

Create an Array List in C++ that can store integers.

The Array List should be implemented as a class and use member functions as a means to manipulate the data in the list.

It should implement the following Functions:

- Add(int a)
 - This will add an integer to the Array List
- Insert(int index, int a)
 - This will Insert an integer at the specified index of the array
- Remove(int index)
 - Removes the integer at the specified Index
- Int Get(int index)
 - Retrieves the integer at the specified index.

It should store those integers to an internal array whose size can be manipulated to allow for the resizing of the List.

If the List is size Zero, the Array should be size 2

If the List is size one, the array should be size 2

If the List is equal to the size of the internal array, increase the size of the internal array by a factor of 2

If the index is invalid ($I < 0$ or $I > \text{List size}$), throw an exception

Throw "Index Out Of Bounds";

See also: https://www.tutorialspoint.com/cplusplus/cpp_exceptions_handling.htm