

# Item 4 - Maximally Reusable Generic Containers - Part 1

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## 1 Question

*How flexible can you make this simple container class?*

How can you best implement copy construction and copy assignment for the following fixed-length vector class? How can you provide maximum usability for construction and assignment?

```
template<typename T, size_t size>
class fixed_vector {
public:
    typedef T* iterator;
    typedef const T* const_iterator;
    iterator begin()      { return v_; }
    iterator end()        { return v_ + size; }
    const_iterator begin() const { return v_; }
    const_iterator end()  const { return v_ + size; }

private:
    T v_[size];
};
```

## **2 Answer**

I would use deep copy for copy construction and copy assignment. That provides the value semantic to the class, and is the most predictable way.