

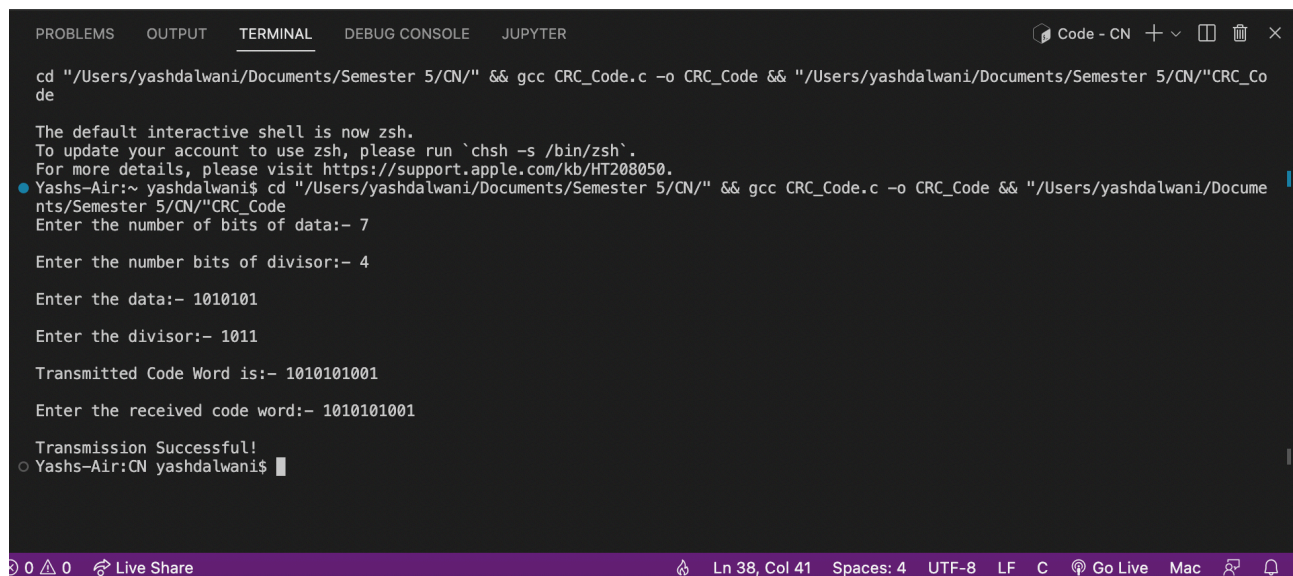
Program:-

```
#include<stdio.h>
char data[20],div[20],temp[4],total[100];
int i,j,datalen,divlen,len,flag=1;
void check();
int main()
{
    printf("Enter the number of bits of data:- ");
    scanf("%d",&datalen);
    printf("\nEnter the number bits of divisor:- ");
    scanf("%d",&divlen);
    len=datalen+divlen-1;
    printf("\nEnter the data:- ");
    scanf("%s",data);
    printf("\nEnter the divisor:- ");
    scanf("%s",div);

    for(i=0;i<datalen;i++)
    {
        total[i]=data[i];
        temp[i]=data[i];
    }
    for(i=datalen;i<len;i++)
        total[i]='0';
    check();
    for(i=0;i<divlen;i++)
        temp[i+datalen]=data[i];
    printf("\nTransmitted Code Word is:- %s",temp);
    printf("\n\nEnter the received code word:- ");
    scanf("%s",total);
    check();
    for(i=0;i<divlen-1;i++)
        if(data[i]!='1')
        {
            flag=0;
            break;
        }
    if(flag==1)
        printf("\nTransmission Successful!\n");
    else
        printf("\nReceived code word contains some error.\n");
}
void check()
{
```

```
for(j=0;j<divlen;j++)
    data[j]=total[j];
while(j<=len)
{
    if(data[0]=='1')
        for(i = 1;i <divlen ; i++)
            data[i] = (( data[i] == div[i])?'0':'1');
    for(i=0;i<divlen-1;i++)
        data[i]=data[i+1];
    data[i]=total[j++];
}
}
```

Output:-



The screenshot shows a terminal window with the following content:

```
cd "/Users/yashdalwani/Documents/Semester 5/CN/" && gcc CRC_Code.c -o CRC_Code && "/Users/yashdalwani/Documents/Semester 5/CN/"CRC_Co
de

The default interactive shell is now zsh.
To update your account to use zsh, please run `chsh -s /bin/zsh`.
For more details, please visit https://support.apple.com/kb/HT208050.
Yashs-Air:~ yashdalwani$ cd "/Users/yashdalwani/Documents/Semester 5/CN/" && gcc CRC_Code.c -o CRC_Code && "/Users/yashdalwani/Docume
nts/Semester 5/CN/"CRC_Code
Enter the number of bits of data:- 7

Enter the number bits of divisor:- 4

Enter the data:- 1010101

Enter the divisor:- 1011

Transmitted Code Word is:- 1010101001

Enter the received code word:- 1010101001

Transmission Successful!
Yashs-Air:CN yashdalwani$
```

The terminal window has a dark background with a light blue cursor. The status bar at the bottom shows "Ln 38, Col 41", "Spaces: 4", "UTF-8", "LF", "C", "Go Live", "Mac", and a bell icon.