

CS 12 - Quiz 3

April 28, 1997

1. (pts) Show what each of the four variables contains after the following code has been executed.

```
char ch1, ch2;
char str1[20];
char str2[10];

infile >> str1;
infile.get(ch1);
infile.getline(str2, 7, ' ');
infile.get(ch2);
```

Assume the input file contains the following:

Hello to all people.

2. (pts) Briefly explain two ways which programming languages implement strings. Show an example of how a string would be stored in memory for each implementation.

3. Write a function that given a string, creates a new string that is the double of the given string and returns a pointer to the new string. For example, given the following string

`str = "bye"`

`strdouble(str)` would return `"byebye"`

The given string should not be changed in any way. The function should not waste memory.

- (a) (pts) Write the function without using any pre-made string functions.

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

```
}
```

- (b) (pts) Rewrite the function using the string functions from `"string.h"`.

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

```
}
```

4. (pts) Write a function called `ChangeNum` which asks the user to enter a number if *choice* equals 'e' and should set the number to 0 if *choice* equals 'r'. You are not allowed to use C++ reference parameters. Fill in the blank to show how the function is called.

```
void main()
{
    char choice = ' ';
    int num;

    cout << "Enter a new number or reset the number to zero (e/r): ";
    cin >> choice;

    -----
    cout << num;
}
```