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# Maximizing XOR

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Problem

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Given two integers,  $L$  and  $R$ , find the maximal value of  $A \text{ xor } B$ , where  $A$  and  $B$  satisfy the following condition:

$$L \leq A \leq B \leq R$$

## Input Format

The input contains two lines;  $L$  is present in the first line and  $R$  in the second line.

## Constraints

$$1 \leq L \leq R \leq 10^3$$

## Output Format

The maximal value as mentioned in the problem statement.

## Sample Input

```
10
15
```

## Sample Output

```
7
```

## Explanation

The input tells us that  $L = 10$  and  $R = 15$ . All the pairs which comply to above condition are the following:

```
10 ⊕ 10 = 0
10 ⊕ 11 = 1
10 ⊕ 12 = 6
10 ⊕ 13 = 7
10 ⊕ 14 = 4
10 ⊕ 15 = 5
11 ⊕ 11 = 0
11 ⊕ 12 = 7
11 ⊕ 13 = 6
11 ⊕ 14 = 5
11 ⊕ 15 = 4
12 ⊕ 12 = 0
12 ⊕ 13 = 1
12 ⊕ 14 = 2
```

$12 \oplus 15 = 3$   
 $13 \oplus 13 = 0$   
 $13 \oplus 14 = 3$   
 $13 \oplus 15 = 2$   
 $14 \oplus 14 = 0$   
 $14 \oplus 15 = 1$   
 $15 \oplus 15 = 0$

Here two pairs (10, 13) and (11, 12) have maximum xor value 7, and this is the answer.

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Java 8

```
1 import java.io.*;
2 import java.util.*;
3
4 public class Solution {
5
6     public static void main(String[] args) {
7         /* Enter your code here. Read input from STDIN. Print output to STDOUT. Your class should be named
8         Solution. */
9     }
10 }
```

Line: 1 Col: 1

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