Problem G
Game Scheduling
Problem ID: gamescheduling
Time limit: 3 seconds

In a tournament with m teams, each team consisting of n players, construct a playing schedule so that each player is paired up against all players in all teams except their own. That is, each player should play $(m-1) \cdot n$ games.

The playing schedule should be divided into rounds. A player can play at most one game per round. If a player does not play a game in a round, that player is said to have a bye in that round.

Your task is to write a program that constructs a playing schedule so that no player has a bye in more than 1 round. In other words, the total number of rounds in the playing schedule should be no more than $(m-1) \cdot n + 1$.



Picture by Pat Paker via Wikimedia Commons, CC BY

The order of the rounds and games, and who is home and away in a game, does not matter.

Input

The input consists of a single line with two integers n and m ($1 \leq n \leq 25$, $2 \leq m \leq 25$, $n \cdot m \leq 100$), the number of players in a team and the total number of teams, respectively.

Output

Output one line per round in the playing schedule. Each line should contain a space separated list of games. A game is in the format "`<player>-<player>`". The players in the first team are denoted as `A1`, `A2`, ..., `An`; the second team `B1`, `B2`, ... `Bn` and so on.

Sample Input 1

```
3 2
```

Sample Output 1

```
A1-B2 B1-A2 A3-B3
A2-B3 B2-A3 A1-B1
A3-B1 B3-A1 A2-B2
```

Sample Input 2

```
2 3
```

Sample Output 2

```
A1-B1 A2-C2 B2-C1
A1-C1 A2-B1 B2-C2
A1-B2 A2-C1 B1-C2
A1-C2 A2-B2 B1-C1
```

Sample Input 3

```
1 5
```

Sample Output 3

```
B1-E1 C1-D1
C1-A1 D1-E1
D1-B1 E1-A1
E1-C1 A1-B1
A1-D1 B1-C1
```

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