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("Enter Data: ");

scanf("%s",input);

printf("Enter Key: ");

scanf("%s",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<keylen;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("\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",input[i]);

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

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

}

Output 1:

------------

Enter Data: 1101011011

Enter Key: 10011

Quotient is 1100001010

Remainder is 1110

Final data is: 11010110111110