



Lesson 37 Static Member

The declaration of a **static data member** in the member list of a class is not a definition. You must define the static member outside of the class declaration, in namespace scope. For example:

```
class X
```

```
{
```

```
public:
```

```
    static int i;
```

```
};
```

```
int X::i = 0; // definition outside class declaration
```

Once you define a static data member, it exists even though no objects of the static data member's class exist. In the **above example**, no objects of class X exist even though the static data member **X::i has been defined**.

Static data members of a class in namespace scope have external linkage. The initializer for a static data member is in the scope of the class declaring the member.

You cannot declare a static data member as **mutable**.

You can only have one definition of a static member in a program. Unnamed classes, classes contained within unnamed classes, and local classes cannot have static data members.