#include <stdio.h>

#include <string.h>

int main ()

{

int i, j, keylen, msglen;

char data[100], key[30], temp[30], quot[100], rem[30], key1[30];

printf ("Enter Data: ");

scanf("%s",data);

printf ("Enter Key: ");

scanf("%s",key);

keylen = strlen (key);

msglen = strlen (data);

strcpy (key1, key);

for (i = 0; i < keylen - 1; i++)

data[msglen + i] = '0';

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

temp[i] = data[i];

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

{

quot[i] = temp[0];

if (quot[i] == '0')

for (j = 0; j < keylen; j++)

key[j] = '0';

else

for (j = 0; j < keylen; j++)

key[j] = key1[j];

for (j = keylen - 1; j > 0; j--)

{

if (temp[j] == key[j])

rem[j - 1] = '0';

else

rem[j - 1] = '1';

}

rem[keylen - 1] = data[i + keylen];

strcpy (temp, rem);

}

strcpy (rem, temp);

printf ("\nQuotient is ");

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

printf ("%c", quot[i]);

printf ("\nRemainder is ");

for (i = 0; i < keylen - 1; i++)

printf ("%c", rem[i]);

printf ("\nFinal data is: ");

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

printf ("%c", data[i]);

for (i = 0; i < keylen - 1; i++)

printf ("%c", rem[i]);

printf("\n");

return 0;

}