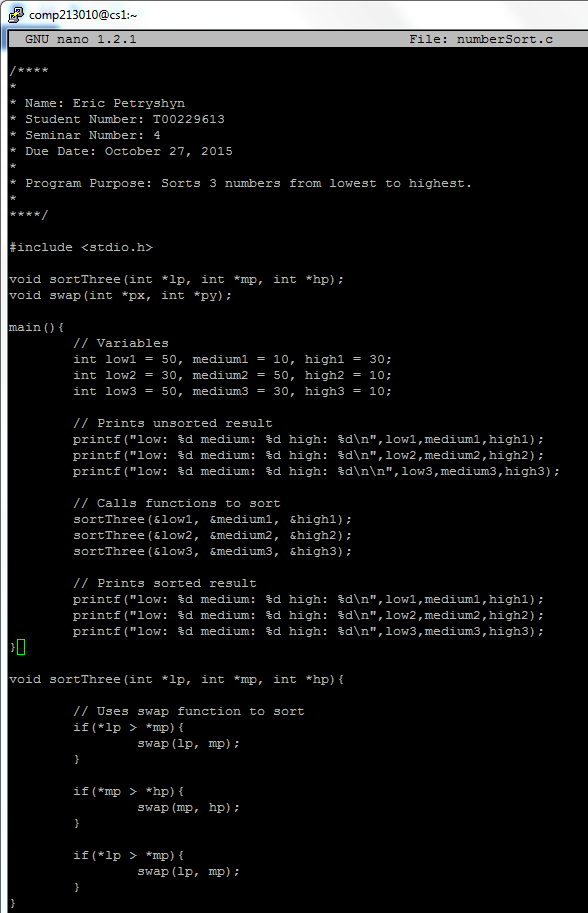
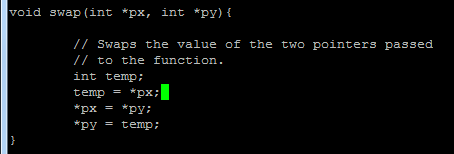
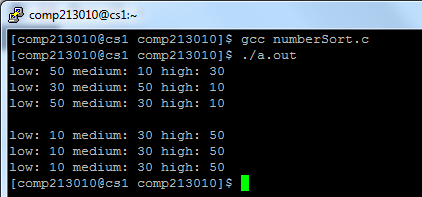
**Problem 1 Code:**

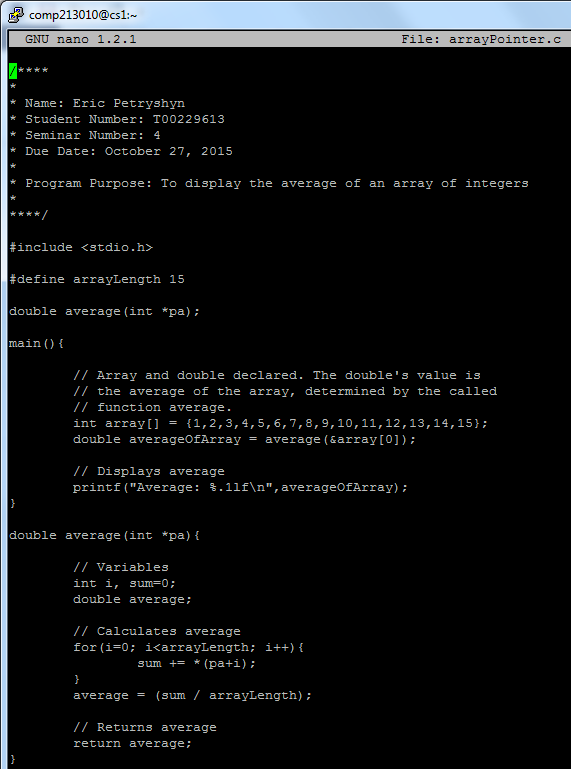




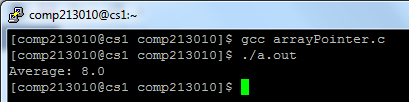
**Problem 1 Output:**



**Problem 2 Code:**

****

**Problem 2 Output:**

****