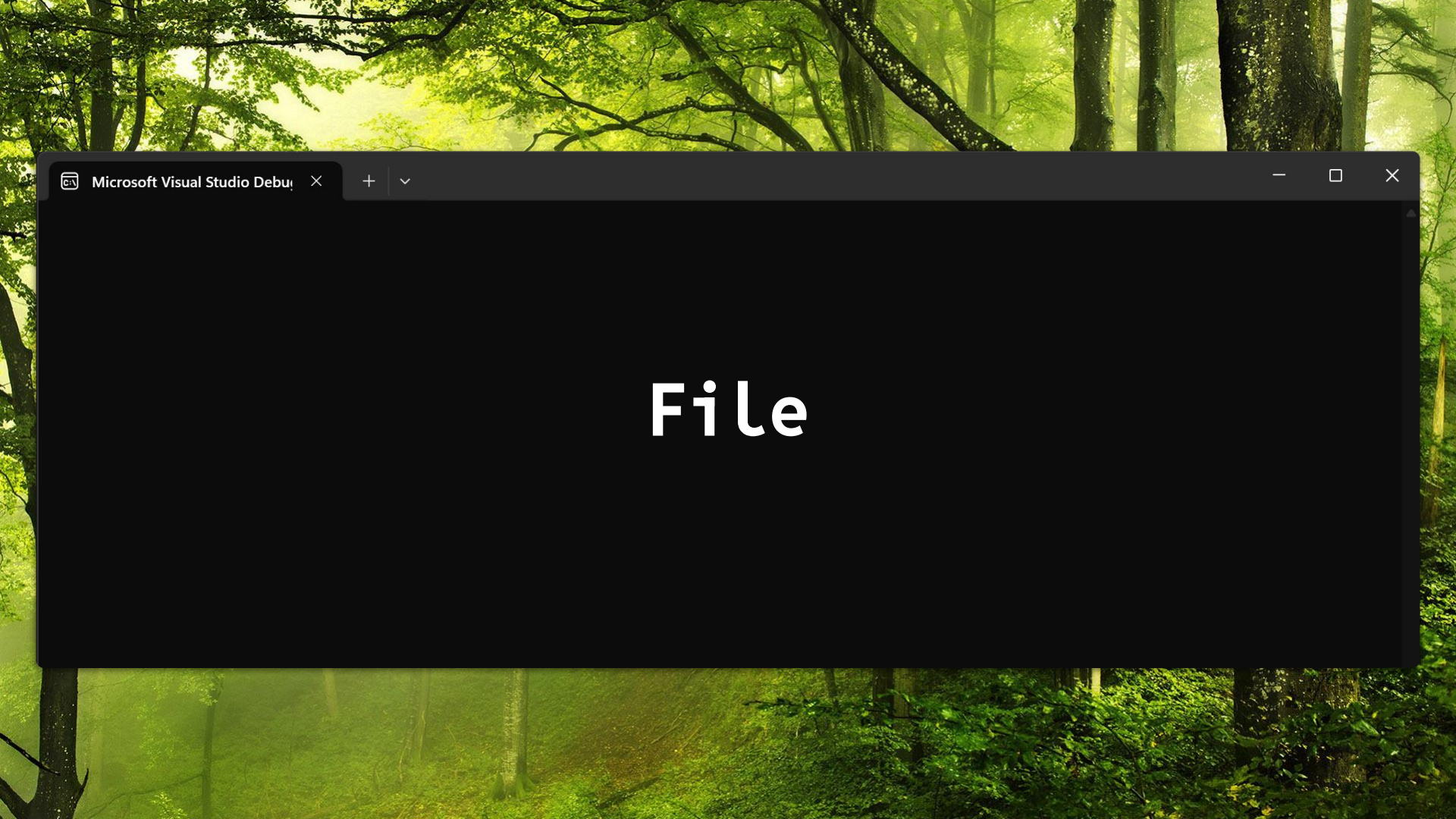

Microsoft Visual Studio Debu
Filed Away
Week 7
C:\Users\brend\source\repos\VGATestProject\x64\Release\VGATestProject.exe (process 70484) exited with code 0.
Press any key to close this window . . .
Rendering Graphics in the Terminal and the Dark Arts of C++ Forum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File

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What is a file?

A long series of bits, with a label... That's it...

File.TXT

<Name of Data> . <How to Read>

Your file extension is just a label, telling programs what kind of bits are there. It tells programs *how* to read the data.

```
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```

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“Make” a File Type

Just rename a file to name.extension with that extension being whatever you want, assuming it isn’t already recognized by your OS.

That’s it. The hard part is telling programs how to read that file.

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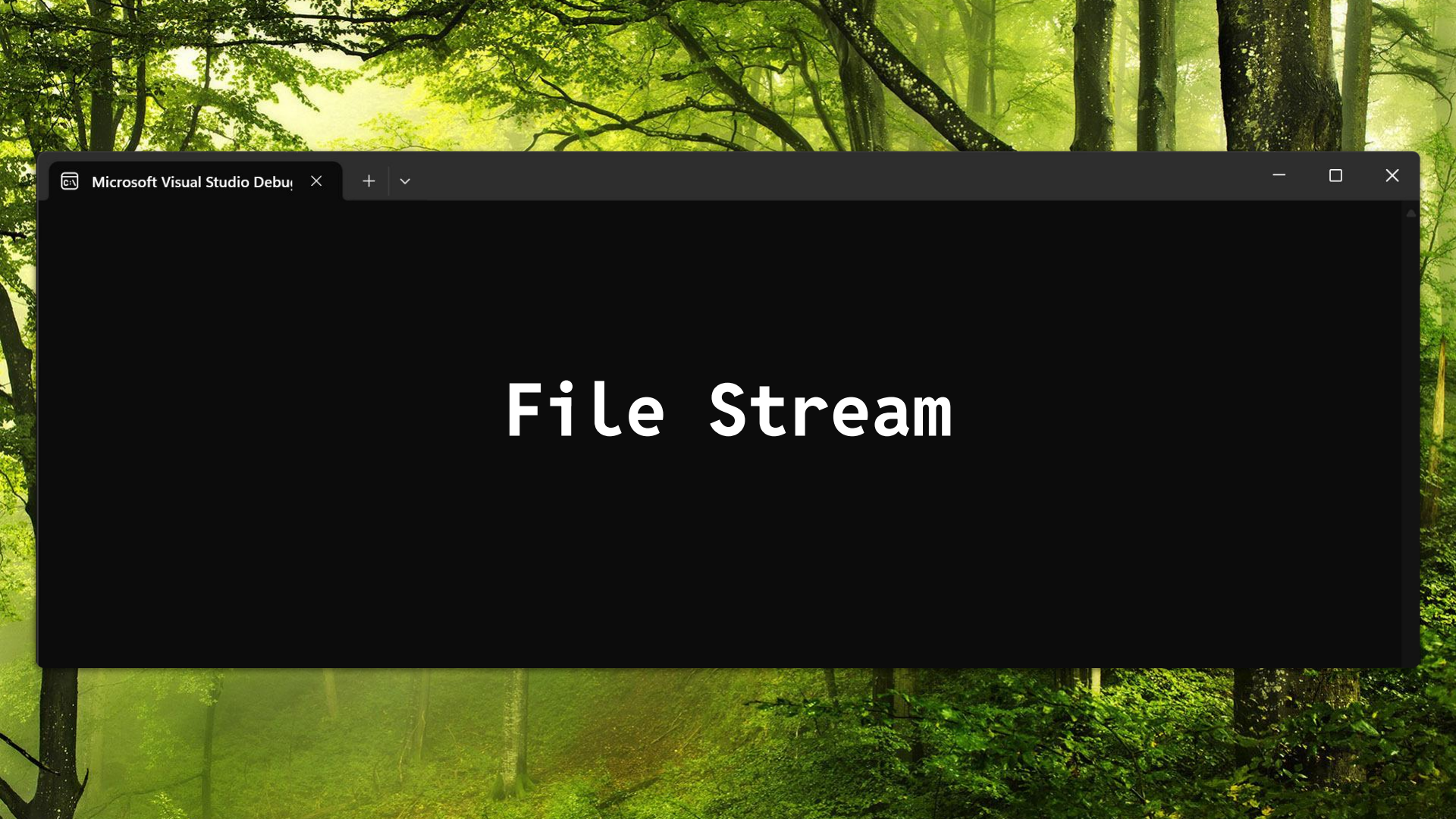
```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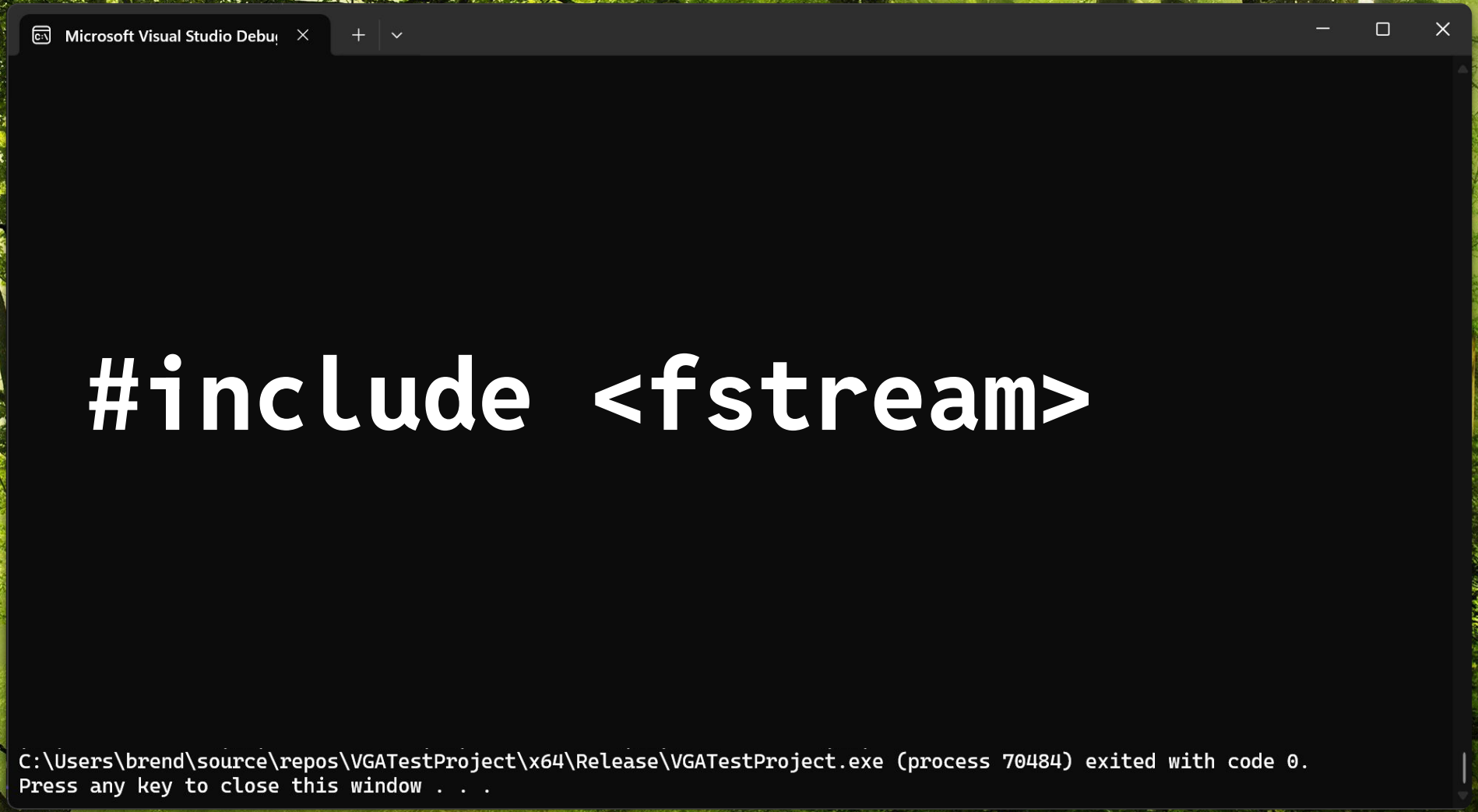
File Stream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#include <fstream>
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Reading Files

```
std::fstream file(filepath, std::ios::in | std::ios::binary);

if (!file.is_open()) {...handle the error}


uint32_t output;

file.read((char*)&output, sizeof(uint32_t));

// Read only uses char (bytes) so we must trick it to use other types
```

```
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```

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Writing to Files

```
std::ofstream file;

file.open(filepath, std::ios::out | std::ios::trunc |
std::ios::binary);

if (!file.is_open()) {...handle errors};


uint32_t output = 2025;

file.write((char*)&output, sizeof(uint32_t));

// This is the same trick with char as with reading from files
```

```
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File Stream Modes

```
std::ios::in    // “Input” – Read from files

std::ios::out    // “Output” – Write to files

std::ios::binary    // “Binary” Use binary instead of text

std::ios::trunc    // “Truncate” – Delete previous file contents

std::ios::ate    // “At End” – Begin at the file’s last position

std::ios::app    // “Append” – Cannot overwrite current file
contents
```

```
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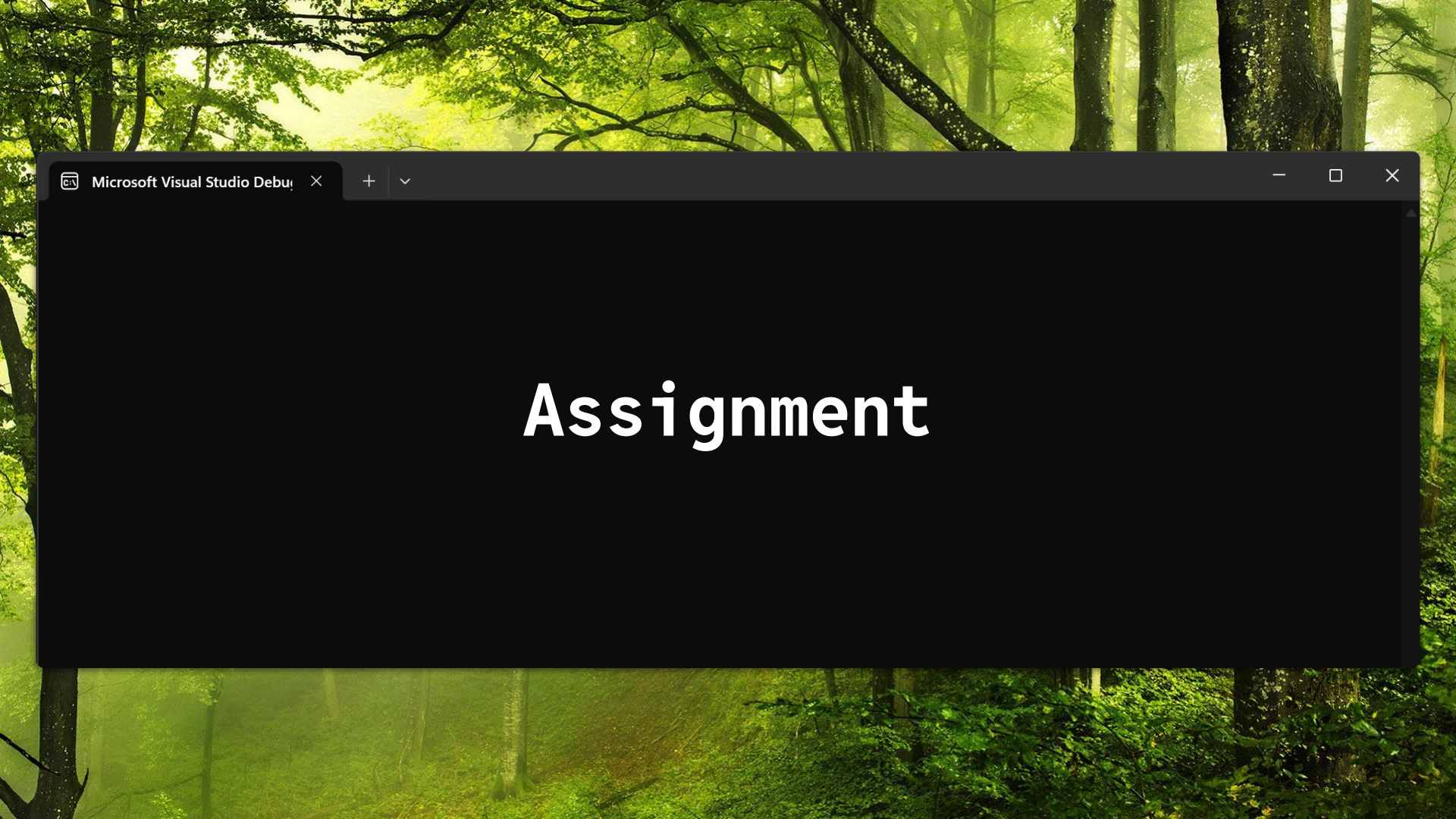
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Assignment

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Create a File Type

Use this file type to store the data for an animation.

Store the data in binary (trust me, it’s easier)

I will walk you through this process in class!

```
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