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#include <iostream>

#include <iomanip> // Untuk setw

#include <stdexcept> // Untuk out_of_range

using namespace std;

// Mendefinisikan ukuran maksimum array dengan #define
#define MAX_SIZE 5

// Template class untuk array statis
template <class T>
class Array1Dstatis {
public:
    Array1Dstatis();

    T& operator[](int index);
    const T& operator[](int index) const;

    // Friend function untuk operator overloading
    friend ostream& operator<<(ostream& os, const Array1Dstatis<T>& arr) {
        os << "Array Statis: ";
        for (int i = 0; i < MAX_SIZE; ++i) {
            os << arr.data[i] << " ";
        }
        os << endl;
        return os;
    }

    friend istream& operator>>(istream& is, Array1Dstatis<T>& arr) {
        cout << "Masukkan " << MAX_SIZE << " nilai untuk array statis: " << endl;
        for (int i = 0; i < MAX_SIZE; ++i) {

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        cout << "Nilai elemen [" << i << "]: ";

        is >> arr.data[i];
    }
    return is;
}

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static constexpr int Size() { return MAX_SIZE; }

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private:

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    T data[MAX_SIZE];
};

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template <class T>

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Array1Dstatic<T>::Array1Dstatic() {
    for (int i = 0; i < MAX_SIZE; ++i) {
        data[i] = T();
    }
}

```

```

template <class T>

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```

T& Array1Dstatic<T>::operator[](int index) {
    if (index >= 0 && index < MAX_SIZE) {
        return data[index];
    } else {
        throw out_of_range("Index out of range");
    }
}

```

```

template <class T>

```

```

const T& Array1Dstatic<T>::operator[](int index) const {

```

```
if (index >= 0 && index < MAX_SIZE) {  
    return data[index];  
} else {  
    throw out_of_range("Index out of range");  
}  
}  
  
int main() {  
    // Membuat instance dari Array1Dstatis dengan ukuran MAX_SIZE  
    Array1Dstatis<int> myArray;  
  
    // Mengisi array dengan nilai  
    cin >> myArray;  
  
    // Menampilkan nilai array  
    cout << "Array Statis: " << endl;  
    cout << myArray;  
  
    return 0;  
}
```