Homework:

Write a code to perform the following steps:

1. Create a class called Array, used to store integers, it should have the following members:
    a. int num, store the number of integers in this array.
    b. int * data, pointer to memory block store the integers.
    c. Int capacity, the size of the memory block.
    d. A default construct, create an empty vector.
    e. A destruct, free the memory.
    f. A copy construct.
    g. Assignment operator.
    h. Member function,
        push_back(int i);
        which add an integer to the end of the array. Remember, you may need to increase the memory block size to store this integer. A convenient strategy is to double the capacity when it is not sufficient.
    i. Member function,
        pop_back(),
        which remove the last element.
    j. Member function,
        remove(int i);
        which remove the integer with index i from the array. Remember, you need to move the followed integers forward.
    k. Member function,
        insert(int num, int i);
        which insert an intergeter “num” at the position “i”. This also may have the capacity insufficient problem.
    l. Member function,
        capacity()
        which return the capacity of the vector.
    m. Member function,
        size()
        which return the size of the vector.
    n. Member function,
        Clear()
        which remove all the elements from the array.
2. Create a main function to test your class. All member functions must be used.

Zip your code, with a readme file and submit to Blackboard.