

CS 12 • Winter 2003
In-lab Programming Exercise 3
Structures and Dynamic Allocation

wagner@cs.ucr.edu
Department of Computer Science and Engineering
University of California, Riverside

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In this third assignment, you'll be exercising your debugging skills. The task is very simple, though not necessarily easy. You're given the full source code for a simple application I wrote and also a sample of the proper output it produces. However, I've changed a few things in the source code and you'll find that the source file you're getting will not compile.

Your first task is to find, explain, and fix all compile errors.

Next, you'll find out that the application runs incorrectly: there are bugs lurking in between the lines. Your second task will then be to find and fix those bugs. I'll give you a hint: every function has at least one error (syntactic or logical).

Note that the source code has no comments whatsoever. You'll need to try and understand what the code does without the benefit of comments and without the TA's immediate help. Needless to say, you shouldn't ask your friends either.

It's important that you try only one idea at a time and that you document your efforts as you go along because the TAs will come to see if you understand what the program is doing or what it's supposed to be doing. Also, your documented attempts to fix this program is the stuff that you should write in your explanation section.

Good luck!

Sample of proper output

Please enter the number of students to process: 3

```
* * * * *
* Please choose one of the menu options below: *
* ===== *
* (1) Input one student *
* (2) Input all students *
* (3) Print one student info record *
* (4) Print all student info records *
* (100) Exit this program *
* * * * *
Please enter your choice now: 2
```

Name: Wagner
ID number: 12
Current number of students: 1

Name: Brian
ID number: 25
Current number of students: 2

Name: Peter
ID number: 39
Current number of students: 3

```
* * * * *
* Please choose one of the menu options below: *
* ===== *
* (1) Input one student *
* (2) Input all students *
* (3) Print one student info record *
* (4) Print all student info records *
* (100) Exit this program *
* * * * *
Please enter your choice now: 1
```

ERROR: Array is full. Cannot add another student

```
* * * * *
* Please choose one of the menu options below: *
* ===== *
* (1) Input one student *
* (2) Input all students *
* (3) Print one student info record *
* (4) Print all student info records *
* (100) Exit this program *
* * * * *
Please enter your choice now: 2
```

ERROR: Array is full. Cannot add another student

```
* * * * *
* Please choose one of the menu options below: *
* ===== *
* (1) Input one student *
* (2) Input all students *
* (3) Print one student info record *
* (4) Print all student info records *
* (100) Exit this program *
* * * * *
Please enter your choice now: 3
```

```
* * * * *
* Please choose one of the menu options below: *
* ===== *
* (1) Select student by ID *
* (2) Select student by name *
* (99) Cancel this request *
* (100) Exit this program *
* * * * *
Please enter your choice now: 1
```

Please enter the ID of the student to search for: 12
Name: Wagner
ID #: 12

```
* * * * *
```


Name: Peter

ID #: 39

```
* * * * *
* Please choose one of the menu options below: *
* ===== *
* (1) Input one student *
* (2) Input all students *
* (3) Print one student info record *
* (4) Print all student info records *
* (100) Exit this program *
* * * * *
```

Please enter your choice now: 100

Thank you for using the CS 12 Student Information Center. Good bye now. :)

in_lab_exer_3 has exited with status 0.

