Philip Pesic

Week 10

October 23 2022

Week 10 Prog 2

Convert Program 1 to a template.

Test with <int> and <double> and <long int>

Use the test found above for program 1…

```cpp
//  main.cpp

//  Week 10 Prog 2

//

//  Created by Pippo Pesic on 10/19/22.

//


#include <iostream>

using namespace std;


template <class T>

class MyArrayClass {

        int arraySize;

        T* pArray;

public:
```

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```
        MyArrayClass() {

        arraySize = 0;

        pArray = NULL;

        }


        MyArrayClass(T size) {

        if (size > 0) {

        pArray = new T[size];

        arraySize = size;

        }

        }


        void setSize(T size) {

        if (pArray == NULL) {

        pArray = new T[size];

        arraySize = size;

        }

        }


        void setAllValues() {

        if (pArray != NULL) {
```

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```cpp
        cout << "Enter values: ";

        for (int i = 0; i < arraySize; i++) {

                cin >> *(pArray + i);

        }

        }

        }


        void printAll() {

        if (pArray != NULL) {

        for (int i = 0; i < arraySize; i++) {

                cout << *(pArray + i) << " ";

        }

        cout << endl;

        }

        }
};


int main() {

        MyArrayClass <int>array1;

        array1.setSize(7);

        array1.setAllValues(); //Input 10,15,20,25,30,35,42
```

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```cpp
        array1.printAll();


        MyArrayClass <float>array2(7);

        array2.setAllValues(); //Input 10,15,20,25,30,35,42

        array2.printAll();


        MyArrayClass<double> * ptrArray1 = new MyArrayClass<double>();

        ptrArray1->setSize(7);

        ptrArray1->setAllValues(); //Input 100,150,200,250,300,350,420

        ptrArray1->printAll();


        cout << "Philip Pesic 10/23/22" << endl;

        return 0;
};
```
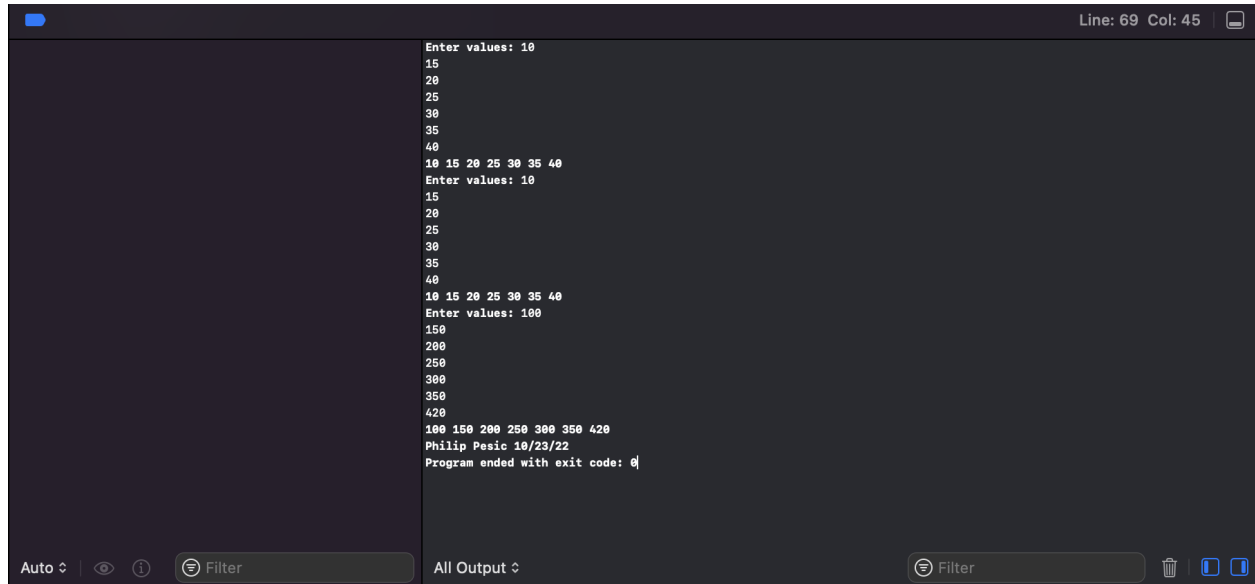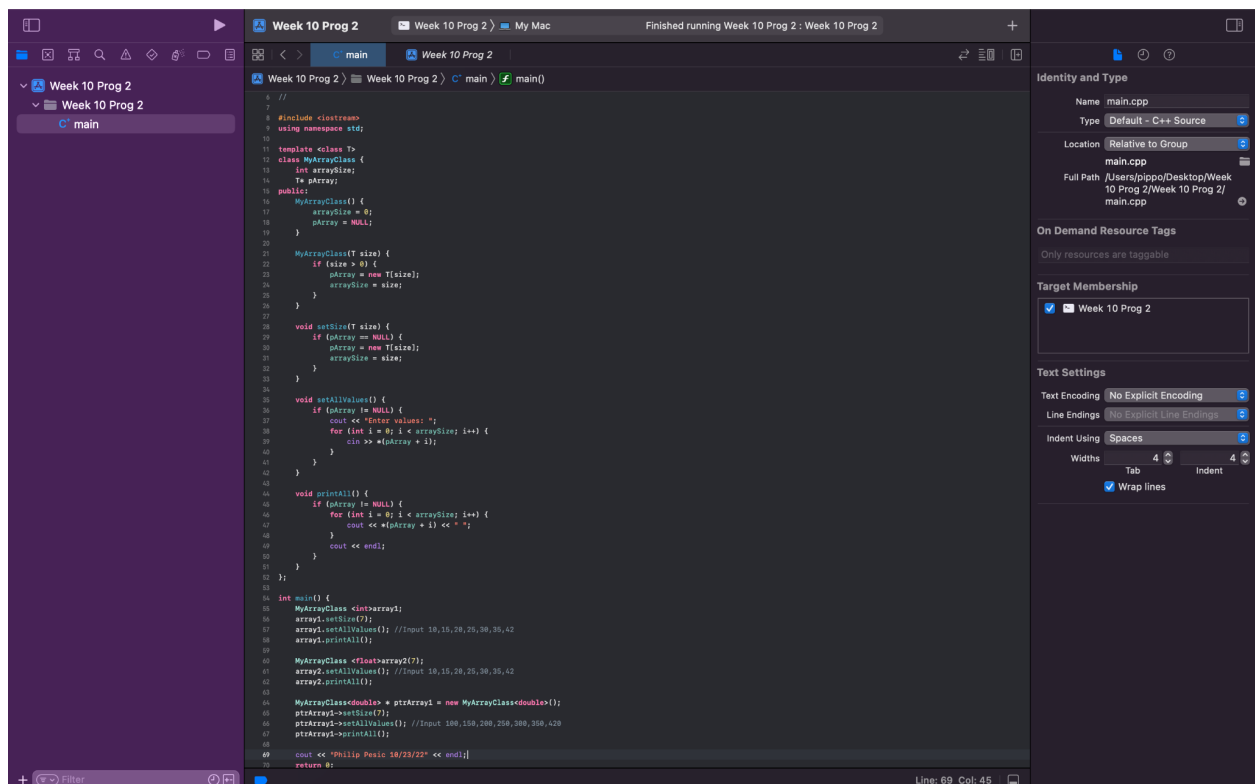
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I learned how to point to templates