Lab 1 (Week of 14 August)

Question 1 - “The Last 3”

Problem Description

Given an integer `n` as input, print the last 3 bits of the number in its binary representation starting with the most significant bit among the three.

> Note: The last three bits are the bits corresponding to the,
>
> $2^2, 2^1$ and 2^0 positions (in that order)

Link to problem on OJ

Input constraints

$0 \leq n \leq 2^{31}$

Input format

The only line of input contains a single integer `n`

Output Format

Output three space-separated bits denoting the last three bits of the given number starting with the most significant bit among the three.

Sample input and output

Sample Input	Sample Output
11	`0 1 1`
12	`1 0 0`

Solution

```c
#include <stdio.h>

int main(void) {
    int n; scanf("%d", &n);
    printf("%d %d %d\n", !!(n & 1), !!(n & 2), !!(n & 4));
    return 0;
}
```

Question 2 - “Date Formats”

Problem Description

Given a date in `DD-MM-YY` format, output it in `MM-DD-YY` format.

Link to problem on OJ

Input format

The only line of input contains a valid date in `DD-MM-YY` format.

Output Format

Output the date in `MM-DD-YY` format with no space separation.

Sample input and output

Sample Input	Sample Output
25-03-04	03-25-04

Sample Input	Sample Output
15-08-23	08-15-23

Solution

```c
#include <stdio.h>

int main(void) {
    int d, m, y;
    scanf("%d-%d-%d", &d, &m, &y);
    printf("%02d-%02d-%02d\n", m, d, y);
    return 0;
}
```