Step 1: Start

Step 2 : Initialize Variables:

2.1:Define BUFF as 100.

2.2:Declare message[BUFF], key[BUFF], pt[BUFF], and ct[BUFF] as character arrays.

2.3:Declare len as 0 (to track valid characters).

2.4:Declare pi and ci as integers.

Step 3: Input:

3.1:Prompt "Enter the plaintext message" and store it in message.

3.2:Prompt "Enter the key (same length as the message)" and store it in key.

Step 4: Validate Key Length

4.1:If strlen(key) does not match strlen(message), print an error and exit.

Step 5: Process Plaintext Message:

5.1:For each character in message,

If the character is alphabetic, convert it to uppercase and store it in pt[len].

Step 6:Increment len for each valid character.

6.1**:**Validate and Convert Key.

6.2:For each character in key (up to len),

If the character is not alphabetic, print an error and exit.

6.3:Convert each character in key to uppercase.

Step 7 :Encrypt Message Using Vernam Cipher:

7.1:For each character in pt (up to len),

Compute pi as the position of pt[i] in the alphabet (using ASCII values).

7.2:Compute k as the position of key[i] in the alphabet.

7.3:Calculate ci = pi ^ k to perform XOR between plaintext and key.

7.4:Convert ci back to a character and store it in ct[i].

Step 8 : Output Encrypted Message,

8.1:Print "The ciphertext is:" followed by ct.

Step 9: Stop