CS 275	**Advanced Programming Techniques in C**	Test 1
Name:	Fall 1997	Maximum Points: 41

Important: This is an open book test. You can use any books, notes, or paper. *Do not log into the computer during the test.* Any calculations and rough work can be done on the back side of the test pages. If there is a syntax error in any program segment, just write it down and you will get full credit for the problem. You will lose five points for not writing your name.

1. [5 pt] On the campus, a Unix system distinguishes between a student and a faculty by their group id number. That is, all the students have a gid 204 while every faculty member has a gid 100. In general, I prefer to have my messages switched off (using `mesg n`) so that no student or faculty can disturb me when I am working. However, at other times, I want to allow students to write to my machine but want to exclude faculty from doing the same. Can you tell me one command that I can add to my `.login` file that allows me to do so?

2. [8 pt] I just created a set of 101 files. Each of these files, generated automatically, had my name starting at column 1, and it is on the line by itself. My name also appears in some of these files but that is intentional. My friend John Smith worked on this project with me and ideally, his name should appear on the files as well. Can you somehow change my name (the string `Sanjiv Bhatia`) so that John's name is added to my name on the same line. Make sure that you only change the automatically generated name and not the one that happened to be in the file. All the files are text files.

3. [5 pt] In your notes, I had given you a very simple script to look up a name in a telephone directory. Since that time, the directory has grown quite big and I like to keep it in a compressed format using the gnu compress utility `gzip`. The file has the extension `.gz`. Can you give me the modified script that will work with the compressed file `phone.gz`?

4. [6 pt] What is the result of executing the following commands? `$` is the shell prompt and `^d` stands for control-d.

```
$ cat > foo
Hello there.
Is it an easy test or what?
^d
$ > bar < foo cat
$
```

5. [4 pt] Give me two commands to identify the file you are working with in `vi`.

6. [4 pt] What commands can you use to take a paragraph from one file and insert it into a second file? Do not create a temporary file for this purpose.

7. [4 pt] My `.cshrc` file contains the following alias:

```
alias ls /bin/ls -sF
```

How can I see the files in the standard `ls` output format?

8. [5 pt] I am working on a project with three other people. We all belong to the same group (and no one else belongs to this group). All the files we create need to be writeable by other members of the group. Can I modify my environment to achieve this? How?