Algorithm Documentation: [Algorithm Name]

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1 Overview

This document presents the [Algorithm Name] algorithm for solving [problem].

2 Algorithm Description

Algorithm 1 Algorithm Name

1: **procedure** AlgorithmName($input$)
2:     $result \leftarrow 0$
3:     $n \leftarrow \text{length}(input)$
4:     **for** $i \leftarrow 1$ **to** n **do**
5:         **if** $condition$ **then**
6:             $result \leftarrow result + input[i]$
7:         **else**
8:             $result \leftarrow result - input[i]$
9:         **end if**
10:     **end for**
11:     **return** $result$
12: **end procedure**

2.1 Complexity Analysis

- **Time Complexity:** $O(n)$ where n is the size of input

- **Space Complexity:** $O(1)$ constant extra space

3 Example

3.1 Input

`input = [1, 2, 3, 4, 5]`

3.2 Output

`result = 15`