

Introduction to Computer Science E14 – Study Groups – Week 37

1. Divide into groups of about four people. In each group, one person will choose five cards to give to the first “performer”, the first performer will give four of them to the second “performer”, one at a time, and the second performer will announce what the fifth card is. Each person should practice each “performer” part at least two times.
2. Propose at least one method for improving the magic trick. For example, if the first card determines the suit, after seeing the trick repeated several times, the audience might find it easier to guess how it is done. Define an algorithm for a modification of the trick which makes this harder to see.
3. Propose an algorithm for doing a magic trick, where one performer is thinking of a number between 1 and 24, tells the audience the number, gets some cards from the audience, and passes some cards to the second performer, who announces the number.

Divide into groups of about four people to do the following:

- Each group should write down their algorithm, clearly and unambiguously. Do not write more than is necessary, but do not leave out necessary information.
 - Find another group and exchange algorithms with that other group. Check the algorithm your group received to see if it is clear and unambiguous (that it can be understood, without any doubts about any cases). Give comments to the group that wrote it.
 - Improve your algorithm and exchange with another group.
4. Discuss questions 2, 4 and 5 on page 30 of the textbook. These could be discussed in your study groups without advisors, if you run out of time.