

29/12/22

Date

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SPLASH

Aim: Write a program for error detecting code using CRC-CCTT

code:-

```
def div (code, poly):
    i = len (poly)
    temp = code[0:len (poly)]
    for j in range(0, len (code) - len (poly)):
        if (temp[0] != '0'):
            xex = xor (temp, poly, len (poly))
            temp = xex[1:] + code[i]
        else:
            temp = temp[1:] + code[i]
        i = i + 1
    print
    if (temp[0] != '0'):
        xex = xor (temp, poly, len (poly))
        send = xex[1:]
    else:
        send = temp[1:]
    return send
```

```
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\n")
poly = "10001000000100001"
zeros = "000000000000000000"
mod-code = code + zeros
sender = division(mod-code, poly)
receiver = code + sender
ans = division(receiver, poly)
if ans == "000000000000000000":
    print("no error in data")
else:
    print("error in data")

```

OUTPUT :

Enter ~~the~~ codeword
 1011101
 no error

Enter codeword
 100100
 error when: 100100000 is sent

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