

EXP NO :1

DATE:

CAESAR CIPHER

AIM:

To implement encryption algorithm using Caesar Cipher technique.

ALGORITHM:

Step 1: Read the plaintext input from the user.

Step 2: Prompt the user to enter the encryption key (shift value).

Step 3: Iterate through each character in the plaintext input.

Step 4: For each alphabetic character, apply the Caesar Cipher encryption by shifting it by the specified key.

Step 5: Handle non-alphabetic characters such as spaces, punctuation, and numbers by leaving them unchanged.

Step 6: Display the encrypted ciphertext as the output to the user.

PROGRAM:

```
#include <stdio.h>

int main() {
    char text[500];
    int key;

    printf("Enter a message to encrypt: ");
    scanf("%s", text);

    printf("Enter the key: ");
    scanf("%d", &key);

    for (int i = 0; text[i] != '\0'; ++i) {
        char ch = text[i];

        if ('a' <= ch && ch <= 'z')
            ch = (ch - 'a' + key) % 26 + 'a';
        else if ('A' <= ch && ch <= 'Z')
            ch = (ch - 'A' + key) % 26 + 'A';
```

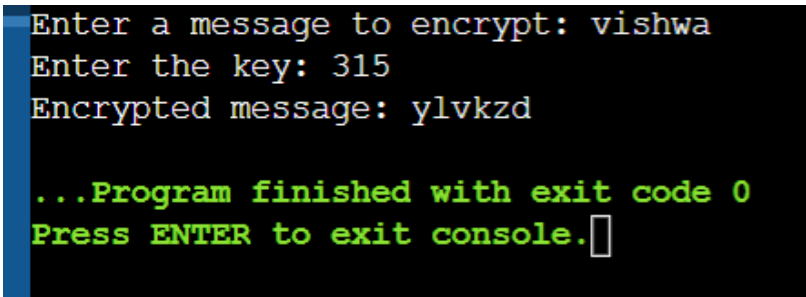
```
    else if ('0' <= ch && ch <= '9')
        ch = (ch - '0' + key) % 10 + '0';

    text[i] = ch;
}

printf("Encrypted message: %s", text);

return 0;
}
```

OUTPUT:

A screenshot of a terminal window with a black background and a blue vertical bar on the left. The text is displayed in a monospaced font. The first three lines are in white: 'Enter a message to encrypt: vishwa', 'Enter the key: 315', and 'Encrypted message: ylvkzd'. The last two lines are in green: '...Program finished with exit code 0' and 'Press ENTER to exit console.' followed by a cursor icon.

```
Enter a message to encrypt: vishwa
Enter the key: 315
Encrypted message: ylvkzd

...Program finished with exit code 0
Press ENTER to exit console.
```

RESULT: