OUTPUT

Enter data : 10110101

Enter g(x) : 1010

Quotient is 1001000100

Remainder is 000

modified data is : 10110101000

case ii)

Enter g(x) : 10001000000100001

Enter data : 1011101

Quotient is : 1011000011000111

Remainder is : 01001

modified data is : 10001000001000010100111

Aim:

```
#include <stdio.h>
#include <stdlib.h>
#include <stdio.h>
#include <conio.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: ");
  gets (input);
printf ( "Enter key: ");
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<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++)
```

```
def division(code, pol):
    i = len(poly)
    temp = code[0:len[poly]]
    for j in range(0, len(code) - len(poly)):
        if (temp[0] != '0'):
            res = xor(temp, poly, len(poly
            temp = res[1:] + code[i]
        else
            temp = temp[1:] + code[i
            i = i+1
    print(temp)
    if (temp[0] != '0'):
        res = xor(temp, poly, len(po
        rem = res[1:]
        else
            rem = temp[1:]
            return rem

def xor(a, b, n):
    ans = ""
    for i in range(n):
        if (a[i] == b[i]):
            ans += '0'
        else:
            ans += '1'
    return ans

code = input("Enter Codeword in")
poly = "1101"
zeros = "000"
modified code = code + zeroes
sender - division(modified - code, poly)
receiver = code + sender
```

5/11/2023