

extern template

Chapter 2 Conditionally Safe Features

```

{
    static std::size_t s_count;    // track number of objects constructed
    T*                d_data_p;   // pointer to dynamically allocated memory
    std::size_t       d_length;   // current number of elements in the vector
    std::size_t       d_capacity; // number of elements currently allocated

public:
    // ...

    std::size_t length() const { return d_length; }
    // Return the number of elements.

    // ...
};

// ...      Any partial or full specialization definitions      ...
// ...      of the class template Vector go here.              ...

template <typename T>
void swap(Vector<T> &lhs, Vector<T> &rhs) { return std::swap(lhs, rhs); }
    // free function that operates on objects of type my::Vector via ADL

// ...      Any [full] specialization definitions      ...
// ...      of free function swap would go here.      ...

template <typename T>
const std::size_t vectorSize = sizeof(Vector<T>); // C++14 variable template
    // This nonmodifiable static variable holds the size of a my::Vector<T>.

// ...      Any [full] specialization definitions      ...
// ...      of variable vectorSize would go here.      ...

template <typename T>
std::size_t Vector<T>::s_count = 0;
    // definition of static counter in general template

// ... We might opt to add explicit-instantiation declarations here.
// ...

} // close namespace my

#endif // close internal include guard

```

In the `my_vector` **component** in the code snippet above, we have **defined** the following, in the `my` namespace.

1. A **class** template, `Vector`, parameterized on element type