

Please read all the questions carefully and raise your hand for assistance if you have any questions.

- 1.) The following data structure stores information about 100 students. Print on the standard output stream the name and gpa of the student with the highest (maximum) gpa. (Use a simple, sequential search to find the largest gpa.)

```
const int MAX = 100;
struct Grid {           // information about one student
    string name;         // student's name
    double gpa;          // student's gpa
};
Grid list[MAX];         // data for 100 students (assume initialized somewhere else)
```

```
int maxLoc = 0;    // list[maxLoc].gpa is largest gpa seen so far
```

```
for (int k = 1; k < MAX; k++)
    if (list[k].gpa > list[maxLoc].gpa)
        maxLoc = k;
```

```
cout << list[maxLoc].name << " " << list[maxLoc].gpa << endl;
```

- 2.) For this problem, assume that we have two C++ string variables declared as follows
 string name; string message;

- a) Write a C++ statement to display this message on the standard output stream:

Hello. What's your name?

```
cout << "Hello. What's your name? ";
```

- b) Write a C++ statement to read a string value from the standard input stream and store it in variable name.

```
cin >> name;
```

- c) Write a *single* C++ statement to store in variable message a string that starts with "Nice to meet you, " and ends with the contents of variable name. For instance, if name contains "Bob", your code should store "Nice to meet you, Bob" in variable message.

```
message = "Nice to meet you, " + name;
```

- 3.) Rewrite the following C function in C++ using C++ reference parameters instead of pointers.

<pre>int func(int a, int *b, int *c){ a = 3; *b = *b + a; *c = *b; return (*b)+(*c)+a; }</pre>	<pre>int func(int a, int &b, int &c) { a = 3; b = b + a; c = b; return b + c + a; }</pre>
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