National University of Computer and Emerging Sciences



Lab 09

COAL

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Task

The Playfair Cipher Text

# **Source Code:**

*;Author :Muhammad Zain*

;Name :The Cipher Playfair

include Irvine32.inc

.data

welcome\_0 byte " -----------------------------------------",0

welcome\_1 byte " | The PlayFair Ciphar |",0

welcome\_2 byte " | An Approach to Encrypt Data |",0

welcome\_3 byte " -----------------------------------------",0

pair\_input\_msg byte "Please input four charcters for Encryption",0

caution\_msg byte "Please input only capital alphabets",0

input byte 5 dup(?)

pair\_1 byte 3 dup(?)

pair\_2 byte 3 dup(?)

pair\_msg byte "Pairs are : ",0

;matrix

arr byte "ZAINB"

rowSize = ($-arr)

byte "CDEFG"

byte "HKLMO"

byte "PQRST"

byte "UVWXY",0

stab byte " ",0

counter dword 0

rowIndex dword 0

colIndex dword 0

.code

main PROC

;==================================================================================

;==================================================================================

;This is the main printing Function/PRoc of Matrix

;==================================================================================

;==================================================================================

mov eax, white + (lightred \* 16)

call SetTextColor

mov edx, offset welcome\_0

call writestring

call crlf

mov edx, offset welcome\_1

call writestring

call crlf

mov edx, offset welcome\_2

call writestring

call crlf

mov edx, offset welcome\_3

call writestring

call crlf

call crlf

mov ecx, 5 ; no. of rows

L1:

mov counter, ecx

mov ecx, rowSize ; no. of columns

L2:

mov ebx, offset arr

mov eax, rowIndex

mov edx, rowSize

mul edx ; row index

add ebx, eax

mov esi, colIndex ; column index

mov eax, 0

mov al, [ebx + esi \* TYPE arr] ; al =arr[i][j]

call WriteChar

mov edx, offset stab

call WriteString

inc colIndex

loop L2

inc rowIndex

mov colIndex, 0

call crlf

mov ecx, counter

loop L1

;==================================================================================

;==================================================================================

; Printing Proc Ends

;==================================================================================

;==================================================================================

call crlf

call crlf

mov edx ,offset pair\_input\_msg

call writestring

call crlf

mov edx ,offset caution\_msg

call writestring

call crlf

mov edx,offset input

mov ecx,sizeof input

call readstring

;============================================================

;============================================================

;Pairing PRoC

;============================================================

;============================================================

mov edx ,offset pair\_msg

call writestring

call crlf

mov edi,offset input

mov esi,offset pair\_1

mov ecx,2

LOP1:

mov al,[edi]

mov [esi],al

inc esi

inc edi

loop LOP1

MOV edx ,offset pair\_1

call writestring

call crlf

mov edi,offset input

mov esi,offset pair\_2

mov ecx,2

add edi,2

L21:

mov al,[edi]

mov [esi],al

inc esi

inc edi

loop L21

MOV edx ,offset pair\_2

call writestring

call crlf

;======================================================

;COloumn PRoc

;mov eax,0

;mov al,edx

;inc al

;.IF al==5

;mov al,0

;.endif

;mov ah,5

;mul ah

;movzx esi,edx

;mov bh,arr[ecx+esi\* typearr]

;mov eax,0

;mov al ,edx

;inc al

;.IF al==5

;mov al,0

;.endif

;mov ah,5

;mul ah

;movzx ecx,al

;movzx esi,edx;

;mov bl

;=============================================================

exit

main ENDP

END main

# **Snip:**

A picture containing text

Description automatically generated