Bractical No.5

Plim: To implement columnar cipher transposition techniques.

for I am you my my my a company

- 1 /2 C

est the superior

Y SIV

Dadjed No. 5

Date:

Jings.	
West 1	Aim: To implement when at appear transposition techniques.
E	Theory:
WE T	conven a plain-text menage and a numeric way,
-1	The columnas teams position cipher in the forum of
	transportion cipher just like Roul fence aphen dumnar
_3	end then reading the cipher off in when one by
IN.	one.
	Reps to be included: The a transposition eigher, the order of the approper
	in the cipher - text.
0	The message is written out in hour of a tixed length,
	and then reach out again column by column and the
(3)	Columns are charsen in some scrambild ander.
	usually defined by a happoold.
3 D	For example, the world HACK is a length 4, and the
	permutation is defined by the alphabetical order of the letters
(h)	in the keyword . In the cords would be "3124" Any space spaces are filled with nulls or left blank
ll ll	as does to be a character (frample,)
B	Finally, the message is read off in solumins in the writer
	specified by the regulard.
	trample:
	Columnal Transportion method
	FOR184 - 4317567
	Character : attack borthouses myst from an x45 bage No.



Date:

50

100000000000000000000000000000000000000			LIVE TO SERVICE TO SER				
			THE WAY				
Ч	3	1	2_	5	Ь	7	-
q	t	ŧ	q	C	IC	8	
0	S	t	P	0	7	٩	
9	ч	0	ŧ	`\	7	t	
w	0	a	· m	X	4_	2	
							THE RESERVE
0				The same			
Program:	211	5500 (0000) - 000-0					
impost je	sa. litu. pup	nnex;					
public che	us (olumi	ν <u>.</u>					
וונס ו	unt star	ic Scanne	(oi				
loor	1000						
			10.5 57	11			
PW	static static	Void mai	[Jpnix12]	ma) r			

System. Out. praintln ("lolumnar Transposition cipher");
in = new scanner (system.in);

System.out.print("1. Encryption \n 2. Decryption \n choose (1,2): ");
ind choice = in . nextInt ();
in . NoxLine();

if (choice == 1) }

System.out. printly (" Encryption");

encyption ();

I she if (choix = = 2) {

System . ONX . Printly (" De Oxyption");

Lecouption 1);

I doe of

Page No.



```
System. out. println (" Invalid choice");
  System. cit(o);
private state via energetion col
   System and print ("Enser message: ");
    spring printed = in northinel) . to upperlase (). replace (" " " ");
    String Builder may = new String Builder (plaintex);
    System request out point (" Enter Keyword: ");
   Strang keyword = In. noxtling (). toupper(are ())
   ing [] kywrdnumlist = keywordnum Assign (kayword);
   for (int i=0; j=1; i< Keyword. length (); itt > jtt ) {
System.oud. paint ( Keyword. substaing (i, j)+" >>);
    ic) ultring two. watch
   for (ind 1: Kymrdrymmin)
     System.out. paint (1+ " ");
   System.out. paintly (" -----");
   ing Extragationer = word ( ) ( ) , Kalmord , ( and ( ) ;
   ing frankhoransen = rednord. Tender () - extratetters?
   if (0+29/0400 1=0)}
       for line i=0; 1< during Characters; itt)
       wed abband ( " ) );
                                                 Page No.
```

PAGE NO.:
DATE:

ame of Practical	
	int numo Bows = msq. length () keyword. length ();
	char[][] cor = new char [num of Kows][ney corrd. length ()];
	7
	int z=0;
	fue (int i= 0; is numal Rows; itt) }
	for (int j=0; jx required. remph 1); j+1) {
	ou [i][j] = msg. charAt (z);
	7++;
	7 273
	Transport to the second of the
<u></u>	D
-	for lint i=0; i < numalkous; i++)}
	for lint j=0; j < 11 cyword. (ength 1); j++) }
	System. out. bashed (and CIJC) + " ");
	7
	Syttem · aut. privata ();
	Aring Builder upher Text = new StringBuilder ();
	and an artifaction of the second of the seco
	C. Low and a Your 10 (1)
	i (Ailman Montal of the Manual of the Manua
	String number = getrumber location (kayword , kywad Mumilist);
	System.out. paintly (" Location of numbers: " + number);
1, 1,	2/ Jahring. Monday Decompty2
1.3	
	for lint j=0; is numafrous; itt)
3	cipherton append (au ())[d]);
1	y agreement agre
S (2)	Teacher's Signature

11 2000	
	PAGE NO.:
1574	DATE :
ne of Practical	
	2 System. Out println (" cipher Text:" + cipherText);
	James brown reduct (24. 4 chlocklott) 3
	primate Static void decryption () }
	: (Enter werrade:);
5	Stainer may = 9n nextline () . to upper lase 1). replace (" " " ");
	System. Old Print ("Enter Newpord: ");
3	string keyroord = in nextling (). touppercase ();
	int numbrous = msq. /ength() 1/requord. Jengh ();
	char CTC7 ar = new char Enumbroun T[Keyward . Vength ()];
<u> </u>	ind [] kywrdalumlist = keywardalumauga (keyward);
. 152	String number = gethinmlocation (keyword, kywordnumlist);
	January (Halman Halandanichan 1)
	for lint 1=0; 1c=0; ic mag. length (); 1+1 . 1c+1){
	ind 1=0;
97	if (k = = keyroond · length ())
	1/20;
] else [
	d= character, get numeric value (numbe, charat (10));
7	1
	for lint 1=0; il numal Roma; itt 11+) 1.
W.	i (1) Haram : [b.] [j] rua
	1 maria maria maria
	7 13
	String Brither plaintext = New String Briller (1;
	for (int i=0; i< numafroum; i+1)
	for (ind 1=0; 1 (Keyword, length (); 17+1)? Teacher's Signature

	PAGE NO.: DATE :
ne of Practical	The second secon
- 100	plaintext. append (aux (5)(5));
	7
	System. out pointly ("plain text: " + plaintext);
- Ex-	
	private state string getalumber oration (Haing Kayword , int []
)——	1 (RilmuMbrany)
	Staing number = " "?
	for (int i=1; i< neground rength()+1; i+1)
74 -W	for (int j=0 ; is keyword length (); j+1)
- 4	/(i==[i] teilmonpscapn) &i
	$\int \int \int dx dx dx = \int \int \int dx dx$
	<u>'</u>
	7
7	i softwar united
9)	
Part arridge	private Static int[] repundenting (string repund) }
	String alpha: ABCDEFGHITKUMMOPORSTUNWXYZ";
	int C) kywrd Numiist = 1840 int Chaywood. length ()];
	Normalisa de la Companya del Companya de la Companya del Companya de la Companya
	int int : 0
	for (ind i=0; i < alpha . length(); i++) {
	for (int 1=0; i < keyword length 1); itt)
	if (alpha. charA+ (i) == Key word. charA+ (j))

c F+ Fim

Teacher's Signature

et Int Dead brogge stationing Columnar Transposition Cipher 1. Encryption 2. Decryption Choose(1,2): 1 Encryption Enter Message: Tomato and Potato Enter Keyword: Buy 1 2 3 TOM AND Location of numbers: 012 Cipher Text: TAAPAOTNOTMODTO (11/ 6 (approx - for what) 1 , 0 d full 80 111 - El Valment . may 7. Columnar Transposition Cipher 1. Encryption 2. Decryption Choose(1,2): 2 Decryption Enter Message: TAAPAOTNOTMODTO Enter Keyword: Buy Plain Text: TOMATOANDPOTATO FRUNTIZZA JOHNAN 172 HWISO IT TOGE PONEL 1 (18 , 28 ad 1 , 10 22 1 1/2 2 81 3 1 1/2 14 hours 1) 10 (uniturion) columnat cipier implemented successfully. 1 +11 -11 201, a. + 11/4 - 12 - 13 - 1 10/ I the in the surprise si the start of the Heren brooker . Til Hand my 1 %

	CHANDAN
	PAGE NO.;
Name of Practical	DATE :

THE RES	i tini = [] a il mundruy il
	7
, b	Jeturn Iyardnumlist;
	7
2	W 1
	tonchuson:
\$-	Columnar cipher implemented successfully
	The state of the s
that i	
To	
)	
100	
3/3	
190	
Air Mills	

Date: VIVA QUESTION: O Columnar cipher fulls under the category of?

Transportion cipher. 3) which cipher is formed by applying whenhar transposition - Double transposition uphor Page No.