EXERCISE FOR CSE202 – WEEK 13

In the problem 2-Partition, you are given n positive integers $a_1, \ldots, a_n$ and the question is to decide whether there exists a subset $I \subset \{1, \ldots, n\}$ such that

$$\sum_{i \in I} a_i = \sum_{i \in \{1,\ldots,n\} \setminus I} a_i.$$

Show that 2-Partition is NP-complete.

[Hint: a non-trivial reduction of the SubsetSum problem can be found.]