Pseudocode for Algorithm 2: Connecting Pairs of Persons

Define function ‘minSwaps’.

Define reference to vector ‘row’ which will represent the seating order of the couples.

The function will return the minimum number of swaps so that the couples can sit together.

Initialize the variables.

n : number of couples

position : keeps track of each person’s seat in the row (hash map)

swap : 0 (number of swaps required)

Create a loop that will iterate through each person’s seating position in the hash map.

This loop has a complexity in O(1) time considering there are no further indications of increased complexity.

Iterate through the rows in pairs considering each couple consists of two people.

Match each person with a partner.

Now that the number of paired seats have been made, we now have to ensure that the partner is correct.

If the partner is not correct, it is necessary to perform a swap until the correct partner is found.

Once two people are swapped, the hash map should be updated to show the new positions.