

- 1.) No. Having the function template defined in the x.cpp file means that the actual logic of the function, the definition, is local to that source file. If another file attempts to instantiate the function declared in x.hpp, without defining the function in that file, the program will not build because the compiler does not have access to the function definition. A call to the function would tell the compiler to instantiate the template, and it would need to figure out what type the function would need to be instantiated with. At that step the building would fail as the function definition wouldn't be available.
- 2.) I expect it would take longer to compile, as the compiler figures out what functions need to be instantiated with what types to operate properly, rather than being already defined and little extra work needing to be done by the compiler.