Find the pair which sum is equal to given sum (find the index of pair)

import java.util.HashMap;

import java.util.Map;

class FindPair

{

// Naive method to find a pair in an array with given sum

public static void findPair(int[] A, int sum)

{

// create an empty Hash Map

Map<Integer, Integer> map = new HashMap<>();

// do for each element

for (int i = 0; i < A.length; i++)

{

// check if pair (arr[i], sum-arr[i]) exists

// if difference is seen before, print the pair

if (map.containsKey(sum - A[i]))

{

System.out.println("Pair found at index " +

map.get(sum - A[i]) + " and " + i);

return;

}

// store index of current element in the map

map.put(A[i], i);

}

// No pair with given sum exists in the array

System.out.println("Pair not found");

}

// Find pair with given sum in the array

public static void main (String[] args)

{

int[] A = { 8, 7, 2, 5, 3, 1 };

int sum = 10;

findPair(A, sum);

}

}