A List of Staffs 2

Given a list of staff in a company. Each staff has a start year (when he/she joined the company).

Output the number of staff joined the company each year.

Input

- The first line contains one integer N - the number of staffs ($1 \le N \le 10^5$).

- The second line contains N integers which are the start year of N staffs.

Output

The list of years and number of staffs joined in the corresponding year. The list should be sorted by ascending year.

Sample

Input	Output
10 1999 2005 2021 2015 2016 2001 2005 1999 2021 2010	1999 2 2001 1 2005 2 2010 1 2015 1 2016 1 2021 2