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```c
#include<stdio.h>

#include<string.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 total bit of data:");

scanf("%d",&datalen);

printf("\nEnter the total bit 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++)
```

```c
total[i]='0';

check();

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

temp[i+datalen]=data[i];

printf("\ntransmitted code word:%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("\nsuccesful!!");

else

printf("\nreceived code word contains errors\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++];

}

}
```
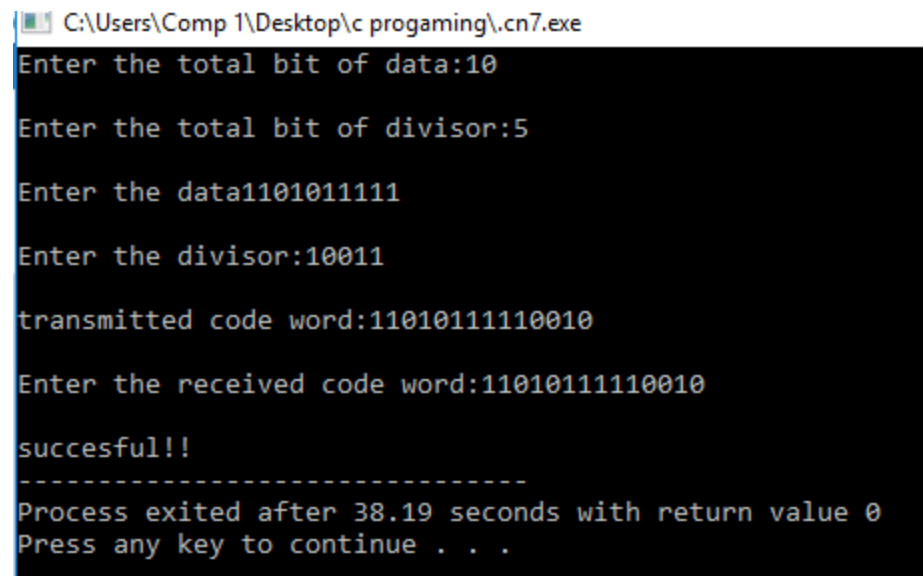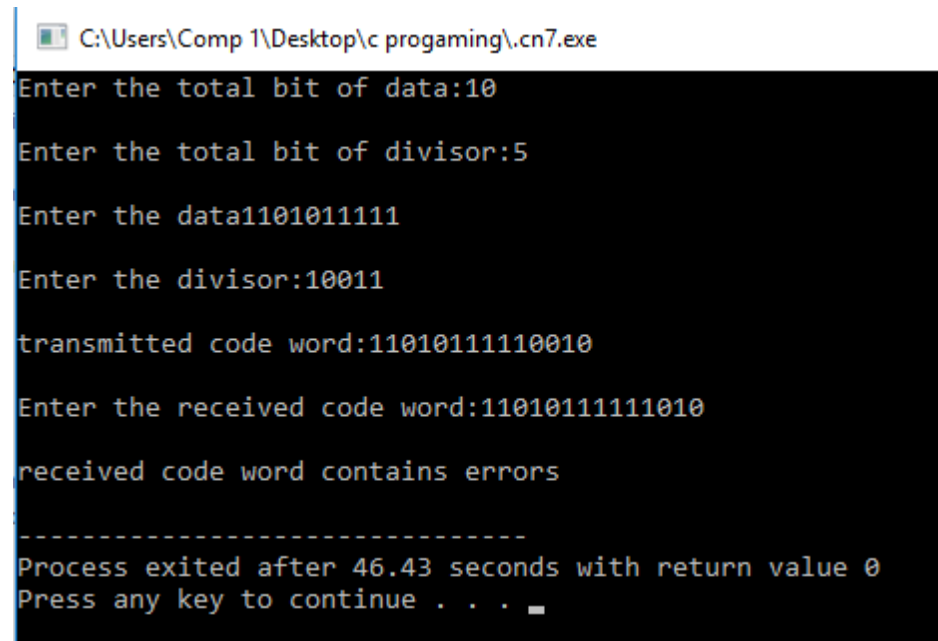
OUTPUT-1 :


```
C:\Users\Comp 1\Desktop\c progaming\.cn7.exe
Enter the total bit of data:10

Enter the total bit of divisor:5

Enter the data1101011111

Enter the divisor:10011

transmitted code word:11010111110010

Enter the received code word:11010111110010

succesful!!
---------------------------------
Process exited after 38.19 seconds with return value 0
Press any key to continue . . .
```

OUTPUT-2 :


```
C:\Users\Comp 1\Desktop\c progaming\.cn7.exe
Enter the total bit of data:10

Enter the total bit of divisor:5

Enter the data1101011111

Enter the divisor:10011

transmitted code word:11010111110010

Enter the received code word:11010111111010

received code word contains errors

---------------------------------
Process exited after 46.43 seconds with return value 0
Press any key to continue . . .
```