

## copy operations

Special member functions are (usually) automatically generated by the compiler.

- Default construction: object created with no parameters.
- Copy construction: object created as a copy of an existing object.
- Copy assignment: existing object replaced as a copy of another existing object.
- Destruction: object destroyed when it is out of scope.

```
StringVector& StringVector::operator=(const StringVector& other) {
    // copy logicalSize, copy allocatedSize, make sure array length same
    // free the old vector
    // change elems to a new array of size allocatedSize
    // copy elems from other to this
    //
    if (this != &other) {
        delete[] elems;
        allocatedSize = other.allocatedSize;
        logicalSize = other.logicalSize;
        elems = new std::string[allocatedSize];
        std::copy(other.begin(), other.end(), begin());
    }
    return *this;
}

// TODO: move_constructor
```

如果重写了拷贝构造 `operator =`，析构函数，的任意一个，应重写以上全部三个函数