

# Java – Mountain Summit

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## Purpose

This lab was designed to teach you how to use an algorithm called bisection search.

## Description

Given an array of integers that represents elevations, return the index of the summit (the highest value). Assuming  $i$  is the summit index, then the array will be ordered such that:

$\text{ary}[0] < \text{ary}[1] < \dots < \text{ary}[i]$  and  $\text{ary}[i] > \text{ary}[i+1] > \dots > \text{arr}[\text{arr.length} - 1]$ .

You may assume that a summit exists, and you are required to solve this problem in logarithmic time.

## Program Shell

Summit.java has been provided for you.

## Sample Execution

```
1
2
1
5
11
11
687500000
799999998
```