MA512 Data Structures and Algorithms Lab

Jan - May 2021

Assignment 6

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1. Implement the hash table-based solution to the 2-SUM problem discussed in the class. Use the division method for your hash function and resolve the collision by linear probing.

   Test case: This file describes an array with 9 integers. For how many target values t in the interval $[3, 10]$ are there **distinct numbers** x, y in the input array such that $x + y = t$? (Answer: 8)

   Challenge data set: This file contains one million integers, both positive and negative (possibly with repetitions!), with the ith row specifying the ith entry of the input array. For how many target values t in the interval $[-10000, 10000]$ are there **distinct numbers** x, y in the input array such that $x + y = t$?