



PROBLEM DESCRIPTION:

FIFA WORLD CUP TEAM DISTRIBUTION

The tournament organizers want to divide the qualifying national teams into a given number of groups for the 2018 FIFA World Cup. The teams within each group will all play each other, so our goal is to distribute the teams across the groups to balance capability and geography.

The qualifying teams for the FIFA World Cup come from six continental confederations:

1. AFC (Asia)
2. CAF (Africa)
3. CONCACAF (North and Central America)
4. CONMEBOL (South America)
5. OFC (Oceania)
6. UEFA (Europe).

To balance the groups in terms of capability, the teams were allocated to K pots based on the 2017 FIFA World Ranking.

Pot 1 contains N_1 teams including Russia (which is the host for the 2018 FIFA World Cup) and the $N_1 - 1$ highest-ranked teams in the 2017 FIFA World Ranking. Pots 2 to K contain the next N_i highest-ranked teams, $i = 2, \dots, K$.

The program takes the list of qualifying teams and assign them to groups based on which confederation and pot they are in. The draw for each group satisfies both of the following constraints:

C1. *No group can have more than one team from any pot.*

C2. *No group can have more than one team from any continental confederation, with the exception of UEFA, which can have up to two teams in a group.*

NOTE: Refer to readme to know the input file format given to the program and output displayed by the program. Also try testing the inputs in test case by renaming each one as "input.txt" !