

Lab 4-2: Array Class

```
✂ clang++-7 -pthread -std=c++17 -o main Array.cpp main.cpp
✂ ./main
Array 1:
5 3 2

Array 2:
0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190
```

Demonstrated at 11:20 am on September, 9th 2021

Array.h

```
#ifndef ARRAY_H
#define ARRAY_H

#include <iostream>

using namespace std;

class Array {
private:
    int capacity;
    int size;
    int *arr;

public:
    Array(int c);
    Array();
    ~Array();

    void insert(int num);
    void print();
};

#endif
```

Array.cpp

```
#include <iostream>
#include "Array.h"

using namespace std;

Array::Array(int c) {
    capacity = c;
    size = 0;
    arr = new int[size];
}

Array::Array() {
    capacity = 1;
    size = 0;
    arr = new int[size];
}

Array::~Array() {

}

void Array::insert(int num) {
    *(arr + size) = num;
    size++;
}

void Array::print() {
    for (int i = 0; i < size; ++i) {
        cout << *(arr + i) << " ";
    }
    cout << endl;
}
```

main.cpp

```
#include <iostream>
#include "Array.h"

using namespace std;

int main() {
    Array array1 (10);
    array1.insert(5);
}
```

```
array1.insert(3);
array1.insert(2);
cout << "Array 1: " << endl;
array1.print();
cout << endl;

Array array2 (20);
for (int i = 0; i < 20; i++) {
    array2.insert (i * 10);
}
cout << "Array 2: " << endl;
array2.print();
cout << endl;
return 0;
}
```