1. **Big-O:** What is the **worst-case** time complexity of the following code snippet?

```c
void mysterySort(int a[], int size) {
    for( int i = 1; i < size; i++ ){
        int next = a[i];
        int j = i;
        while( j > 0 && a[j-1] > next) {
            a[j] = a[j-1];
            j--; 
        }
        a[j] = next; }
}
```

What type of sort is this?

2. **Command Line Arguments:** Given the following entered at the command line:

```
./a.out -f 4 -g 6 -startfile Floor1.txt
```

   a. How do you set up your main so that you have access to the arguments?

   b. What does argc equal?

   c. What would print to the terminal window if you wrote the following in main:

```
cout << argv[5][3] << endl;
```

3. **Strings & streams:** What do the cout statements print for the below code snippet?

```c
int main(){
    char a,b,c;
    string test = “FUN”;
    stringstream ss(“a b c”);

    ss >> b;
    ss >> a;
    ss >> c;

    test.insert(test.begin() + 1, a);

    cout << (((int)(a-b)*3)+4)/4 << endl;
    ss << test;
    cout << ss.str() << endl;
    return 0; }
```