Name_____

1. Write a function that requests integers from the user. Use the values to populate column 0 of a 2 dimensional array. For each row, complete the array by entering the square of the element in corresponding position in column 1.

2. Use selection sort to sort the array in problem 1 based upon the values in column 0. In selection sort, we first find the largest element in the array and exchange it with the first element's value. We then find the next largest element in the array and exchange it with the second element's value. We continue the process until the array is sorted.

3. Write a C++ program that includes a function *prompt()* to request a user to enter an arbitrary text string. The function will store the char* string in a (dynamic – use new and delete to manage) buffer that was passed by reference from the main function.

4. Build a simple data structure of type Node. Let a Node contain the following members,

        void initialize(int aValue);   // set myData to aValue, nextPtr to NULL

        void show(void);   // print out myData

        int get(void);   // return myData

        int myData;

        Node* nextPtr;

Demonstrate each of your member functions.