1. You set your music player to shuffle mode. It plays each of the n songs before repeating any. Write a program to estimate the likelihood that you will not hear any sequential pair of songs (that is, song 3 does not follow song 2, song 10 does not follow song 9, and so on).

2. Write a filter that reads in a sequence of integers and prints the integers, removing repeated values that appear consecutively. For example, if the input is “1 2 2 1 7 8 8 6 6 6 6 6 3”, then your program should print “1 2 1 7 8 6 3”.