

You have two files. Each line of each file consists of a unique identifier followed by space-delimited fields. For each file, a unique identifier is present only once. The list of unique identifiers in the first file may not be the same as in the second file.

From this, you want to produce one file that contains, on each line, a merged line from the input where the unique identifiers match. For example:

File 1

rp1 Mary Smith
st7 John Doe
uk9 Alex Johnson

File 2

po9 Claudine Evert
uk9 Patricia Nelson
st7 Caroline Winchester
pl3 Sarah Harvey

Output

st7 John Doe Caroline Winchester
uk9 Alex Johnson Patricia Nelson

The order of the lines and the fields within the lines does not matter; the below would also be acceptable as output

Output

uk9 Patricia Nelson Alex Johnson
st7 Caroline Winchester John Doe

- a) Describe an algorithm to solve this problem.
- b) Write pseudo-code for your algorithm.
- c) What are the pros and cons to your approach? What computational limitations might force you to do something differently, and what would that be?