**Ashesh Kumar**

**501254**

**I.T. – 6**

**Emulate Linearization Attack**

**L****inearization.java**

import java.io.\*;  
import java.util.\*;  
  
public class Linearization {  
  
 public static void main(String[] args) {  
  
 // initializing three char arrays  
 char[] inarr1 = new char[] { 'x', 'y', 'b', 'a' };  
 char[] inarr3 = new char[inarr1.length];  
 int repeat = 0;  
   
 int count\_if\_LCompare = 0;  
 int count\_if\_CCompare = 0;  
 int count\_for = 0;  
 int count\_while = 0;  
  
 Scanner input = new Scanner(System. in );  
 String str = input.next();  
  
 inarr3 = str.toCharArray();  
  
  
 long lStartTime2 = System.nanoTime();  
 while (repeat != inarr1.length) {  
 if (inarr1.length != inarr3.length) {  
 System.out.println("False. They are not equal");  
 count\_if\_LCompare++;  
 } else {  
 boolean isEqual = true;  
 for (int i = 0; i < inarr1.length; i++) {  
 if (inarr1[i] != inarr3[i]) {  
 System.out.println("False.they are not equal");  
 count\_if\_CCompare++;  
   
 isEqual = false;  
 break;  
 }  
 count\_for++;  
 }  
 if (isEqual) System.out.println("true.they are equal");  
 }  
 repeat++;  
 count\_while++;  
 }  
 long lEndTime2 = System.nanoTime();  
 System.out.println("Time used: " + ((lEndTime2 - lStartTime2)/inarr1.length));  
  
 }  
}

**OUTPUT:**

**C:\Users\Ashesh\Downloads\documents-export-2015-02-21>java Linearization**

**qwert**

**False. They are not equal**

**False. They are not equal**

**False. They are not equal**

**False. They are not equal**

**Time used: 235149**

**C:\Users\Ashesh\Downloads\documents-export-2015-02-21>java Linearization**

**qwer**

**False.they are not equal**

**False.they are not equal**

**False.they are not equal**

**False.they are not equal**

**Time used: 278466**

**C:\Users\Ashesh\Downloads\documents-export-2015-02-21>java Linearization**

**xqwe**

**False.they are not equal**

**False.they are not equal**

**False.they are not equal**

**False.they are not equal**

**Time used: 335518**

**C:\Users\Ashesh\Downloads\documents-export-2015-02-21>java Linearization**

**xyqw**

**False.they are not equal**

**False.they are not equal**

**False.they are not equal**

**False.they are not equal**

**Time used: 562517**

**C:\Users\Ashesh\Downloads\documents-export-2015-02-21>java Linearization**

**xybq**

**False.they are not equal**

**False.they are not equal**

**False.they are not equal**

**False.they are not equal**

**Time used: 566441**

**C:\Users\Ashesh\Downloads\documents-export-2015-02-21>java Linearization**

**xyba**

**true.they are equal**

**true.they are equal**

**true.they are equal**

**true.they are equal**

**Time used: 428038**