

Namespaces Solutions

- What is meant by a namespace in C++?
 - A namespace is used to group related symbol names together
- Why are namespaces useful?
 - Namespaces are usually defined by libraries, to prevent name conflicts with code written by users or other library developers

- Write a simple class with a member function that prints out a message. Define this in the global namespace
- Write a similar class in a namespace (use your name if you cannot think of anything suitable)
- Both these classes should have header files that define the interface and source files that implement the print member function
- Add a main() function that creates instances of these classes and calls their print member functions

- C++11 introduced a sub-library to deal with time handling inside the standard library
- This is defined in a namespace called chrono which is nested inside the std namespace
- A type called seconds is defined inside the chrono namespace
- Write down the definition of a variable of type seconds
 - `std::chrono::seconds sec;`

- What is meant by "hiding" a symbol? How can we deal with this?
- Write a simple program to demonstrate symbol hiding
 - When a namespace defines a symbol which is already defined in an outer namespace, the outer's namespace's symbol cannot be seen in the inner scope

- How does the "using" keyword make working with namespaces easier? How should it not be used?
 - The “using” keyword can simplify code if used carefully
 - It should not be used where there is ambiguity about which symbol will be used
 - “using namespace std” and similar should not appear in header files