/\* CN exercise2 \*/

/\* C program to implement CRC \*/

#include<stdio.h>

#include<string.h>

void main()

{

int i,j,keylen,msglen;

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

printf("\n enter frame :\t");

gets(input);

printf("\n enter divisor:\t");

gets(key);

keylen=strlen(key);

msglen=strlen(input);

strcpy(key1,key);

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

{

input[msglen+i]='0';

}

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

temp[i]=input[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]=input[i+keylen];

strcpy(temp,rem);

}

strcpy(rem,temp);

printf("\n Quotient is...:\t");

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

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

printf("\n Remainder is...:\t");

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

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

printf("\n Final data to be transmitted is:\t");

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

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

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

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

printf("\n");

}