Programming Style

The idea with program style is to have a readable program. Poor style can lead to programs which are error-prone, difficult to read, and difficult to understand. The purpose of this recommended style is not to force you into a certain way of programming, but rather to give you a model of good style from which you can evolve your own style. If the word must appears in a style description that specific style will be required in all programs. In the other cases, if you don’t use the recommended style it is up to you to use some other good (judged by the instructor) style. Be sure when adopting a programming style that it is not only readable, but also consistent over all statement types.

1. Every program must have a header as follows:

```c
/***************************************************
* Programmer: Tony Toledo
* Course/Lab Section: CSCI203-1
* Date: 9/29/02
* Problem Statement: This program .......
*                    *
***************************************************/
```

The Comment/Uncomment Block feature of emacs makes this very easy to do.

2. Each logical segment of code must be preceded by a descriptive comment and a blank line.

3. Operators such as =, +, <, etc., must be surrounded by blank characters. For example:

   ```
   x = x + 1;
   ```

4. Object and function names must be meaningful and start with a lower case letter. Each word in the name should begin with an upper case letter. Here is an example: numItems.

5. You must indent C++ statements that contain braces. Here is the recommended style.
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for (int i = 0; i < n; i++) {
    S1;
    S2;
}

while (i < n) {
    S1;
    S2;
}

if (a < b + 1)
    S1;
else {
    S2;
    S3;
}

if (a > b) {
    S1;
    S2;
} else {
    S3;
    S4;
}

switch (x) {
    case 1:
        S1;
        break;
    case 2:
        S2;
        break;
    case 3:
        S3;
        break;
    default:
        S4;
        break;
}

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6. Functions must be preceded by a comment block that states its purpose, pre-conditions, and post-conditions.

7. When possible, use assertions to verify pre-conditions and post-conditions.