

Problem D: One Dimensional Sovereigns

Filename: one

Time limit: 2 seconds

The Count has ruled over this portion of the number line for long enough; it is time to appoint a pair of unique integers as king and queen to take over. The Count knows that the compatibility of the king and queen is vital to success, so he wants to pick a pair with the largest possible greatest common divisor. However, he also wants to pick the pair to be as small as possible to keep them humble.

Input

Each test case consists of a single line containing two space separated integers a and b ($1 \leq a < b \leq 5 \cdot 10^5$)

Output

Output a single line containing a pair integers x and y , ($a \leq x < y \leq b$) such that there is no other pair of integers inside the same range with a larger gcd. If there are multiple pairs with the same gcd, pick the pair with the smallest x . If there are still ties, pick the pair with the smallest y .

Samples

Input	Output
1 5	2 4
3 5	3 4
13 18	15 18
14 27	18 27
12 17	12 16
333126 333456	333141 333434