

EECE.3220 Spring 2017: Exam 1 Class and Structure Definitions

Class definition for Question 1

```
class E1Class {
public:
    E1Class();
    E1Class(int v1, int v2, double v3);
    void setInts(int v1, int v2);
    void setDouble(double v3);
    void readVars(int &ref1, int &ref2, int &ref3);
    void printVars();
private:
    int var1, var2;
    double var3;
};
```

Structure definitions for Question 4

```
struct Question {
    int max;           // Maximum possible score
    int score;        // Actual score
};

struct Exam {
    string name;      // Name of student
    Question qlist[4]; // List of questions
};
```

Guidelines for working with these structures:

- Within each Exam, the max field in all Question structures must add to 100.
 - For example, you could have `qlist[0].max = 20, qlist[1].max = 30, qlist[2].max = 15, and qlist[3].max = 35.`
- If you have Exam structures representing different students' scores on the same test, then the max fields in corresponding elements of qlist will match.
 - For example, if two Exam structures e1 and e2 represent two student scores on the same test, `qlist[0].max` will be the same in both e1 and e2, even though `qlist[0].score` might differ in those structures (since the two students could have different scores on the same question).

Structure definitions for Question 4 (continued)

Graphical representation of possible “elist” array passed to each function

name "Michael Geiger"			name "John Smith"			
qlist[0]	max	25	qlist[0]	max	25	...
	score	20		score	18	
qlist[1]	max	20	qlist[1]	max	20	
	score	12		score	15	
qlist[2]	max	40	qlist[2]	max	40	
	score	30		score	22	
qlist[3]	max	15	qlist[3]	max	15	
	score	8		score	12	
elist[0]			elist[1]			

Notes:

- Each entry in `elist` is a single `Exam` structure.
- Each `Exam` structure contains a string (`name`) and array of `Question` structures (`qlist`).
- Each `Question` structure contains two integers: the highest possible score on that question (`max`) and the student’s actual score (`score`).
- Note that, for every element in the `elist[]` array, the max score for each corresponding question will be the same. In other words, the `max` field in `qlist[0]` is the same in `elist[0]`, `elist[1]`, and so on.