EXP NO:3

DATE:3/1/24 **RAIL FENCE CIPHER**

Aim: To implement an encryption algorithm using Rail Fence Cipher technique.

Algorithm:

- Step 1: Declare msg and key, initializing msg with the original message, and set key to the desired rail fence key.
- Step 2: Create railMatrix with dimensions [key][msgLen], initializing elements with newline characters.
- Step 3: Iterate through msg, placing characters in railMatrix based on the Rail Fence Cipher pattern, updating row and col.
- Step 4:Print the encrypted message by traversing railMatrix, excluding newline characters.
- Step 5:Return 0 for successful execution and program termination.

Program:

```
#include<stdio.h>
#include<string.h>

void encryptMsg(char msg[], int key){
 int msgLen = strlen(msg), i, j, k = -1, row = 0, col = 0;
char railMatrix[key][msgLen];

 for(i = 0; i < key; ++i)
for(j = 0; j < msgLen; ++j)
 railMatrix[i][j] = '\n';
 for(i = 0; i < msgLen; ++i){
 railMatrix[row][col++] = msg[i];

 if(row == 0 || row == key-1)
 k = k * (-1);
row = row + k;
```

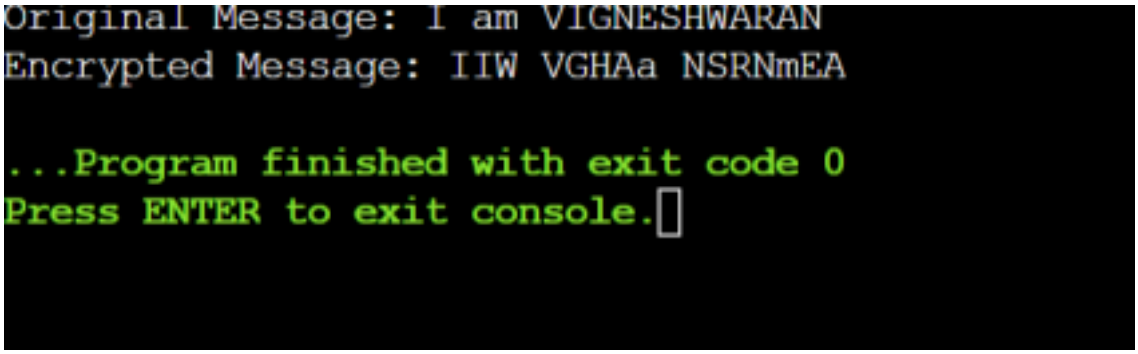
```
}

printf("\nEncrypted Message: ");

for(i = 0; i < key; ++i) for(j =
0; j < msgLen; ++j)
if(railMatrix[i][j] != '\n')
printf("%c", railMatrix[i][j]);
}

int main(){
char msg[] = "I am Vaishnavi"; int
key = 4; printf("Original Message:
%s", msg); encryptMsg(msg, key);
return 0;
}
```

Output:



Result: To implement an encryption algorithm using Rail Fence Cipher technique has been Executed successfully.