

# CRC example

want:

$$D \cdot 2^r \text{ XOR } R = nG$$

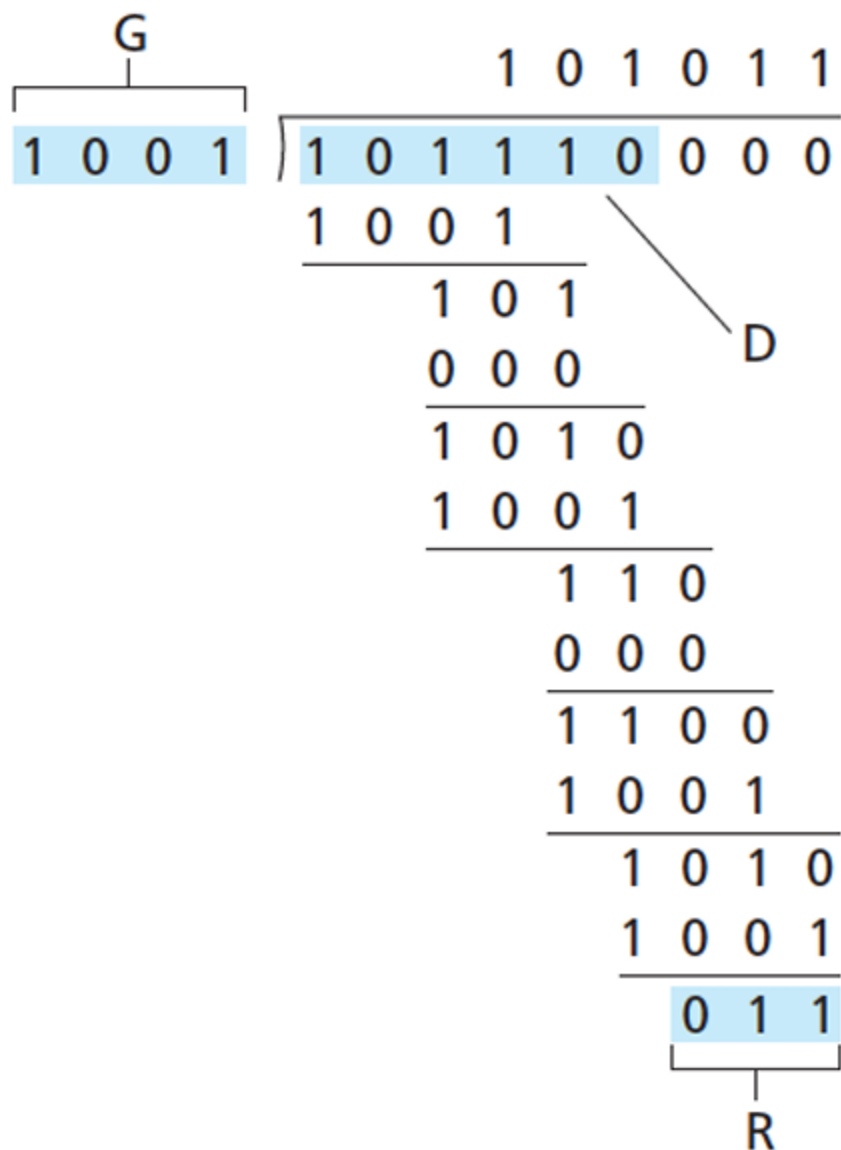
*equivalently:*

$$D \cdot 2^r = nG \text{ XOR } R$$

*equivalently:*

if we divide  $D \cdot 2^r$  by  $G$ , want remainder  $R$  to satisfy:

$$R = \text{remainder}\left[\frac{D \cdot 2^r}{G}\right]$$



# LATIHAN: PARITY CHECKING

- Odd parity (8 bit)

1 0 1 0 1 1 1 0  
1 1 0 0 1 0 1 1  
1 0 1 1 1 1 0 0  
0 0 1 0 0 1 1 0

1 0 1 0 1 1 1 0  
1 1 0 0 1 0 1 1  
1 0 1 1 1 1 0 0  
0 0 1 0 0 1 1 0

# LATIHAN : CRC

- Jika diketahui  $D = 1101011011$  dan  $G = x^4 + x^1 + 1$  hitung CRC dari pesan ini?
- Dengan  $G = x^4 + x^1 + 1$  buktikan apakah pesan berikut **1111 1111 1101 01** memiliki error atau error free?