1. Introduction

The solution presented in this report summarises how to compute the number of pairs of babies that are at the creche at the same time., taking in their arrival and departure time, the solution is called Contact Tracing Algorithm.

1. Contact Tracing Algorithm Solution

* Input number of babies
* Input their arrival and departure times.
* Create an empty array, to store different times of babies who are at creche at the same time.
* Iterate trough the array.
* For each baby “b” in the array
* For each baby “k” in the array starting from “b+1”.
* If the departure time of baby “k” is more than or equal to the arrival time of baby “b”, and the arrival time of baby “k” is less than or equal to either, then add the pair “(b+1, k+1)” to the array of baby pairs.
* Print out the array of pairs that show babies who were at the creche at the same time.
* **This algorithm takes O(n2) time complexity because of the two nested loops that each go through the babies, The nested loop makes sure that the algorithm is able to compare every baby with every other baby that arrived after them.**

CSC 211 – Practical 2 Report

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