**207**

**HW # 3**

1. Write a program that reads a sentence and determines whether each word in the sentence is a palindrome or not. Use a stack and a queue of characters. Add the characters of the word to the stack and the queue, then remove from the stack and the queue and compare.
2. Write a program that reads a programming language statement and determines whether the paranthesization is correct or not. For example,

If ( I > 10) a[i] = b[i] – 1 ;

Has correct paranthesization. But the statement

While ( x != 3 )) { y-- ;

Does not have correct paranthesization.

Use a stack of characters.

1. Write a program that simulates restaurant servicing people. restaurant has two waiting queues. One for men and one for women. Create a class queue of persons, where a person has one attribute which is the number of breads he wishes to buy.

Use a random numbers generator, number of people and number of breads, to fill in the queues.