**File Management:**

File Handling: <https://www.geeksforgeeks.org/file-handling-c-classes/>

Steps to Setup Project for Directory Handling:

1. Set C++ Language Standard:
   * Right-click on your project in the Solution Explorer.
   * Select Properties.
   * Navigate to Configuration Properties > C/C++ > Language.
   * Set C++ Language Standard to ISO C++17 Standard (/std:c++17).

**Folder Management:**

<https://en.cppreference.com/w/cpp/filesystem>

**SHA 256:**

**Setup Environment:**

1. Setup openssl library to use sha <https://www.youtube.com/watch?v=u8E6YXZkE-A>
2. Documentation for SHA-256:

To include the OpenSSL, build folder in your Visual Studio project, follow these general steps:

**Add Include Directories:**

Open your Visual Studio project.

Right-click on your project in the Solution Explorer and select Properties.

Navigate to C/C++ Include Directories:

Under C/C++, select General.

In the Additional Include Directories field, add the path to the OpenSSL include directory. This is typically located in your OpenSSL build folder, for example:

C:\path\to\openssl\include

**Add Library Directories:**

Still in the project properties, navigate to Linker > General.

In the Additional Library Directories field, add the path to the OpenSSL lib directory, which contains the compiled libraries. For example:

C:\path\to\openssl\lib

**Link OpenSSL Libraries:**

Go to Linker > Input in the project properties.

In the Additional Dependencies field, add the names of the OpenSSL libraries you need to link against. Typically, you will include:

libssl.lib

libcrypto.lib

**Set Preprocessor Definitions:**

Navigate to C/C++ > Preprocessor.

In the Preprocessor Definitions field, add any necessary definitions that OpenSSL requires. Common definitions include:

OPENSSL\_USE\_STATIC\_LIBS

**Copy DLLs (if needed):**

If you are using shared libraries (DLLs), ensure that the corresponding DLL files (libssl.dll and libcrypto.dll) are available in your project's output directory or in a directory that is included in your system's PATH.

**Include PATH Variable:**

Go to system variable paths add a path there : **C:\openssl-3.4.0\build\bin**

**Test the Configuration:**

Write a simple test program that includes OpenSSL headers and calls OpenSSL functions to verify that everything is set up correctly. For example:

#include <openssl/ssl.h>

#include <openssl/evp.h>