

CS 12 - Quiz 3 February 12, 1997

1. Give the definition for a structure.
2. Give the definition for an Abstract Data Type.
3. (a) Name the passing technique used for passing structures.
(b) Name the passing technique used for passing arrays.
4. Write a program that given a string, creates a string that is the double of the given string and returns a pointer to the double. A double of a string for example is, given the string

```
str = "ho"           the double would be  
strdouble = "hoho"
```

The given string should not be changed in any way. While you may receive partial credit, full credit will only be given for correct answers that make use of the string functions.

```
char *strdouble(char *str)  
{  
}
```

5. (a) Create a structure to keep track of information on a musicCD. It should be able to hold the title of the CD, the name of the band, the number of songs, and the length (in minutes) of the CD.
(b) Write a function that makes a separate copy of your structure. The function takes one parameter, the structure to be copied. It should create a new structure, set the members, and return a pointer to the new structure.
6. Show the contents of A after the following code has been run.

```
int A[4] = {12, 6, 12, 4};  
int *ip;
```

```
ip = A+1;  
(*ip)++;  
ip++;  
*(ip + 1) += 3;
```