**PRACTICAL NO. 3**

**Aim :** To implement product cipher.

**Code :**

#include<stdio.h>

#include<string.h>

#include<stdlib.h>

void main()

{

char c[10],k[10];

int a[10],b[10],l,i,s[10],ci[10],d[10];

printf("Enter a string");

gets(c);

printf("Enter key");

gets(k);

l= strlen(c);

for(i=0;i<l;i++)

{

a[i] = c[i];

a[i] = a[i] - 48;

b[i] = k[i];

b[i] = b[i] - 48;

}

for(i=0;i<l;i++)

{

if((a[i] == 1 && b[i] == 1) || (a[i] == 0 && b[i] == 0) )

{

s[i] = 0;

}

else if((a[i] == 0 && b[i] == 1) || (a[i] == 1 && b[i] == 0))

{

s[i] = 1;

}

}

for(i=0;i<l;i++)

{

if(s[i] == 1)

{

d[i] = 0;

}

else

{

d[i] = 1;

}

}

for(i=l-1;i>=0;i--)

{

ci[l-1-i] = d[i];

}

for(i=0;i<l;i++)

{

printf("%d",ci[i]);

}

}

**Output :**

**1.JPG**

**Conclusion :** We have successfully implemented product cipher.