EXPNO:3 **DATE:**

RAILFENCECIPHER

Aim: ToimplementanencryptionalgorithmusingRailFenceCiphertechnique.

Algorithm:

- Step1:Declaremsgandkey,initializingmsgwiththeoriginalmessage,and set key to the desired rail fence key.
- Step2:CreaterailMatrixwithdimensions[key][msgLen],initializing elements with newline characters.
- Step3:Iteratethroughmsg,placingcharactersinrailMatrixbasedonthe Rail Fence Cipher pattern, updating row and col.
- Step4:Printtheencryptedmessagebytraversingrail Matrix,excluding newline characters.
- Step5:Return0forsuccessfulexecutionandprogramtermination.

Program:

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

voidencryptMsg(charmsg[],intkey){
   intmsgLen=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(){
    charmsg[]="ThisisSRIPRASATH"; int
    key = 3;
    printf("OriginalMessage:%s",msg);
encryptMsg(msg, key);     return 0;
}
```

Output:

```
original message: this is thriloke
encrypted message: t tlhsi hioeisrk
=== Code Execution Successful ===
```

Result: