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/*This programme defines a class template for a custom-made array*/

#include <iostream>
using namespace std;

// Defining a class template
template <class a_type>
class myArray
{
private:
    a_type* ptr;
    int size;
public:
    myArray(a_type arr[], int s)
    {
        ptr = new a_type[s];
        size = s;
        for (unsigned int i = 0; i < size; i++) ptr[i] = arr[i];
    };

    ~myArray() { /*should there be anything here?*/ };

    void print(); // This is a function prototype only
};

// Member fuction definition is here:
template <class a_type> // We need to repeat this line because it is a different scope
void myArray<a_type>::print()
{
    for (unsigned int i = 0; i < size; i++)
        cout << " " << *(ptr + i) << endl;
};

void main() {

    int A[5]{ 1,2,3,4,5 };
    myArray<int> a(A, 5); // myArray of type integer

    char B[6]{ "Hello" };
    myArray<char> b(B, 5); // myArray of type character

    a.print();

    b.print();

    system("pause");
};
```