

RAIL Fence

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1 /*
2  * To change this license header, choose License Headers in Project Properties.
3  * To change this template file, choose Tools | Templates
4  * and open the template in the editor.
5  */
6 package test;
7
8 import java.io.BufferedReader;
9 import java.io.BufferedWriter;
10 import java.io.FileReader;
11 import java.io.FileWriter;
12 import java.io.IOException;
13 import java.util.logging.Level;
14 import java.util.logging.Logger;
15 import javax.swing.JOptionPane;

177 private void TKActionPerformed(java.awt.event.ActionEvent evt) {
178     // TODO add your handling code here:
179 }
180 //ENCRYPT.....
181 private void ENActionPerformed(java.awt.event.ActionEvent evt) {
182     // TODO add your handling code here:
183     String plaintext= TPT.getText();//TPT: văn bản plaintext
184     int i=0,j,l,r,s,c=0,t=0;
185     String ciphertext="";
186     System.out.println("Enter the Rails:");
187     String khoa= TK.getText();//TK: văn bản khóa
188     r=Integer.parseInt(khoa);
189     l=plaintext.length()/r;
190     s=2*l;
191     System.out.println("r la: "+r);
192     char ct[][]=new char [r][s];
193     while(i<r)
194     {
195         ct[i][c]=plaintext.charAt(t);
196         t++;
197         if(i==r-1 && t<=plaintext.length()-1)
198         {
199             c=c+1;
200             for(j=r-2;j>=0;j--)
201             {
202                 ct[j][c]=plaintext.charAt(t);
203                 t++;
204                 if(j==0 && t<=plaintext.length()-1)
205                 {
206                     c++;
207                     i=0;
208                 }

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209     }
210     }
211     i=i+1;
212 }
213 for(i=0;i<r;i++)
214 {
215     for(j=0;j<ct[i].length;j++)
216     {
217         char d=ct[i][j];
218
219         if(d=='\0')
220         {
221             continue;
222         }
223         else
224         {
225             ciphertext=ciphertext+ct[i][j];
226         }
227     }
228 }
229 System.out.println("The Cipher text is:\n"+ciphertext);
230 System.out.println(ciphertext.length());
231 TCT.setText(ciphertext.toString().toUpperCase()); //TCT: văn bản ciphertext
232 }
233 //DENCYPT.....
234 private void DEActionPerformed(java.awt.event.ActionEvent evt) {
235     // TODO add your handling code here:
236     System.out.print("Enter message: ");
237     String message=TCT.getText();
238     message = message.replaceAll("\\s", "");
239     int key=0;
240     System.out.print("Enter key(number of rails): ");
241     String Khoa=TK.getText();
242     key=Integer.parseInt(Khoa);
243
244     char[][] rail = new char[key][message.length()];
245     // matrix
246     for (int i = 0; i < key; i++){
247         for (int j = 0; j < message.length(); j++) {
248             rail[i][j] = '.';
249         }
250     }
251     int row = 0;
252     int check = 0;
253     for (int i = 0; i < message.length(); i++) {
254         if (check == 0){
255             rail[row][i] = message.charAt(i);
256             row++;
257             if (row == key){
258                 check = 1;
259                 row--;
260             }
261         } else if (check == 1){
262             row--;
```

```
263     rail[row][i] = message.charAt(i);
264     if (row == 0) {
265         check = 0;
266         row = 1;
267     }
268 } // if-else
269 } // for
270
271 // changing order of rails
272 int ord = 0;
273 for (int i = 0; i < key; i++) {
274     for (int j = 0; j < message.length(); j++) {
275         String temp = rail[i][j] + "";
276         if (temp.matches("\\.")) {
277             continue;
278         } else {
279             // adding cipher letters one by one diagonally
280             rail[i][j] = message.charAt(ord);
281             ord++;
282         } // if-else
283     } // inner for
284 } // for
285
286 // checking message reorder on rails
287 System.out.println("Reorder");
288 for (int i = 0; i < key; i++) {
289     for (int j = 0; j < message.length(); j++) {
290         System.out.print(rail[i][j]);
291     }
292     System.out.println();
293 }
294
295 String decrypText = "";
296 check = 0;
297 row = 0;
298 for (int i = 0; i < message.length(); i++) {
299     if (check == 0) {
300         decrypText += rail[row][i];
301         row++;
302         if (row == key) {
303             check = 1;
304             row--;
305         }
306     } else if (check == 1) {
307         row--;
308         decrypText += rail[row][i];
309         if (row == 0) {
310             check = 0;
311             row = 1;
312         }
313     } // if-else
314 } // for
315
316 System.out.println("Decrypted Text: " + decrypText);
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```
317     TPT.setText(decrypText);
318
319 }
320
321 private void GFActionPerformed(java.awt.event.ActionEvent evt) {
322     // TODO add your handling code here:
323     try{
324         String txtLuu = TCT.getText();//TCT: văn bản ciphertext
325         System.out.println(txtLuu);
326         BufferedWriter bw = null;
327         String txtDuongdan = "E:\\Usb\\ur\\vd\\text2.txt";
328         bw = new BufferedWriter(new FileWriter(txtDuongdan));
329         bw.write(txtLuu);
330         bw.close();
331         JOptionPane.showMessageDialog(null,"Ghi File thành công");
332     } catch (IOException ex) {
333         Logger.getLogger(test1.class.getName()).log(Level.SEVERE,null,ex);
334     }
335 }
336
337 private void MFActionPerformed(java.awt.event.ActionEvent evt) {
338     // TODO add your handling code here:
339     try{
340         String txtDuongdan = "E:\\Usb\\ur\\vd\\text2.txt";
341         BufferedReader br = null;
342         br = new BufferedReader(new FileReader(txtDuongdan));
343         StringBuffer sb = new StringBuffer();
344         JOptionPane.showMessageDialog(null,"Mở File thành công");
345         char[] ca=new char[5];
346         while (br.ready()){
347             int len=br.read(ca);
348             sb.append(ca,0,len);
349         }
350         br.close();
351         String chuoi = sb.toString();
352         TCT.setText(chuoi);//Qtxtvanban: là văn bản plaintext
353     } catch (IOException ex) {
354         Logger.getLogger(test1.class.getName()).log(Level.SEVERE,null,ex);
355     }
356 }
357
```