

CENG 112 – DATA STRUCTURES

Homework 2

March 12, 2015

Due Date: 24 March 2015

Prog. Assignment 1.1 Flexiable Exam Grader

Modify the exam grader program in “grades/v3/grader.c” from week 2, so that it works with any number of students:

- Modify the declaration of the `load_grades` method to take an `int *` to the number of students and return a `float *` that is the array of grades.
- Modify the definition of the `load_grades` method to read as many grades as possible. It should start by allocating a small `float` array by `malloc` and enlarge the array with `realloc` whenever it needs a larger array.

Hint: You should first understand the **flexible-phonebook** program and use exactly the same technique to solve this question.

Prog. Assignment 1.2 Exam Grader with an *Array*

Modify the exam grader program in “grades/v3/grader.c” from week 2, so that it uses the generic array we have written this week and works with any number of students.

- Modify the declaration of the `load_grades` method so that it returns a `struct Array *` that is the array of grades and it does not take any parameters.
- Modify the definition of the `load_grades` method to create a new `Array`, fill it with as many grades as it is possible to read, and return this `Array`.
- Modify the remaining functions to take the `Array` as a parameter and process its contents.