**Ministerul educaţiei, culturii şi cercetării**

**al Republicii Moldova**

**Universitatea de Stat din Tiraspol**

Facultatea fizică, matematică şi tehnologii informaţionale

Catedra informatică şi tehnologii informaţionale

Lucrari de laborator

**Criptografie și securitatea informaţiei**

A elaborat: Cojocari Andrei, gr.C1I1

Profesor: Globa Angela

**Sistemul de criptareVigenere**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| U | V | W | X | Y | Z |
| 20 | 21 | 22 | 23 | 24 | 25 |

Alegem un cuvintcheie , de exemplu: **W=LABORATOR CRIPT**

Text clar:

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| C | O | J | O | C | A | R | I | \_ | A | N | D | R | E | I |
| 12 | 0 | 17 | 2 | 7 | 8 | 19 | 0 |  | 14 | 2 | 19 | 0 | 21 | 21 |
| L | A | B | O | R | A | T | O |  | C | R | I | P | T | T |
| 11 | 0 | 1 | 14 | 17 | 0 | 19 | 14 |  | 2 | 17 | 8 | 15 | 19 | 19 |

**Criptarea:**

Ln(M)=12+11 mod 26=23 =>X

Ln(A)=0+0 mod 26=0 =>**A**

Ln(R)=17+1 mod 26=18 =>**S**

Ln(C)=2+14 mod 26=16 =>**Q**

Ln(H)=7+17 mod 26=24 =>**Y**

Ln(I)=8+0 mod 26=8 =>**I**

Ln(T)=19+19 mod 26=38 mod 26 =>12=>**M**

Ln(A)=0+14 mod 26=14 =>**O**

Ln(N)=13+17 mod 26=4 =>E

Ln(O)=14+2 mod 26=16 =>**Q**

Ln(C)=2+17 mod 26=19 =>**T**

Ln(T)=19+8 mod 26=1=>**B**

Ln(A)=0+15 mod 26=15 =>**P**

Ln(V)=21+19 mod 26=14 =>**O**

**Decriptarea:**

dx(**X**)=23-11 mod 26=12=>**M**

dx(**A**)=0-0 mod 26=0=>**A**

dx(**S**)=18-1 mod 26=17=>**R**

dx(**Q**)=16-14 mod 26=2=>**C**

dx(**Y**)=24-17 mod 26=7=>**H**

dx(**I**)=8 mod 26=8=>**I**

dx(**M**)=38-19 mod 26=19=>**T**

dx(**O**)=14-14 mod 26=0=>**A**

dx(**E**)=30-17 mod 26=11=>**N**

dx(**Q**)=21-4 mod 26=17=>**O**

dx(**T**)=19-17 mod 26=2=>**C**

dx(**B)**=27-8 mod 26=19=>**T**

dx(P)=15-15 mod 26=0=>**A**

dx(O)=40-19 mod 26=11=>**V**

**Sistemul de criptarePlayfair**

**K=KEYWORD**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| K | E | Y | W | O |
| R | D | A | B | C |
| F | G | H | I | J |
| L | M | N | P | S |
| T | U | V | X | Z |

**Criptare:**

Text clar: CO|JO|CA|RI|AN|DR|EI

**PO=>CO**

**JO=>JO**

**GA=>CA**

**CO=>RI**

**RN=>AN**

**EL=>DR**

**UK=>EI**

**Decriptare:**

**SW=>CO HO=>CA AL=>AN LE=>EI**

**CZ=>JO ZO=>RI KM=>AD**

**Sistemulde criptareHomofonic**

|  |  |  |  |
| --- | --- | --- | --- |
| \_ | 153 | 894 | 490 |
| **A** | 961 | 579 | 251 | 672 | 237 |
| **B** | 963 | 454 | 131 | 687 | 512 |
| **C** | 726 | 793 | 123 | 438 | 642 |
| **D** | 614 | 352 | 031 | 421 | 113 |
| **E** | 930 | 485 | 720 | 039 | 719 |
| **F** | 717 | 895 | 317 | 617 | 324 |
| **G** | 116 | 220 | 413 | 782 | 934 |
| **H** | 152 | 147 | 283 | 351 | 490 |
| **I** | 745 | 553 | 199 | 920 | 158 |
| **J** | 700 | 721 | 233 | 402 | 403 |
| **K** | 319 | 404 | 444 | 333 | 049 |
| **L** | 891 | 884 | 305 | 873 | 362 |
| **M** | 210 | 249 | 825 | 172 | 300 |
| **N** | 771 | 720 | 142 | 089 | 274 |
| **O** | 283 | 342 | 856 | 792 | 877 |
| **P** | 625 | 401 | 007 | 099 | 371 |
| **Q** | 713 | 901 | 122 | 593 | 935 |
| **R** | 114 | 400 | 500 | 872 | 904 |
| **S** | 900 | 207 | 209 | 302 | 458 |
| **T** | 872 | 893 | 723 | 455 | 272 |
| **U** | 414 | 279 | 145 | 789 | 431 |
| **V** | 614 | 666 | 213 | 578 | 812 |
| **W** | 720 | 309 | 765 | 423 | 114 |
| **X** | 800 | 882 | 405 | 213 | 461 |
| **Y** | 531 | 542 | 783 | 945 | 687 |
| **Z** | 107 | 982 | 937 | 404 | 570 |

Text clar: COJOCARI\_ANDREI

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **C** | **O** | **J** | **O** | **C** | **A** | R | **I** | **A** | **N** | **D** | **R** | **E** | **I** |
| 210 | 400 | 438 | 147 | 553 | 893 | 237 | 142 | 877 | 500 | 089 | 251 | 578 | 578 |

**Sistemulde criptarePolybios**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **A** | **B** | **C** | **D** | **E** |
| **A** | A | B | C | D | E |
| **B** | F | G | H | I | J |
| **C** | K | L | M | N | O |
| **D** | P | Q | R | S | T |
| **E** | E | U | X | Y | Z |

Text clar: COJOCARI ANDREI

Se cripteaza: CCCADDDAAABBBBBBBDDDDACCCC

Se descripteaza: COJOCARIANDREI

**Sistemulde criptare RSA**

Text clar: 1 2 3 4

p=241; q=379

n=241\*379=91339

γ(n)=(241-1)(379-1)=90720; (b,γ(n))=1;

γ(n)=90720; 90720=;

90720 | 2 t=4931;

45360 | 2 (90720,4931)=1

22680 | 2

11340 | 2

5670 | 2

2835 | 3

945 | 3

315 | 3

105 | 3

35 | 5

7 |7

1 |

**Cheiapublica=** (91339,4931);

at ≡ 1 mod γ(n);

12 mod 91339 ≡ y;

Inversa lm t: a=71531;

**Cheiaprivate =** (241,379,90720,71531)

Introducem**t** in sistemul binary

t = 4931 = 10011010000112

|  |  |  |
| --- | --- | --- |
|  | **Z=Z2 mod n, initial z=1** | **If Ci = 1 then Z ≡ Z\*X mod n** |
| **1** | 12 mod 91339 ≡ 1 | 1\*1234 mod 91339 ≡ 1234 |
| **0** | 12342 mod 91339 ≡ 61332 | 61332 |
| **0** | 613322 mod 91339 ≡ 187 | 187 |
| **1** | 1872 mod 91339 ≡ 34969 | 34969\*1234 mod 91339 ≡ 39738 |
| **1** | 397382 mod 91339 ≡ 40012 | 40012\*1234 mod 91339 ≡ 51748 |
| **0** | 517482 mod 91339 ≡ 70041 | 70041 |
| **1** | 700412 mod 91339 ≡ 15330 | 15330\*1234 mod 91339 ≡ 10047 |
| **0** | 100472 mod 91339 ≡ 12614 | 12614 |
| **0** | 126142 mod 91339 ≡ 458 | 458 |
| **0** | 4582 mod 91339 ≡ 27086 | 27086 |
| **0** | 270862 mod 91339 ≡ 16548 | 16548 |
| **1** | 165482 mod 91339 ≡ 1982 | 1982\*1234 mod 91339 ≡ 70974 |
| **1** | 709742 mod 91339 ≡ 54165 | 54165\*(1234 mod 91339 ≡ 7080) |

Text criptat: 70801

Decriptarea: dn(y) = 7080171531 mod 91339

a = 71531

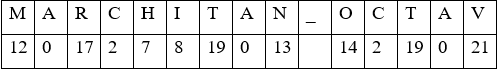
a2 = 10001011101101011

|  |  |  |
| --- | --- | --- |
|  | **Z=Z2 mod n, z =1 initial** | **?Ci = 1 ->Z\*y mod n** |
| **1** | 12 mod 91339 ≡ 1 | 1\*70801 mod 91339 ≡ 70801 |
| **0** | 708012 mod 91339 ≡ 5942 | 5942 |
| **0** | 59422 mod 91339 ≡ 50510 | 50510 |
| **0** | 505102 mod 91339 ≡ 70491 | 70491 |
| **1** | 704912 mod 91339 ≡ 48142 | 48142\*70801 mod 91339 ≡ 4279 |
| **0** | 42792 mod 91339 ≡ 42041 | 42041 |
| **1** | 420412 mod 91339 ≡ 36031 | 36031\*70801 mod 91339 ≡ 23200 |
| **1** | 238002 mod 91339 ≡ 67233 | 67233\*70801 mod 91339 ≡ 31648 |
| **1** | 316482 mod 91339 ≡ 63769 | 63769\*70801 mod 91339 ≡ 22199 |
| **0** | 221992 mod 91339 ≡ 21696 | 21696 |
| **1** | 216962 mod 91339 ≡ 46549 | 46549\*70801 mod 91339 ≡ 21951 |
| **1** | 219512 mod 91339 ≡ 33176 | 33176\*70801 mod 91339 ≡ 20252 |
| **0** | 202522 mod 91339 ≡ 31394 | 31394 |
| **1** | 313942 mod 91339 ≡ 35426 | 35426\*70801 mod 91339 ≡ 20252 |
| **0** | 202522 mod 91339 ≡ 21607 | 21607 |
| **1** | 216072 mod 91339 ≡ 28820 | 28820\*70801 mod 91339 ≡ 62899 |
| **1** | 628992 mod 91339 ≡ 26755 | 26755\*70801 mod 91339 ≡ 1234 |

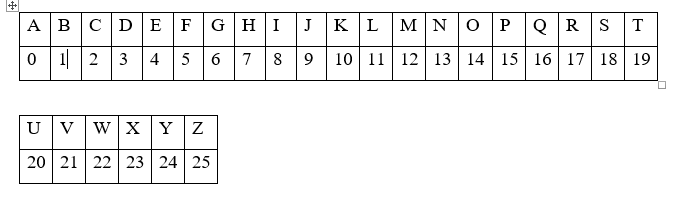
Text decriptat : 1 2 3 4

**Sistemulde criptareAfin**

Text clar:



Cheia (7 , 10)



E (7,10) (**‘M’**) ≡ 7\*12+10 mod 26 ≡ 16;

E (7,10) (**‘A’**) ≡ 7\*14+10 mod 26 ≡ 4;

E (7,10) (**‘R’**) ≡ 7\*9+10 mod 26 ≡ 21;

E (7,10) (**‘C’**) ≡ 7\*14+10 mod 26 ≡ 3;

E (7,10) (**‘H’**) ≡ 7\*6+10 mod 26 ≡ 25;

E (7,10) (**‘I’**) ≡ 7\*0+10 mod 26 ≡ 10;

E (7,10) (**‘T’**) ≡ 7\*2+10 mod 26 ≡ 24;

E (7,10) (**‘A’**) ≡ 7\*14+10 mod 26 ≡ 3;

E (7,10) (**‘N’**) ≡ 7\*17+10 mod 26 ≡ 24;

E (7,10) (**‘O’**) ≡7\*14+10 mod 26 ≡ 3;

E (7,10) (**‘C’**) ≡ 7\*2+10 mod 26 ≡ 24;

E (7,10) (**‘T’**) ≡ 7\*19+10 mod 26 ≡ 13;

E (7,10) (**‘A’**) ≡ 7\*14+10 mod 26 ≡ 3;

E (7,10) (**‘V’**) ≡ 21\*11+10 mod 26 ≡ 7;

**Text criptat:**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Q** | **E** | **V** | **E** | **Z** | **K** | **Y** | **D** | **Y** | **W** | **Y** | **I** | **D** | **N** | **H** |
| 16 | 4 | 21 | 4 | 25 | 10 | 24 | 3 | 24 | 22 | 24 | 8 | 3 | 13 | 7 |

**Decriptare :**

(a-1) = 7-1 = 15

dk(**K**) = 14\*18+14\*19 mod 26 = 12 ->**M**

dk(**D**) = 15\*4+15\*19 mod 26 = 0 ->**A**

dk(**V**) = 15\*9+15\*19 mod 26 = 9 ->**R**

dk(**D**) = 15\*14+15\*19 mod 26 = 14 ->**C**

dk(**Z**) = 15\*6+15\*19 mod 26 = 6 ->**H**

dk(**K**) = 15\*0+15\*19 mod 26 = 0 ->**I**

dk(**Y**) = 15\*2+15\*19 mod 26 = 2 ->**T**

dk(**D**) = 15\*14+15\*19 mod 26 = 14 ->**A**

dk(**Y**) = 15\*17+15\*19 mod 26 = 17 ->**N**

dk(**W**) = 15\*13+15\*19 mod 26 = 13 ->**O**

dk(**S**) = 15\*24+15\*19 mod 26 = 2 ->**C**

dk(**I**) = 15\*13+15\*19 mod 26 = 11 ->**T**

dk(**I**) = 15\*3+15\*19 mod 26 = 0 ->**A**

dk(**I**) = 15\*7+15\*19 mod 26 = 21 ->**V**

**Sistemulde criptareMerkle Hellman**

Alegem un vector cu crestere mare ( 8biti )

A = {2,3,5,11,23,47,95,189}

1 ai = 374; m>374 ->modul

m = 380

Alegem t – multiplicator

(m,t) = 1; 380 = 22\*5\*19

t = 17;

Calculaminversului t.

s\*t ≡ 1 mod m; aplicindalgoritmul Euclid extins

s = 313

313\*17 mod 380 = 1

Calculamti = t\*aimod m

A = {2,3,5,11,23,47,94,189}

b1 = 17\*2 mod 380 = 34;

b2 = 17\*2 mod 380 = 51;

b3 = 85;

b4 = 187;

b5 = 11;

b6 = 39;

b7 = 78;

b8 = 173;

B = {34,51,85,187,11,39,78,173} =>Cheiepublica

(A,t,m,s) =>Cheie private

ti = t\*ai mod m

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 34 | 51 | 85 | 187 | 11 | 39 | 78 | 173 |
| 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | **M** |
| 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | **A** |
| 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | **R** |
| 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | **C** |
| 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | **H** |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | **I** |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | T |
| 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | **A** |
| 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | **N** |
| 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | **O** |
| 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | **C** |
| 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | **T** |
| 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | A |
| 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | V |

**M =** 187

**A =** 11+39+78+173 = 301

**R =** 11+78 = 89

**C =** 11+39+78+173 = 301

**H =** 39+78+173 = 260

**I =** 173

T = 0

**A =** 78+173 = 251

**N =** 11+39+78+173 = 301

**O =** 187+78 = 265

**C =** 11+39+78 = 128

**T =** 39+173 = 212

**A =** 11+39 = 50

**V =** 11+39 = 50

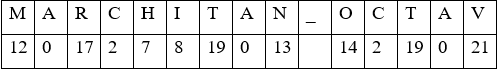
Text Criptat : 187 301 89 301 260 173 0 251 301 265 128 212 50

**Sistemulde criptare Cezar**

Text clar: COJOCARI ANDREI

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| U | V | W | X | Y | Z |
| 20 | 21 | 22 | 23 | 24 | 25 |

Fiecarelitera se inlocuieste cu echivalentulsau numeric.

**M =** 12 + 5 mod 26 ≡ 17 =>**R**

**A =** 0 + 5 mod 26 ≡ 5 =>**F**

**R =** 17 + 5 mod 26 ≡ 22 =>**W**

**C =** 2 + 5 mod 26 ≡ 7 =>**H**

**H =** 7 + 5 mod 26 ≡ 12 =>**M**

**I =** 8 + 5 mod 26 ≡ 13 =>**N**

**T =** 19 + 5 mod 26 ≡ 14 =>**O**

**A =** 0 + 5 mod 26 ≡ 5 =>**F**

**N =** 13 + 5 mod 26 ≡ 18 =>**S**

**O =** 14 + 5 mod 26 ≡ 19 =>**T**

**C =** 2 +5 mod 26 ≡ 7 =>**H**

**T =** 19 + 5 mod 26 ≡ 14 =>**O**

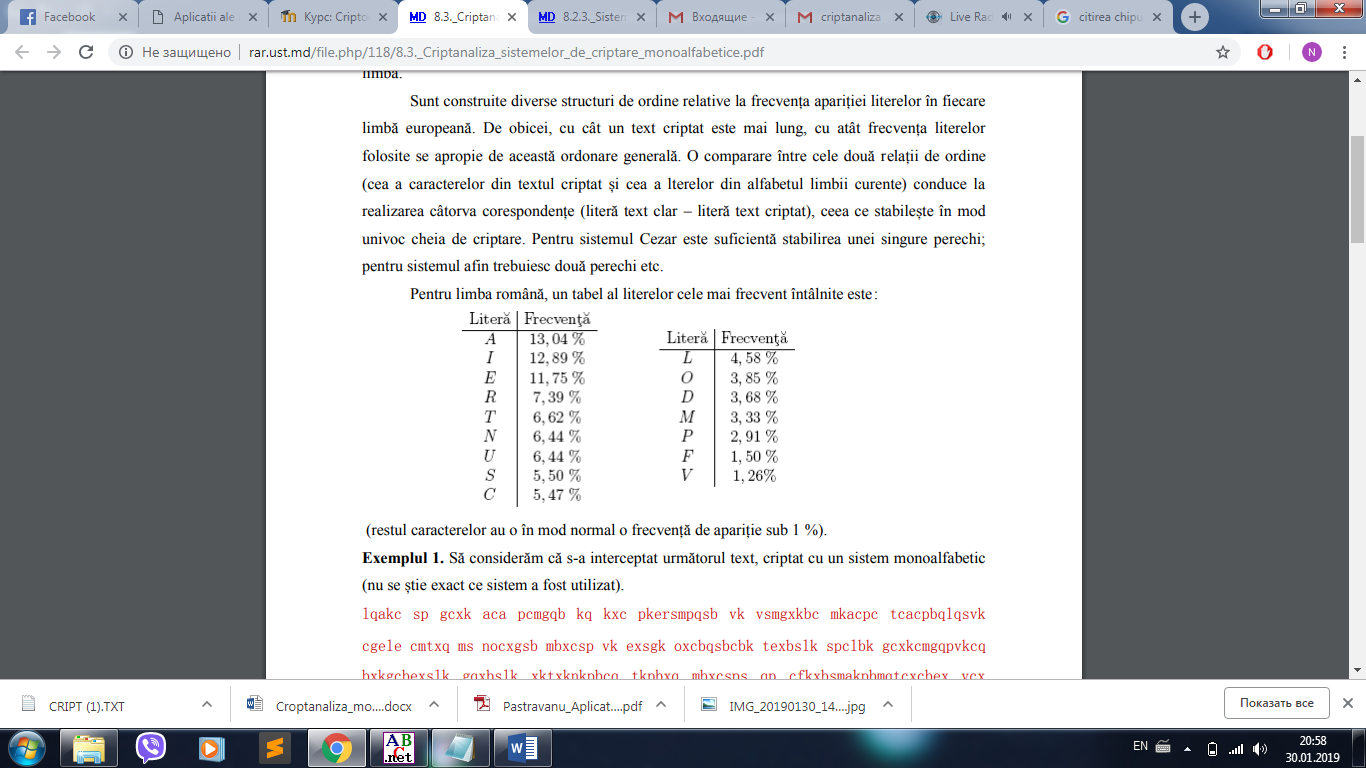
**A =** 0 + 5 mod 26 ≡ 5 =>**F**

**V =** 21 + 5 mod 26 ≡ 0 =>**A**

**Text Criptat** :RFWHMNOFSTHOFA

**Pentrudecriptare :**Aceiasiproceduradoar ca scadem 3 de la urma la inceput.

**Criptoanaliza Mono**



Text criptat:

VTHWVLPR J YZLO JPOHU HW LZPHVOJOVJ CZQHOHPZ QHOVIJIJ

KRWHTVJ LH J QRPIJO PJ IVSJPOZI QJ OHTCRQ

GHJIRQ ZYHPHJQ JQ CJIOHSRQRH PZWLVIUJOZI

J CRMQHPJO CIHTRQ LJR CZVT QJ UJILOJ SV LJHLCIVGVPV

JWH HJI QJ WZRJLCIVGVPV JWH J CQVPJO LJ LORSHVGV

QJ UHVWJ TJWRLPIHLVQV CZVORQRH THEJH VTHWVLPR

JR YZLO SJIRHOV JPJSVTHVH IZTJWV SV OHOR TJHZIVLPR

VTHWVLPR J YZLO HWOVIWJO QJ LCHOJQRQ TJIPROJ

SHW MRPRIVLOH LH JCZH J YZLO OIJWLCZIOJO QJ

LJWJOZIHRQ PJIHOJL

**J-A**

vthwvlpr A yzloApohuhwlzphvoAovAczqhohpzqhoviAiAkrwhtvAlh A qrpiAopAivsApoziqAohtcrq

ghAirqzyhphAqAqcAiohsrqrhpzwlviuAozi

A crmqhpAocihtrqlArczvtqAuAiloAsvlAhlcivgvpv

AwhhAiqAwzrAlcivgvpvAwh A cqvpAolAlorshvgv

qAuhvwAtAwrlpihlvqvczvorqrhtheAhvthwvlpr

AryzlosAirhovApAsvthvhiztAwvsvohortAhzivlpr

vthwvlpr A yzlohwoviwAoqAlchoAqrqtAiproA

shwmrprivlohlhAczh A yzlooiAwlczioAoqA

lAwAozihrqpAihoAl

**H - I**

vtIwvlpr A yzloApoIuIwlzpIvoAovAczqIoIpzqIoviAiAkrwItvAlI A qrpiAopAivsApoziqAoItcrq

gIAirqzyIpIAqAqcAioIsrqrIpzwlviuAozi

A crmqIpAociItrqlArczvtqAuAiloAsvlAIlcivgvpv

AwIIAiqAwzrAlcivgvpvAwI A cqvpAolAlorsIvgv

qAuIvwAtAwrlpiIlvqvczvorqrItIeAIvtIwvlpr

AryzlosAirIovApAsvtIvIiztAwvsvoIortAIzivlpr

vtIwvlpr A yzloIwoviwAoqAlcIoAqrqtAiproA

sIwmrprivloIlIAczI A yzlooiAwlczioAoqA

lAwAoziIrqpAiIoAl

**V – E**

EtIwElprAyzloApoIuIwlzpIEoAoEAczqIoIpzqIoEiAiAkrwItEAlI A qrpiAopAiEsApoziqAoItcrq

gIAirqzyIpIAqAqcAioIsrqrIpzwlEiuAozi

A crmqIpAociItrqlArczEtqAuAiloAsElAIlciEgEpE

AwIIAiqAwzrAlciEgEpEAwI A cqEpAolAlorsIEgE

qAuIEwAtAwrlpiIlEqEczEorqrItIeAIEtIwElpr

AryzlosAirIoEApAsEtIEIiztAwEsEoIortAIziElpr

EtIwElpr A yzloIwoEiwAoqAlcIoAqrqtAiproA

sIwmrpriEloIlIAczI A yzlooiAwlczioAoqA

lAwAoziIrqpAiIoAl

**O – T**

EtIwElprAyzlTApTIuIwlzpIETATEAczqITIpzqITEiAiAkrwItEAlI A qrpiATpAiEsApTziqATItcrq

gIAirqzyIpIAqAqcAiTIsrqrIpzwlEiuATzi

A crmqIpATciItrqlArczEtqAuAilTAsElAIlciEgEpE

AwIIAiqAwzrAlciEgEpEAwI A cqEpATlAlTrsIEgE

qAuIEwAtAwrlpiIlEqEczETrqrItIeAIEtIwElpr

AryzlTsAirITEApAsEtIEIiztAwEsETITrtAIziElpr

EtIwElpr A yzlTIwTEiwATqAlcITAqrqtAiprTA

sIwmrpriElTIlIAczI A yzlTTiAwlcziTATqA

lAwATziIrqpAiITAl

**I – R**

EtIwElprAyzlTApTIuIwlzpIETATEAczqITIpzqITERARAkrwItEAlI A qrpRATpAREsApTzRqATItcrq

gIARrqzyIpIAqAqcARTIsrqrIpzwlERuATzR

A crmqIpATcRItrqlArczEtqAuARlTAsElAIlcREgEpE

AwI IAR qAwzrAlcREgEpEAwI A cqEpATlAlTrsIEgE

qAuIEwAtAwrlpRIlEqEczETrqrItIeAIEtIwElpr

AryzlTsARrITEApAsEtIEIRztAwEsETITrtAIzRElpr

EtIwElpr A yzlTIwTERwATqAlcITAqrqtARprTA

sIwmrprRElTIlIAczI A yzlTTRAwlczRTATqA

lAwATzRIrqpARITAl

**Q – L**

EtIwElpr A yzlTApTIuIwlzpIETATEAczLITIpz LITERARA krwItEAlI A LrpRATpAREsApTzR LA TItcrLgIARrLzyIpIAL AL cARTIsrLrIpzwlERuATzR

A crmLIpATcRItrLlArczEt LA uARlTAsElAIlcREgEpEAwI IAR LA wzrAlcREgEpEAwI A cLEpATlAlTrsIEgE LA uIEwAtAwrlpRIlELEczETrLrItIeAIEtIwElprAryzlTsARrITEApAsEtIEIRztAwEsETITrtAIzRElprEtIwElpr A yzlTIwTERwAT LA lcITALrLtARprTAsIwmrprRElTIlIAczI A yzlTTRAwlczRTAT LA lAwATzRIrLpARITAl

**P – C**

EtIwElCr A yzlTACTIuIwlzCIETATEAczLITICz LITERARA krwItEAlI A LrCRAT CA REsACTzR LA TItcrLgIARrLzyICIAL AL cARTIsrLrICzwlERuATzR

A crmLICATcRItrLlArczEt LA uARlTAsElAIlcREgECEAwI IAR LA wzrAlcREgECEAwI A cLECATlAlTrsIEgE LA uIEwAtAwrlCRIlELEczETrLrItIeAIEtIwElCrAryzlTsARrITEACAsEtIEIRztAwEsETITrtAIzRElCrEtIwElCr A yzlTIwTERwAT LA lcITALrLtARCrTAsIwmrCrRElTIlIAczI A yzlTTRAwlczRTAT LA lAwATzRIrLCARITAl

**L – S**

EtIwESCr A yzSTACTIuIwSzCIETATEAczLITICz LITERARA krwItEA SI A LrCRAT CA REsACTzR LA TItcrLgIARrLzyICIAL AL cARTIsrLrICzwSERuATzR

A crmLICATcRItrLSArczEt LA uARSTAsESAIScREgECEAwI IAR LA wzrAScREgECEAwI A cLECAT SA STrsIEgE LA uIEwAtAwrSCRISELEczETrLrItIeAIEtIwESCrAryzSTsARrITEACAsEtIEIRztAwEsETITrtAIzRESCrEtIwESCr A yzSTIwTERwAT LA ScITALrLtARCrTAsIwmrCrRESTI SI AczI A yzSTTRAwSczRTAT LA SAwATzRIrL CARITAS

**Z – O**

EtIwESCr A yOSTACTIuIw SOCIETATEA cOLITICO LITERARA krwItEA SI A LrCRAT CA REsACTOR LA TItcrLgIARrLOyICIAL AL cARTIsrLrICOwSERuATOR

A crmLICATcRItrLSArcOEt LA uARSTAsESAIScREgECEAwI IAR LA wOrAScREgECEAwI A cLECAT SA STrsIEgE LA uIEwAtAwrSCRISELEcOETrLrItIeAIEtIwESCrAryOSTsARrITEACAsEtIEIROtAwEsETITrtAIORESCrEtIwESCr A yOSTIwTERwAT LA ScITALrLtARCrTAsIwmrCrRESTI SI AcOI A yOSTTRAwScORTAT LA SAwATORIrL CARITAS

**C – P**

EtIwESCr A yOSTACTIuIw SOCIETATEA POLITICO LITERARA krwItEA SI A LrCRAT CA REsACTOR LA TItPrLgIARrLOyICIAL AL PARTIsrLrICOwSERuATOR

A PrmLICATPRItrLSArPOEt LA uARSTAsESAISPREgECEAwI IAR LA wOrASPREgECEAwI A PLECAT SA STrsIEgE LA uIEwAtAwrSCRISELEPOETrLrItIeAIEtIwESCrAryOSTsARrITEACAsEtIEIROtAwEsETITrtAIORESCrEtIwESCr A yOSTIwTERwAT LA SPITALrLtARCrTAsIwmrCrRESTI SI APOI A yOSTTRAwSPORTAT LA SAwATORIrL CARITAS

**Y – F**

EtIwESCrA FOST ACTIuIw SOCIETATEA POLITICO LITERARA krwItEA SI A LrCRAT CA REsACTOR LA TItPrLgIARrL OFICIAL AL PARTIsrLrICOwSERuATOR

A PrmLICATPRItrLSArPOEt LA uARSTAsESAISPREgECEAwI IAR LA wOrASPREgECEAwI A PLECAT SA STrsIEgE LA uIEwAtAwrSCRISELEPOETrLrItIeAIEtIwESCrAr FOST sARrITEACAsEtIEIROtAwEsETITrtAIORESCrEtIwESCr A FOST IwTERwAT LA SPITALrLtARCrTAsIwmrCrRESTI SI APOI A FOST TRAwSPORTAT LA SAwATORIrL CARITAS

**W – N**

EtINESCrA FOST ACTIu IN SOCIETATEA POLITICO LITERARA krNItEA SI A LrCRAT CA REsACTOR LA TItPrLgIARrL OFICIAL AL PARTIsrLrICONSERuATOR

A PrmLICATPRItrLSArPOEt LA uARSTAsESAISPREgECE ANI IAR LA NOrASPREgECE ANI A PLECAT SA STrsIEgE LA uIENAtANrSCRISELEPOETrLrItIeAIEtINESCrAr FOST sARrITEACAsEtIEIROtANEsETITrtAIORESCrEtINESCr A FOST INTERNAT LA SPITALrLtARCrTAsINmrCrRESTI SI APOI A FOST TRANSPORTAT LA SANATORIrL CARITAS

**T – M**

EMINESCrA FOST ACTIu IN SOCIETATEA POLITICO LITERARA krNIMEA SI A LrCRAT CA REsACTOR LA TIMPrLgIARrL OFICIAL AL PARTIsrLrICONSERuATOR

A PrmLICATPRIMrLSAr POEM LA uARSTAsESAISPREgECE ANI IAR LA NOrASPREgECE ANI A PLECAT SA STrsIEgE LA uIENAMANrSCRISELEPOETrLrIMIeAIEMINESCrAr FOST sARrITEACAsEMIEI ROMANE sETITrMAIORESCrEMINESCr A FOST INTERNAT LA SPITALrLMARCrTAsINmrCrRESTI SI APOI A FOST TRANSPORTAT LA SANATORIrL CARITAS

**Text decriptat**

EMINESCU A FOST ACTIV IN SOCIETATEA POLITICO LITERARA JUNIMEA SI A LUCRAT CA REDACTOR LA TIMPUL ZIARUL OFICIAL AL PARTIDULUI CONSERVATOR

A PUBLICAT PRIMUL SAU POEM LA VARSTA DE SAISPREZECE ANI IAR LA NOUASPREZECE ANI A PLECAT SA STUDIEZE LA VIENA MANUSCRISELE POETULUI MIHAI EMINESCU AU FOST DARUITE ACADEMIEI ROMANE DE TITU MAIORESCU EMINESCU A FOST INTERNAT LA SPITALUL MARCUTA DIN BUCURESTI SI APOI A FOST TRANSPORTAT LA SANATORIUL CARITAS

**Sistemulde criptareRisheleu**

Fie careul 6x6, in care zonelehasurateconstituiegauri.

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Vremsacriptamtexul: **INTRE OAMENI EXISTA UN LIMBAJ COMUN!!!**

Vomscrieacest text sub forma unui table cu saseliniisisasecoloane,astfel:

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| **O** | **A** | **M** | **E** | **N** | **I** |
| **E** | **X** | **I** | **S** | **T** | **A** |
| **U** | **N** |  | **L** | **I** | **M** |
| **B** | **A** | **J** |  | **C** | **O** |
| **M** | **U** | **N** | **!** | **!** | **!** |

Aplicandcartonulpesteacest text, vorraminevizibile 9 caractere: **NR\_NINIO!**(citite de la stânga la dreaptași de susînjos)

Vom roti acumcareul cu 90oin sensulacelor de ceasornic. El vaarătaastfel:

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Asezindacumpestetext ,raminvizibilecaracterele: MISUMJCU!

La a treiarotire a careului se obține similar textul: TOXTLAMN!, iar la a patrarotire – NEAEEA\_B\_

Decitextulcriptateste: **NR\_NINIO!**MISUMJCU!TOXTLAMN!NEAEEA\_B\_

Operatia de decriptare se realizeaza similar.