

Cipher Vault

"Unlock the Power of Secure
Communication with CipherVault!"

PRESENTED TO
Gamal Shehata

PRESENTED BY
Abdulrahman Magdy

22/5/2023



Problem Addressed

- Traditional communication methods often lack sufficient security measures, making messages vulnerable to interception and unauthorized access. CipherVault aims to address the problem of secure message communication
- Address the need for easy-to-use encryption and decryption tools
- Unavailability of educational resources to learn an introduction to cryptography

Proposed Solutions

Solution # 1

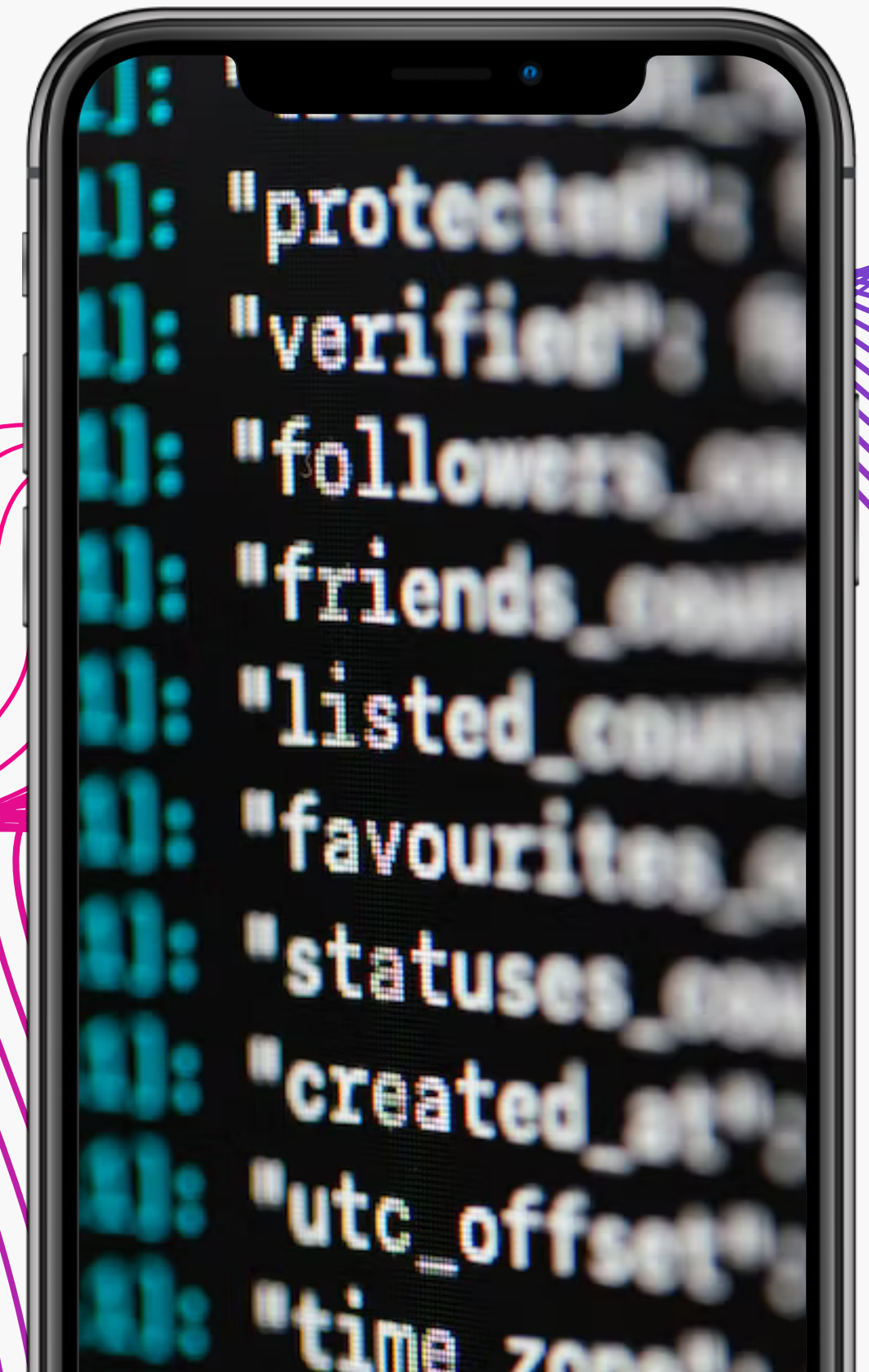
Comprehensive encryption and decryption: CipherVault provides multiple encryption and decryption techniques, including Caesar cipher, Vigenère cipher, Rail Fence cipher, and Morse code cipher.

Solution # 2

The program is easy to use, and have flexible options: Direct writing, and file upload

Solution # 3

The program keep track of all usage of the program and ensure user security by privacy of keys used.



CIPHERS

Caesar

Caesar cipher is a simple substitution cipher where each letter in the plaintext is shifted a certain number of positions down the alphabet.

Vigenere

Vigenere cipher is a polyalphabetic substitution cipher that uses a keyword to encrypt the plaintext by shifting each letter multiple positions based on the corresponding letter in the keyword.

Rail Fence

Rail Fence cipher is a transposition cipher that rearranges the plaintext by writing it diagonally in a zigzag pattern across a specified number of rows, and then reading off the ciphertext row by row.

Morse

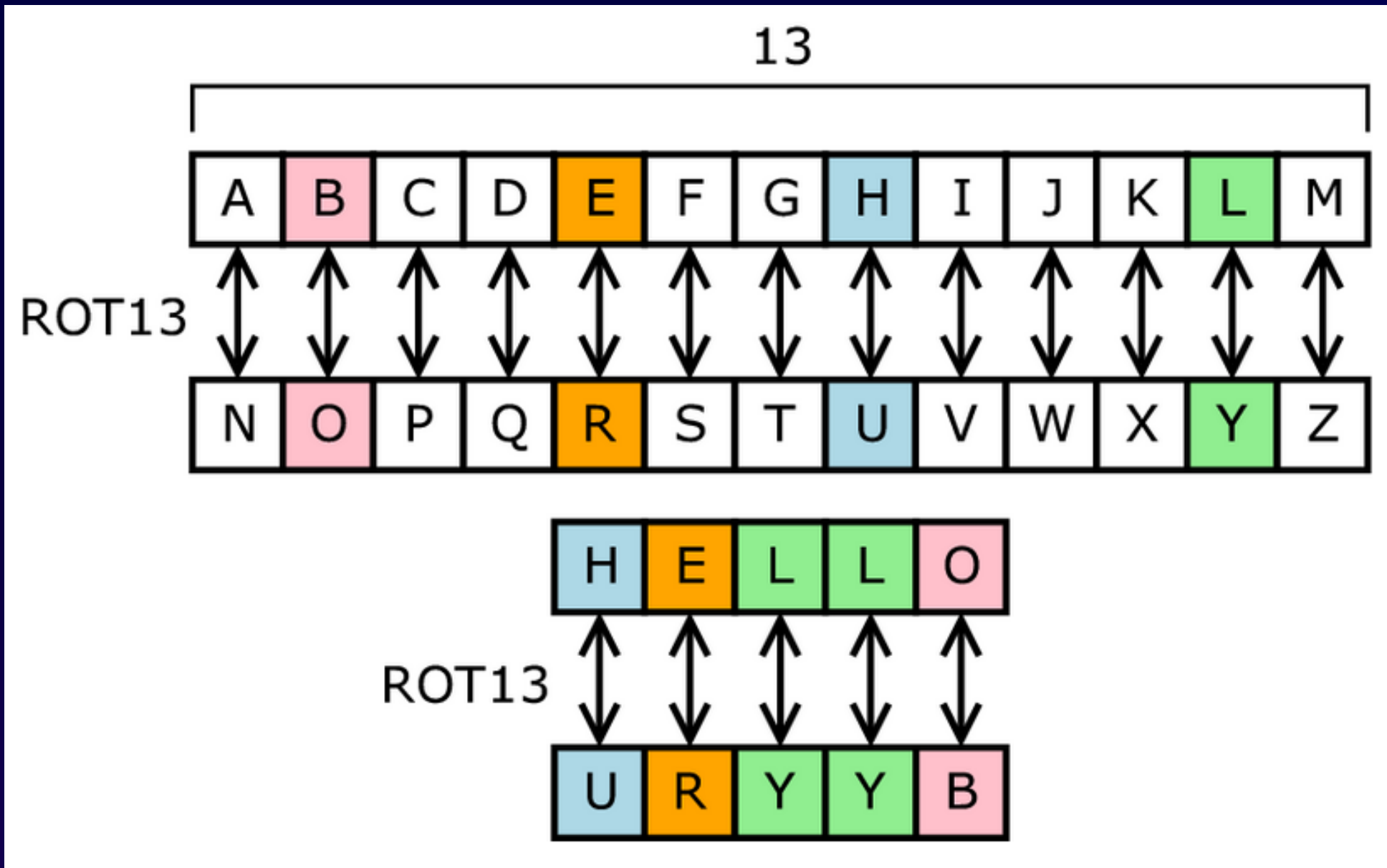
Morse code is a character encoding scheme that uses dots and dashes to represent letters and numbers, enabling communication through audio or visual signals.

[Back to Agenda](#)



Caesar Cipher

[Back to Agenda](#)



Vigenere Cipher

o p u w r	x n s	v z k	g b y j m i a
v i g e n	e r e	v i g	e n e r e v i
1-1-2-2-1-	2-1-1-	2-2-1-	6 1 2-9 1-8 0
4 5 0 2 7	3 3 8	1 5 0	4 2
- 2- 8 6 4 1-	4 1- 4	2- 8 6	4 1- 4 1- 4 2- 8
1 3	7	1	3 7 1

Rail Fence Cipher

[Back to Agenda](#)



Plaintext

T H I S I S A S E C R E T M E S S A G E

Rail Fence

Encoding

key = 4

T						A						T						G	
	H				S		S				E		M				A		E
		I		I				E		R				E		S			
			S						C						S				

Ciphertext

T A T G H S S E M A E I I E R E S S C S



Morse Code

International Morse Code

--- -- -- - . - . -

A	.-	N	-. -	1	.- - - -	.	. . . . .	=	- . . . .
B	- . . .	O	- - -	2	. . - - -	,	- . . . . -	+	. . . . .
C	- . . -	P	. - - .	3	. . . - -	?	. . . . .	-	. . . . .
D	- . .	Q	- - . -	4	. . . . -	!	- . . . . -	\$	. . . . .
E	. -	R	. - .	5	. . . . .	'	. - . . . .	@	. . . . .
F	. . - .	S	. . .	6	- . . . .	"	. . . . .	
G	- . -	T	-	7	- . . . .	(	. . . . .	
H	. . . .	U	. . -	8	-)	-		
I	. .	V	. . . -	9	- . . . . .	&	. . . . .	
J	. - - -	W	. - -	0	- - - - -	:	-		
K	- . -	X	- . . .			;	-		
L	. - . .	Y	- . - -			/	-		
M	- -	Z	- . . .			_	. . . . .	

User Interface

The screenshot shows a Windows application window titled "MainWindow". The interface is divided into several sections:

- Message:** A large text area for inputting the message to be encrypted or decrypted.
- Result:** A large text area for displaying the output of the encryption or decryption process.
- Shift value:** A text input field for specifying the shift value used in the Caesar cipher.
- Buttons:** A row of five buttons at the bottom: "Caesar" (with a dropdown arrow), "Encrypt", "Decrypt", "Import file", and "Export file".

Any Questions?

EMAIL

s-gamal.shehata@zewailcity.edu.eg

s-abdulrahman.abdulrahman@zewailcity.edu.eg

CALL US

01095386092

01090733963