

Member and Non-member Operators

Solutions

- In general, is it better to implement operators as member functions or as non-member functions? Explain why
 - Operators should be implemented as member functions where possible
 - Direct access to private data
 - All class-related code is in the same place
 - However, some operators cannot be implemented as members

- Consider the following code sample. Describe what happens if the + operator is defined as

(a) A member function

(b) A non-member function

```
string w { "world" };
```

```
string hi = "hello " + w;
```

- This does not compile when defined as a member function
- When it is a non-member function, the compiler interprets it as

```
string hi = operator +("hello", w);
```
- and then converts the function argument to an std::string

- Give some examples of operators which are best implemented as
 - a) A member function
 - ++, -=, dereferencing operator *, assignment operator =
 - b) A non-member function
 - +, ==, stream operator <<