

```
1 #include "IntVector.h"
2 #include <cstdlib>
3 #include <stdexcept>
4 // #include <type_traits>
5 #include <utility>
6 // #include <vcruntime_new.h>
7
8 IntVector::IntVector(const int aArrayOfIntegers[], size_t
    aNumberOfElements) {
9     this->fNumberOfElements = aNumberOfElements;
10    this->fElements = new int[aNumberOfElements];
11    for (int i = 0; i < aNumberOfElements; i++) {
12        this->fElements[i] = aArrayOfIntegers[i];
13    }
14 }
15
16 IntVector::~IntVector() {
17     // delete this->fNumberOfElements;
18     delete[] this->fElements;
19 }
20
21 size_t IntVector::size() const { return this->fNumberOfElements; }
22
23 const int IntVector::operator[](size_t aIndex) const {
24     // we don't need the *this here, or am I missing something?
25     if (aIndex < 0 || aIndex >= this->fNumberOfElements) {
26         throw std::out_of_range("Illegal vector index");
27     }
28     return this->fElements[aIndex];
29 }
30
31 const int IntVector::get(size_t aIndex) const {
32     // I guess this is where it actually goes?
33     return (*this)[aIndex];
34 }
35
36 void IntVector::swap(size_t aSourceIndex, size_t aTargetIndex) {
37     if (aSourceIndex < 0 || aSourceIndex >= this->fNumberOfElements ||
38         aTargetIndex < 0 || aTargetIndex >= this->fNumberOfElements) {
39         throw std::out_of_range("Illegal vector indicies");
40     }
41
42     // yes this function actually exists
43     std::swap(this->fElements[aSourceIndex], this->fElements
        [aTargetIndex]);
44 }
```