110         pattern[indPattern1] = pattern[indPattern2];
111         pattern[indPattern2] = tempPattern;
112     }
113     return pattern;
114 }
115 /**
116  * @param SQUARE
117  * @param fileString
118  * @param pattern
119  */

```

```

49 public static String createAlphabet() {
50     return "ABCDEFGHIJKLMNOPQRSTUVWXYZ ";
51 }
52
53 /**
54  * This method does a thing
55 */
56 public static String alphabetEncryptor(int hash, String
alphabet) {
57     Random random = new Random(hash);
58     for (int i = 0; i < 100; i++) {
59         int indLetter1 = random.nextInt(27);
60         int indLetter2 = random.nextInt(27);
61         char letter1 = alphabet.charAt(indLetter1);
62         char letter2 = alphabet.charAt(indLetter2);
63         alphabet = alphabet.replace(letter1, '$');
64         alphabet = alphabet.replace(letter2, letter1);
65         alphabet = alphabet.replace('$', letter2);
66     }
67     return alphabet;
68 }
69 /**
70  * Here we create a pattern
71 */
72 public static int[] pattern(int hash, int size) {
73     int[] pattern = new int[size];
74     for (int i = 0; i < size; i++) {
75         pattern[i] = i;
76     }
77     Random random = new Random(hash);
78     for (int i = 0; i < 100; i++) {
79         int indPattern1 = random.nextInt(8);
80         int indPattern2 = random.nextInt(8);
81         int tempPattern = pattern[indPattern1];
82         pattern[indPattern1] = pattern[indPattern2];
83         pattern[indPattern2] = tempPattern;
84     }
85     return pattern;
86 }
87
88 // And here we make an encrypted array
89 public static char[][] encryptedArray(int SQUARE, String
fileString, int[]
pattern) {
90     char[][] encryptedArray = new char[SQUARE][SQUARE];
91     // Looping algorithm
92     for (int j = 0; j < SQUARE; j++) {

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```
119     public static char[][] encryptedArray(int SQUARE, String
fileString, int[]
pattern)
120     {
121         char[][] encryptedArray= new char[SQUARE][SQUARE];

// created a square 2d array to store the encrypted characte
rs
122         for(int j = 0; j < SQUARE; j++)

123         {
124             for(int i = 0; i < SQUARE; i++)
125             {
126                 if(fileString.length() == 0)
127                 // fill the array while there are values left in the string
127                 {
128                     break;
129                 }
130                 encryptedArray[i][pattern[j]] = fileString.c
harAt(0); // filled the array with the first character
from the file
131                 fileString = fileString.substring(1, fileStr
ing.length()); // removed the character from the string
132             }
133         }
134         return encryptedArray;
135     }
136 }
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```
93         for (int i = 0; i < SQUARE; i++) {
94             if (fileString.length() != 0) {
95                 encryptedArray[i][pattern[j]] = fileString.charAt(0);
96
97                 fileString = fileString.substring(1, fileString.length
());
98             } else {
99                 break;
100             }
101         }
102         return encryptedArray;
103     }
104 }
```