

CS 12 - Quiz 4 May 12, 1997

1. (12 pts) Show what each of the six variables contain after the following code has been executed.

```
char ch1, ch2, ch3;
char str1[20];
char str2[20];
char str3[20];
infile >> str1;
infile.get(ch1);
infile.getline(str2, 7, ' ');
infile.get(ch2);
infile.getline(str3, 3, ' ');
infile.get(ch3);
```

Assume the input file contains the following:

I hope you all studied this.

2. (8 pts) State whether the following sets of overloaded functions are valid or invalid.

- (a) void func1(int x){}
 void func1(int a, double b){}
- (b) void func2(int x){}
 int func2(int y){}
- (c) void func3(int x, char c){}
 void func3(char c, int x){}
- (d) int func4(double a){}
 int func4(double b){}

3. (10 pts) Write a class header and functions to maintain information about a rectangle. You should have data members to hold the length and width. The class should also include a member function that displays the length and width, and a member function that calculates and returns the area of the rectangle. Be sure to write both the class header as well as the functions. You do not need to write the main program.

4. (10 pts) Given the following class *C1*, write a class called *C2* that publicly inherits *C1* and adds a private integer member called *x*, and a public member function called *c1_func* that takes one integer parameter and returns an integer. You do not need to write the functions, you only need to show the prototype.

```
class C1
{
    private:
        char ch;
    protected:
        float num;
    public:
        void display();
        int calc();
};
```

5. (10 pts) Rewrite the class *C2* to have the same capabilities as the previous problem without using class inheritance.