#include <iostream>

using namespace std;

int main()

{

int i,j,k,l;

//Get Frame

int fs;

cout<<"\n Enter Frame size: ";

cin>>fs;

int f[20];

cout<<"\n Enter Frame:";

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

{

cin>>f[i];

}

//Get Generator

int gs;

cout<<"\n Enter Generator size: ";

cin>>gs;

int g[20];

cout<<"\n Enter Generator:";

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

{

cin>>g[i];

}

cout<<"\n Sender Side:";

cout<<"\n Frame: ";

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

{

cout<<f[i];

}

cout<<"\n Generator :";

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

{

cout<<g[i];

}

//Append 0's

int rs=gs-1;

cout<<"\n Number of 0's to be appended: "<<rs;

for (i=fs;i<fs+rs;i++)

{

f[i]=0;

}

int temp[20];

for(i=0;i<20;i++)

{

temp[i]=f[i];

}

cout<<"\n Message after appending 0's :";

for(i=0; i<fs+rs;i++)

{

cout<<temp[i];

}

//Division

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

{

j=0;

k=i;

//check whether it is divisible or not

if (temp[k]>=g[j])

{

for(j=0,k=i;j<gs;j++,k++)

{

temp[k]=temp[k]^g[j];//XOR operation

}

}

Output :

Enter Frame size: 9

Enter Frame:1

1

0

0

1

0

1

0

1

Enter Generator size: 5

Enter Generator:1

0

1

0

1

Sender Side:

Frame: 110010101

Generator :10101

Number of 0's to be appended: 4

Message after appending 0's :1100101010000

CRC bits: 1011

Transmitted Frame: 1100101011011

Receiver side :

Received Frame: 1100101011011

Remainder: 0000

Since Remainder Is 0 Hence Message Transmitted From Sender To Receriver Is Correct

Process returned 0 (0x0) execution time : 48.273 s

Press any key to continue.