Problem 0: Puzzling Permutations

Larry has a problem. He can’t remember the password to his combination lock. He knows the values, but just can’t recall the order they were in.

Unlucky for him, he also never pays attention in Data Management class, so he doesn’t know how to do permutations either.

Help Larry open his lock before he misses class.

Larry’s password consists of 6 letters: P, O, T, A, T, O. Create a program that can produce all permutations of these values.

Notice that there are two O’s and two T’s, do not print duplicates, otherwise there will be 720 total outputs, and Larry will be at his locker forever.

*Sample duplicate:*

T1 O1 T2 A P O2

T2 O1 T1 A P O2

Although T1 and T2 are in different positions in each case, both cases still have the order of “T O T A P O.”

*Hint: There should be 180 outputs in total.*

Well…looks like he still won’t be going to class after all. ¯\\_(ツ)\_/¯