

CS 5045 – Computation for the Life Sciences

Fall 2003

Homework 07

October 15, 2003

Problem 1a. Write a program that generates 10 random dna sequences, named dna0 through dna9, each having between 12 and 18 nucleotides (the number of nucleotides must be a multiple of 3, i.e. it can be 12, 15, or 18). The program will open a dbm database file and will write the dna sequences (the key is the sequence name).

Problem 1b Write a second program which reads all the sequences from a dbm database file (whose name is specified as a command line argument). Each dna sequence will be transcribed into the corresponding aminoacid. The dna sequence and the corresponding aminoacid will be printed. Hint: read text page163.

Problem 2. Repeat Problems 1a and 1b using a fixed-length random access database file.