Quiz 7 Answers

1. Given the class `Thing`, write the header for a standalone function that overloads the less than operator. Assume the operator compares two `Thing` objects.

   ```
   bool operator<(const Thing& leftOp, const Thing& rightOp)
   ```

2. Given the class `Thing`, write the header for a method that overloads the less than operator. Assume the operator compares two `Thing` objects.

   ```
   bool Thing::operator<(const Thing& rightOp) const
   ```

3. What is a `friend` in C++?

   A `friend` in C++ is a class or function granted direct access to the private members of a class.

4. Where is a `friend` declaration coded in C++?

   A `friend` declaration is coded inside the declaration for a class.

5. Write the function header for overloading the output operator for the `Thing` class.

   ```
   ostream& operator<<(ostream& leftOp, const Thing& rightOp)
   ```

6. When and how can a method be declared `const`?

   A method may be `const` if it does not modify any data members of the calling object. To make a method `const`, you code the keyword `const` at the end of the method's prototype and header.

7. Given the class `Simple`, write the header for a standalone function that overloads the multiplication operator. Assume the operator multiplies two `Simple` objects to get a `Simple` result.

   ```
   Simple operator*(const Simple& leftOp, const Simple& rightOp)
   ```

8. Given the class `Simple`, write the header for a method that overloads the multiplication operator. Assume the operator multiplies two `Simple` objects to get a `Simple` result.

   ```
   Simple Simple::operator*(const Simple& rightOp) const
   ```