

# Problem 201: Bitwise AND of Numbers Range

## Problem Information

**Difficulty:** Medium

**Acceptance Rate:** 48.37%

**Paid Only:** No

**Tags:** Bit Manipulation

## Problem Description

Given two integers `left` and `right` that represent the range `[left, right]`, return \_the bitwise AND of all numbers in this range, inclusive\_.

**Example 1:**

**Input:** left = 5, right = 7 **Output:** 4

**Example 2:**

**Input:** left = 0, right = 0 **Output:** 0

**Example 3:**

**Input:** left = 1, right = 2147483647 **Output:** 0

**Constraints:**

$0 \leq \text{left} \leq \text{right} \leq 2^{31} - 1$

## Code Snippets

**C++:**

```
class Solution {  
public:
```

```
int rangeBitwiseAnd(int left, int right) {  
  
}  
};
```

### Java:

```
class Solution {  
    public int rangeBitwiseAnd(int left, int right) {  
  
    }  
}
```

### Python3:

```
class Solution:  
    def rangeBitwiseAnd(self, left: int, right: int) -> int:
```