File Structure

This ZIP file contains an example of using the TinyXML library to parse the `studentActivity.xml` file. This program will parse the XML into a list of student objects, which are then printed to the console. For more information on TinyXML, refer to its online documentation. Note that you are not required to use TinyXML, any XML parser implemented in C++ is valid.

The ZIP file contains the following CPP and H source files:

- The classes `Activity`, `Club`, `Course`, and `Student` are all simply data classes for the data in the XML file.
- The class `XMLParser` contains most of the code that calls the TinyXML library. You could include the parsing logic directly in the main file, but I find separating into a single task per file is cleaner.
- `main.cpp` contains a simple driver that calls the `XMLParser` logic then prints the result.
- Finally, `tinyxml.h`, `tinystr.h`, `tinyxml.cpp`, `tinystr.cpp`, `tinyxmlerror.cpp`, and `tinyxmlparser.cpp` are the source files from the TinyXML library. They were downloaded directly from the TinyXML website to include in this example. You can copy them from this ZIP file, though I would recommend downloading it yourself to get experience in downloading and installing a library.

Running

The ZIP file contains a `Makefile`, in addition two Visual Studio projects showing different ways to build the code. You do not need to use Visual Studio to run the code, it is simply provided as a reference for students using Visual Studio for their projects. Likewise, you are free to use either a console application project or a Makefile project in Visual Studio. The sections below give more information on each of the three setups.

Makefile

This project is set up to be built directly using Make. The `Makefile` should run on both Windows and Linux, serving as an example of a multi-OS `Makefile`.

Visual Studio Makefile project

The Visual Studio project `MakefileProject` is set up as a Makefile project, meaning Visual Studio will use the provided `Makefile` to build the project and clean the workspace. The project is specifically set up to use make from Mingw-w64 and `g++`. If you wish to use a different version of Make, you can change the commands used to build the project under MakefileProject > Properties > NMake. If you wish to use a different compiler than `g++`, you can change that in the Makefile.

Visual Studio Console Application Project

The Visual Studio project `ConsoleApplication` is set up as a standard Visual Studio console application project, which will allow you to build and run the project using Visual Studio build tools. Note that in addition to the default configuration, I told Visual Studio to define the property `TIXML_USE_STL` under ConsoleApplication > C/C++ > Preprocessor > Preprocessor Definitions. This allows us to use TinyXML functions that take `std::string` instead of `char*`.