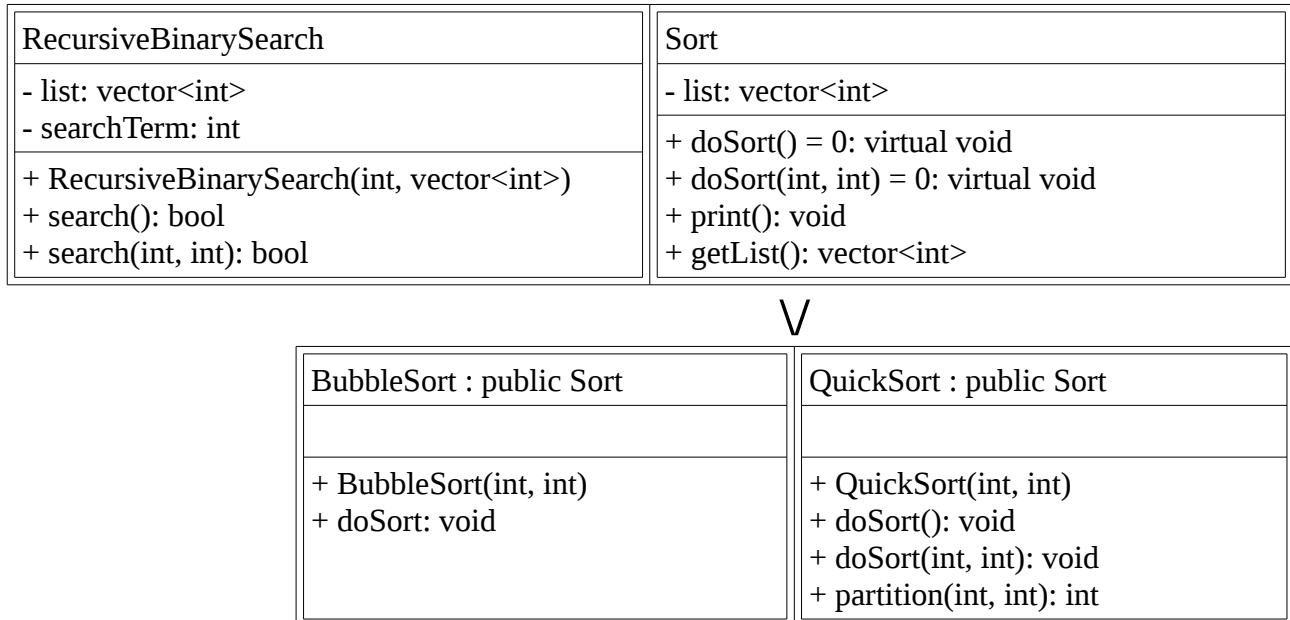


ADDS Prac 8 Design

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UML Diagram



Description

Sort

Contains the vector list and functions which should be used by both BubbleSort and QuickSort.

BubbleSort

Contains the implementation of the bubble sort algorithm in doSort().

QuickSort

Contains the implementation of the quick sort algorithm in doSort(), which recursively calls an assisting function as well as partition, which separates the whole list into sub-lists.

RecursiveBinarySearch

Implements the Binary Search algorithm using recursive function calls.

Main

Takes a single line of integers for input, then sorts this using quick sort. Using binary search on the resulting sorted list of integers, it attempts to find '1', finally outputting a true or false followed by a space then followed by the list of integers.

Testing

Input: 1 8 7 9 4 5 3

Expected Output: true 1 3 4 5 7 8 9

Input: -1234 -987 -21 -9 -1 0 2 18 37 444 9999

Expected Output: false -1234 -987 -21 -9 -1 0 2 18 37 444 9999

Input: 7 4 8 3 9 5 1 400 -78 69 -368

Expected Output: true -368 -78 1 3 4 5 7 8 9 69 400

Input: 9238487 943 20 3779420

Expected Output: false 20 943 3779420 9238487