```
def xor(a, b):
    result = []

    for i in range(1, len(b)):
        if a[i] == b[i]:
            result.append('0')
        else
            result.append('1')
    return ''.join(result)

def mod2div(dividend, divisor):
    pick = len(divisor)
    tmp = dividend[0:pick]
    while pick < len(dividend):
        if tmp[0] == '1':
            tmp = xor(divisor, tmp) + dividend[pick]
        else:
            tmp = xor('0'*pick, tmp) + dividend[pick]
        pick += 1

    if tmp[0] == '1':
        tmp = xor(divisor, tmp)
    else
        tmp = xor('0'*pick, tmp)
    checkword = tmp
    return checkword

def encodeData(data, key)
    l_key = len(key)
    appended_data = data + '0'*(l_key-1)
    rem = mod2div(appended_data, key)
    print("Modified data :"+str(appended_data)
```

```
    codeword = data + remainder
    return codeword

def decode_data(code, key):
    remainder = mod2div(code, key)
    return rem

data = "1011101"
print("dataword" + str(data))

key = "1001000"
codeword = encodeData(data, key)
recieved_data = int(decodeData(code, key))
if recieved_data == 0
        print("No error")
else
        print("Error has occured")
print
```

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