

Implicit vs. Explicit

Conversion constructors can be **implicit** (which is the default), or **explicit**.

The implicit conversion constructor is called any time the compiler needs a **Time** object, but finds a **double** that it can convert. Consider this fragment of code:

```
1 | Time bed_time(23, 30);    // 11:30
2 | bed_time = 5.2;          // WHAAAAAT?
```

You would **expect** that line 2 would be a syntax error, but, surprisingly, it is not. Instead, **the conversion constructor is silently (implicitly) called**, and **bed_time** is changed to **5:12 am**. Probably not what you expected.

You can add **explicit** as a modifier to the prototype to prevent this:

```
explicit Time(double hours); // 7.51 -> 7:35
```

The keyword **explicit** **only** goes in the class definition. It **is not repeated** in the **.cpp** file. Sometimes, as you'll see when you cover symmetric overloaded operators in CS 250, you'll **want** to allow implicit conversion. For instance the **string(const char*)** constructor is **not explicit**. Most of the time, however, **explicit** is preferred.



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