**def** sender(**data**,**coeff\_list**):

    binary\_generator**=**bnry\_gnratr(coeff\_list)

    data\_sender**=**data

**for** i **in** range(len(binary\_generator)**-**1):

        data\_sender**+=**'0'

    print("Data sender is: " **+** str(data\_sender))

    remainder**=**divide(data\_sender,binary\_generator)

**return** remainder

**def** bnry\_gnratr(**coeff\_list**):

    binary\_generator**=**""

**for** i **in** range(len(coeff\_list)):

**if**(coeff\_list[i]**==**'0'):

            binary\_generator**+=**'0'

**elif**(coeff\_list[i]**!=**'0'):

            binary\_generator**+=**'1'

    print("Binary generator is: " **+** (binary\_generator))

**return** binary\_generator

**def** reciever(**data**,**rem**,**coeff\_list**):

    data\_reciever**=**data**+**rem

    print("Data at reciever end is: "**+**data\_reciever)

    binary\_generator**=**bnry\_gnratr(coeff\_list)

    remainder**=**divide(data\_reciever,binary\_generator)

    print("Remainder at reciever: "**+**remainder)

**if**(remainder**==**'0000'):

        print("No error at reciever end")

**else**:

        print("Error at reciever end")

**def** divide(**data**,**binary\_generator**):

    data\_sender**=**data

    s**=**data\_sender[:5]

    print(s)

    remainder**=**""

    temp**=**""

    temp**=** int(s, 2)**^**int(binary\_generator,2)

    print(bin(temp)[2:].zfill(len(s)))

**for** i **in** range(len(data\_sender)**-**4):

**if**(s[0]**==**'1'):

            temp**=** int(s, 2)**^**int(binary\_generator,2)

            temp**=**bin(temp)[2:].zfill(len(s))

            s**=**temp[1:]**+**data\_sender[5**+**i:6**+**i]

            print(temp)

**elif**(s[0]**==**'0'):

            temp**=** int(s, 2)**^**int('00000',2)

            temp**=**bin(temp)[2:].zfill(len(s))

            s**=**str(str(temp[1:])**+**data\_sender[5**+**i:6**+**i])

            print(temp)

    remainder**=**temp[1:]

    print(remainder)

**return** remainder

data**=**input("Enter the data: ")

print("Data: " **+** data)

length\_poly**=**int(input("Enter the length of the polynomial: "))

coeff\_list**=**[]

print("Enter the coefficient of the polynomial: ")

**for** i **in** range(length\_poly):

    n**=**input()

    coeff\_list.append(n)

print("Cofficient list is: " **+** str(coeff\_list))

r**=**sender(data,coeff\_list)

data\_reciever**=**input("Enter the recieved at the reciever end")

reciever(data\_reciever,r,coeff\_list)







