

Commenting Guide

CS/ECE 354 - Spring 2016

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1. File Header Comments

Include the following comments at the top of every file that you submit. You can disregard the portion about pairs if working alone.

```
/* Title:           (Assignment number and file name)
 * Description:     (Brief summary of program)
 *
 * Author:         (your name)
 * Email:          (your email address)
 * CS Login:       (your login name)
 * Section:        (section number)
 *
 * Pair Partner:   (name of your pair programming partner)
 * Email:          (email address of your programming partner)
 * CS Login:       (partner's login name)
 * Section:        (section number)
 */
```

2. Function Header Comments

Include the following comments on top of every function in every file that you submit.

```
/**
 * (Write a succinct description of this method here)
 *
 * @param (parameter name) (Describe the first parameter here)
 * @param (parameter name) (Do the same for each additional parameter)
 * @return (description of the return value)
 */
```

An example of a function header comment is given below..

```
/**
 * This function searches an array of stock prices to find
 * the maximum profit made by completing one transaction
 * i.e buying and selling the stock once. The restriction
 * is that the stock must be bought before it is sold.
 *
 * @param prices: An integer array of stock prices
 * @param prices_size: The size of the prices array
 * @return The maximum profit from the transaction
 */
int maxProfit(int[] prices, int prices_size)
{
    ....
}
```

3. Other Comments

Use comments within the body of main and other functions to:

- highlight the major steps of your algorithm
- explain long calculations or conditions
- clarify convoluted or unusual code
- mark locations where you suspect a bug may exist

Do not use comments in methods to explain things that are obvious to programmers. For example, it is not useful to provide comments such as "this assignment statement assigns 22 to the variable x". Instead use comments to point out things that are not immediately evident or to highlight sections of code. See example below.

```
int maxProfit(int[] prices, int prices_size)
{
    /* Must have at least two prices for profit */
    if(prices_size < 2)
        return 0;

    int profit = 0;
    int minElement = INT_MAX; /* Lowest price so far */

    /* Iterate through all the prices,
     * and track the profit from selling at the current price
     * after buying at the lowest price
     */
    for(int i=0; i<prices_size; i++)
    {
        profit = max(profit, prices[i] - minElement);
        minElement = min(minElement, prices[i]);
    }

    return profit;
}
```