

//crc

```
#include<stdio.h>
```

```
#include<stdbool.h>
```

```
bool crccheck(int msg[],int n,int poly[],int m);
```

```
int main(){
```

```
    int i,n,m;
```

```
    int msg[100],poly[100];
```

```
    printf("enter the length of message: ");
```

```
    scanf("%d",&n);
```

```
    printf("\nenter the message bits(0's & 1's): ");
```

```
    for(i=0;i<n;i++){
```

```
        scanf("%d",&msg[i]);
```

```
    }
```

```
    printf("\nenter the length of polynomial: ");
```

```
    scanf("%d",&m);
```

```
    printf("\nenter the polynomial coefficients(0's & 1's): ");
```

```
    for(i=0;i<m;i++){
```

```
        scanf("%d",&poly[i]);
```

```
    }
```

```
    //append 0s to the msg for poly len(m) -1 times
```

```
    for(i=0;i<m-1;i++){
```

```
        msg[n+i]=0;
```

```
    }
```

```
    //print the msg
```

```
    printf("\nafter appending 0s(padding) the message for crc is: ");
```

```
    for(i=0;i<n+m-1;i++){
```

```
        printf("%d ",msg[i]);
```

```
    }
```

```
    printf("\n");
```

```

    if(crccheck(msg,n,poly,m)){
        printf("\ncrc check passed, no error occured.\n");
    }else{
        printf("\ncrc check failed, error occured.\n");
    }
    return 0;
}

```

```

bool crccheck(int msg[],int n,int poly[],int m){
    int i,j;
    for(i=0;i<n;i++){
        if(msg[i]==1){
            for(j=0;j<m;j++){
                msg[i+j]=msg[i+j]^poly[j];
            }
        }
    }
    //check if the rem is all 0s
    for(i=n-m+1;i<n;i++){
        if(msg[i]!=0){
            return false;
        }
    }
    return true;
}

```

```
E:\cn practice\crc p4.exe
enter the length of message: 10
enter the message bits(0's & 1's): 1 0 1 0 1 0 1 0 1 0
enter the length of polynomial: 5
enter the polynomial coefficients(0's & 1's): 1 1 0 0 1
after appending 0s(padding) the message for crc is: 1 0 1 0 1 0 1 0 1 0 0 0 0 0
crc check passed, no error occurred.

-----
Process exited after 22.11 seconds with return value 0
Press any key to continue . . .
```

31°C  
Mostly clear



Search

